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International working party for
documentation and conservation
of buildings, sites and neighbourhoods of the
modern movement

Conference Proceedings

Sixth International DOCOMOMO Conference
Brasília, Brazil, September 19-22, 2000

The Modern City Facing the Future

Universidade Federal da Bahia-UFBA
Universidade de Brasília-UnB
DOCOMOMO-Brazil

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Contents

Conference and Proceedings

When the Brazilian DOCOMOMO Working Party stated its intention to host the Sixth International DOCOMOMO Conference, it was guided by the basic ideo underlying the formation of our national working party in 1992: bringing together people and institutions scattered throughout Brazil that are interested in documenting, studying and debating the architecture and urbanism of the Modern Movement. At the same time, the aim was to bolster international debate about this subject with our counterparts in other countries. Since then, DOCOMOMO Brazil's meetings have been o rich and challenging collective experience.

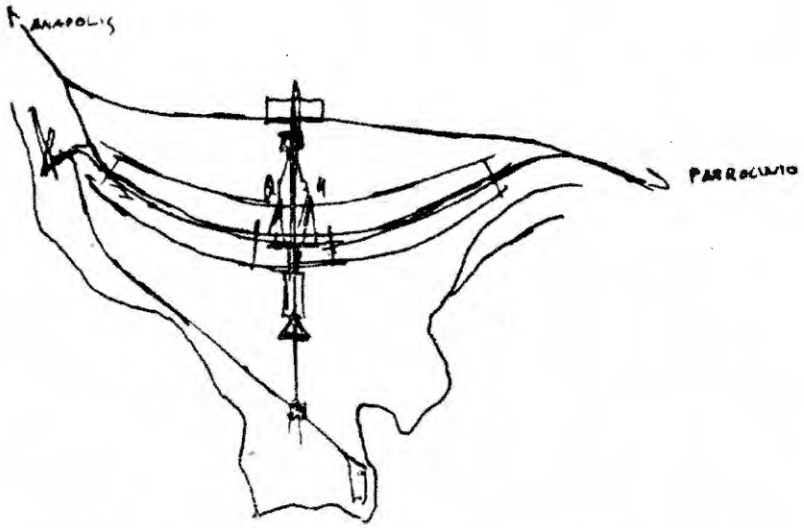
In 1996, we announced our candidacy through a letter of intent from the Brazilian working party, presented during the Council Meeting of the Fourth International DOCOMOMO Conference in Slovakia. The title chosen for the conference, "The modern city facing the future," reflected the aim of discussing Modern Urbanism in light of the Brazilian experience of serving on the DOCOMOMO Internatianal Specialist Committee on Urbanism, then headed by Marco Aurélio Gomes. Another factor we considered when developing our bid to host the conference was the informal requests received from members of several other national working parties that the event be held in the city of Brasilia, which is recognized as one of the Modern Movement's most ambitious and successful accomplishments in the field of urbanism. The US working party also announced its candidacy to host the 2000 conference. The Council Meeting decided to postpone voting on the 2000 conference until February 1997, and asked the two candidates to submit more detailed proposals and commitments from support institutions.

Finally, we submitted a paper drafted in accordance with the "General Outlines far International DOCOMOMO Conferences" to DOCOMOMO International on Februory 4, 1997. It was presented to the members of the Internationol Council, who voted in favor af holding the conference in Brasilia. The organizing institutions that signed the proposal included the Universidade Federal da Bahia (UFBA) – which since 1992 has housed the directorate of DOCOMOMO Brazil at its Graduate Department of Architecture and Urbanism – and the Universidade de Brasília (UnB), which, through its School of Architecture, accepted the challenge of holding the conference in that celebrated city. Therefore, the conference's executive office was established at UnB under the direction of Professor Frederico de Holanda.

The Call for Papers presented the basic structure for the conference so as to better guide the submission of abstracts. Scientific Committee members helped write the introduction on the conference's theme, the centrol motivation of which was encouraging a critical onalysis of the Modern Movement's urbanism experiences while seeking to identify the relevance (or lack thereof) of the continuity of their principles, with a view to achieving better quality in future urban-planning projects. More specific issues were also suggested for paper tapics, such as the relationship between designed and real cities, urban and architectural form (the city as a designed unity), social commitment and political control, urban preservation and dynamics, universal proposals and individual realities, as well as topics such as authenticity, autharship, the aesthetic dimension and collective life.

The Scientific Committee met to make the final selection of papers in December 1999 in São Paula City, with the support of the Biennial Foundation (Niemeyer, 1954), during the Third International Architecture Biennial and the Third Brazilian DOCOMOMO Seminar. We received 310 abstracts from 29 countries. Of these, we selected 51 abstracts for oral presentation and 40 for case-study panels to be exhibited at the conference. The Final Program was developed on the basis of the abstracts that were most closely related to the conference's central theme, and they were used to determine the thematic sessions. In addition to a sessian an the Main Theme, a special sessian on Brasilia was organized due to the large proportion of papers on that city. The International Executive Committee suggested making another change in the structure of previous conferences, which was including more guest speakers in the program.

The official opening of the conference and welcome cocktail party took place at Itamaraty Palace (Ministry of Foreign Affairs), one of the foremost buildings designed by Oscar Niemeyer, with gardens designed by Roberto Burle Marx. The Opening Session panel included the President of the In-



Lúcio Costa - "Relatório do Plano Piloto de Brasília", 1957.

ternational DOCOMOMO, Hubert-Jan Henket, representatives of the Universidade de Brasília and Universidade Federal da Bahia, the event's organizers, and architect Maria Elisa Costa, daughter of Lucio Costa, whom we wanted to honor. Then, renowned architect Kisho Kurokawa gave the keynote lecture. After the opening ceremony, everyone was invited to go an an architectural promenade to the building's garden terrace, where pianist Marcelo Bratke (grandson of Brazilian architect Oswaldo Bratke) awaited us to give a recital. We were thrilled to enjoy a carefully selected program of 20th-century works by composers ranging from Gershwin to Villa-Lobas. In the spirit of the DOCOMOMO conferences, this performance represented the role of nature in modern Brazilian music and its relationship with modern music around the world.

In the days that followed, the conference took place in two auditoriums in the main building of UnB – the Central Science Institute, another magnificent Niemeyer building. In addition to the Thematic Sessions, the Exhibition opened on the first night, and the DOCOMOMO International Council Meeting began on the second evening. Unfortunately, a closing general debate including guest speakers that was scheduled for the final afternoon of the conference had to be cancelled due to timing problems. The work ended in the early evening, shortly after a presentation by the Sixth DOCOMOMO International Conference team. After a three-day work marathon in which architecture students were markedly present, exhaustian gave way to a festive atmosphere during the closing party, held on a moonlit evening in the garden terrace of the National Congress building's annex in the Pilot Plan, which affords a splendid view of Three Powers Square.

In addition to the official program, guided tours to the most significant parts of the city were organized to give everyone a general idea of what the accomplishment called Brasilia is today. It was interesting to see first-time visitors' varying expectations and forms of appropriation of the city. In this regard, if the Sixth Internationol DOCOMOMO Conference was an event on modern urbanism held in Brasilia, it left us with the desire to organize a specific event on Brasilia in the future.

We were also aware that many participants were visiting Brazil for the first time, and therefore we made a point of offering Additional Post-Conference Tours to five other important cities. A work team was formed in each city under the responsibility of Marta Camisassa (Belo Horizonte and Ouro Preto), Márcio Campos (Salvador), Mirthes Baffi (São Paulo) and the Niemeyer Foundation (Rio de Janeiro). Thanks to meticulous planning, participants had a chance to experience first hand the diversity and vastness of this country, which developed under the aegis of modernity.

On behalf of UFBA, the UnB and DOCOMOMO International, we would like to thank the institutians that supported us and believed in this conference. Our special thanks to Francisco Júnior and João Borges, from the UnB Graduate Department of Architecture and Urbanism (FAU/UnB), and Alejandra Muñoz, from UFBA, who worked alongside us with such dedication to ensure the conference's success.

Brasília "Rodoviária", 1990, DePHA/GDF Archives - S. Cavalcante.

Proceedings

The aim of this publication is to publish all the papers and lectures presented during the conference.

Strangely enough, one year after the event, long after its executive office was closed, we had received less than 30% of the papers, which prevented us from obtaining the funding required to publish them in good time. We then sought the help of the Brazilian DOCOMOMO working party to issue a third (and urgent) call for papers. Thanks to the cooperation of Hugo Segawa, Mirthes Baffi and Marina Donelli, we managed to collect nearly 80% of the papers. DOCOMOMO International was aware of the situation and suggested that we go ahead anyway.

This publication's structure follows the order of the conference's program. The complete papers have been revised and/or expanded by their authors, including added illustrotions and captions. The solution devised for unsubmitted papers was to publish their abstracts (in italics), which we received prior to the conference.

Finally, we would like to extend our special thanks to Professor Flávia Gorcio, the manoging director of the UFBA Press, who took this publication in hand and produced and printed this book free of chorge, despite the university's current financial difficulties.

This book is dedicated to Milton Santos, who died in 2001.

Anna Beatriz Golvão and Frederico de Holonda

Brasília "Praço dos Três Poderes", 1990, DePHA/GDF Archives - S. Cavalcante.

OPENING SESSION

Hubert-Jan Henket

Hubert-Jan Henket

Opening of the conference " The Modern City facing the Future"

The theme of the 6th International DOCOMOMO conference "The Modern City facing the Future" will give us a good opportunity to look on our own mirror. In that mirror we will see the past, we will see what has happened and the reality of today, we will see the intentions and the results of Modern Movement urbanism. If we look through that mirror and try to imagine the future, we see simulations of what is to come. It is important for us to look very critically in both ways at that mirror simultaneously, because it can lead us to some clues as to what could be the specific contribution of DOCOMOMO to appropriate cities of the future. This is not an easy task, because the images seen in that mirror are full of paradox. But as you will remember, DOCOMOMO is born out of the paradox how to keep the temporary, the transience of the past for future generations to be enjoyed.

So let us give it a try and first look back for a moment. The architect Cedric Price used the beautiful metaphor of the egg to describe the spatial development of cities (1). He compared the city from its early origins till the 19th century with a boiled egg, offering administrations, marked activities and inhabitants a cultured protection within the clear boundaries of the shell, against the untamed nature outside. However, due to rapid technological and economic improvements during the industrial revolution, cities began to spread their territories in concentric shapes, more or less like a fried egg. Transport systems criss-crossed living quarters, scattered around polluting factories, poverty and disease flourished, and an urban praletariat was born.

To counter this urban chaos idealistic architects at the beginning of the 20th century arrived at a completely new tabula rasa approach, the Modern Movement. They thought they could see the future far ahead and planned new healthy and emancipated environments, fitting the aspirations and the requirements of a society which wasn't yet born. And planning, the rational and functional ordering of time-space became a panacea.

Separation of functions, the open organisation of space, the introduction of green in urban design and the high rise block became the innovative tools of housing modern man. Considering the 19th century conditions the proletariat used to live in, this new rational approach with its firm believe in a better future was indeed a great leap forwards. Many humane and beautiful examples emerged, all over the world.

However, particularly after World War II the qualitative ideas of the early innovators became standardised tools in the quantitative struggle of political agendas and the immediacy of speculation. Together with the hyperbolic increase in the demand for mobility, this automatically let to the unforeseen, the unexpected. Urban plans, regional plans and national plans succeeded each other in ever faster speed, trying to cope with the acceleration of changing demands and an unstoppable compulsion for improvement.

This rapidly changing realities showed again a new notion of the city. So next to Cedric Price's fried egg we are now served the scrambled eggs. These new cities are perceived as part of a set of relationships, spanning from the global to the national, the regional and to the local, with overlapping social, physical and digital networks.

But there is more. Information technology offers the possibility to be present and act at any place on the globe and be at home at the same time.

This in turn introduces yet again a completely different type of space-time, simultaneously yet incompatible with the traditional Newtonian type of time-space as represented in the boiled egg, the fried egg and the scrambled egg.

At the same time acceleration and delay, as well as increase and decrease of scale occur, where as simulation and reality merge into one.

Rem Koolhaas prophesised in his book S, M, L, XL, that we move towards, I quote: "The generic city, the city liberated from the captivity of center from the straight jacket of identity. The generic city is nothing but a reflection of present need and present ability. It is a city without history... If it gets too small it just expands. If it gets too old it just selfdestructs and renews. It is superficial like a Holywood studio lot, it can produce a new identity every Monday morning... The great orginality of the generic city is to abandon what doesn't work... to break up the blacktop of idealism with the jackhammers of realism and to accept

whatever graws in its place. In that sense the generic city accommodotes both the primordiol and the futuristic. ...But its most dongerous and most exhilarating discovery is that planning makes no difference whatsoever" End of quote.

Well, there you are. This is what one of the worlds most avantgarde and influential architects of today is telling us. Identity and historic layers are a waste of time and planning makes no difference whatsoever.

As you will understand, I tried very hard to have Koolhaas here at our conference as one of our key note speakers. But alas, due to having won the Pritsker Prize recently his diary didn't allow him in the end.

So where do we stand, we as DOCOMOMO should ask ourselves if planning of the city in the sense of the Modern Movement is impossible, because its consists of thousands of incompatible coordination systems, how will we manage the different layers of speed and spatial meaning simultaneously, and how do we find balances between order and chaos for our future cities?

One thing we do know. However digitalised, fragmented, nomadic or multicultural we have become, an ecological and sacial spatial equilibrium will always remoin a necessity. Besides the importance of emancipation, of self determination and participation, the need of belonging and intimacy, of historic and local identity will be as relevant in the future as it was in the past. And perhaps even more so in a hyper-dynamic and secular era like ours.

This conference will show, that apart from the stereotype and true criticism about the modern city, there are also many valuable qualities, which are or could be of vital importance to our future.

Dear DOCOMOMO friends let us be open-minded and critical about the urban past of Modern Movement and about our own specific contribution to the future. We should ask ourselves two main questions:

1. What can we learn from the past experiences with modern cities? and

2. What are the key elements of existing modern cities that we should keep in one or another way for future generations, why do we want to keep them and how?

Let's try to find answers to these questions in a spirit of optimism, that characteristic quality of the pioneers of the Modern Movement. The idea that the city can contribute to the happiness of all; something that can't be left solely to marked forces ar short-term political agendas. It very much needs the idealistic input from all of us as well. Just think of the social injustice around us, the population boom and the ecological urgency.

I sincerely hope that the choice of speakers and the contribution to the debates by everybody will lead us to some clues. I wish you a very productive conference.

OPENING LECTURE

Kisho Kurokawa

Kisho Kurokawa

The Symbiotic City

The 21st century Future City will perhaps become the metabolic and symbiotic city?

When the CIAM collapsed in 1958, my feelings were conflicted. I felt anxious regarding the loss of the text the Modern architecture movement, but I was also greatly anticipating what was to come after in architecture and city planning. Seeing these changes, I wrote an essay entitled "From the Age of Machine Principle to the Age of Life Principle" in 1959.

The Metabolism group we formed in 1960 introduced the Metabolism-Recycle concept, which is the key concept of the Age of Life Principle.

The period from the end of the 19th century to the collapse of the CIAM in the middle of the 20th can be defined as the peak of the Modern era. I believe the spirit of this era can be expressed by the phrase "the Age of Machine Principle", particularly when cultural figures such as Le Corbusier called the house a "machine for living", Russian film-director Sergei Eisenstein called cinema a machine, and Italian Futurist Marinetti called the poem a machine.

The Age of Machine Principle gave high esteem to efficiency, dualistic rationalism, productivity, universality, homogeneity, linear hierarchy, and global standardization.

Furthermore, it was the time that elevated the fields of science, technology, and economics, striving to become an industrialized society. Supporting the age of the machine principle were the concepts of Aristotelian and Cartesian dualistic rationalism, Logocentrism, humanism, and Eurocentrism. The "international style" of architecture from the Age of Machine Principle imported the ideas of industrialization and standardization as it spread throughout the world, blind to the existing cultures, traditions, and climates. It was an age that ruled by one exclusive model. The city of the Age of Machine Principle embodied the Athens Charter of the Modern City, the design also following a single model. The ideal city was planned as a final completion; the '*master* plan.'

Looking back at history, we know that a city is not defined by the plan from which it originated, but continues to grow and change and develop outside of any boundaries a 'master' plan may have drawn. I think it can be said that a single ideal model of architecture and urban planning does not exist. I contend that there are a variety of models to follow, and that architecture and urban planning should reflect the environment and culture that it inhabits.

Having set forth the hypothesis in my "From the Age of Machine Principle to the Age of Life Principle" in 1959, I truly believe that after 40 years my prediction has come true.

The life principle regards metabolism, recycling, information, ecology, sustainability, symbiosis, and the gene as its important key concepts. From the time I announced my prediction with my essay in 1959, I have based my architecture and urban designs along those concepts.

As part of the Metabolism movement that emerged in 1960, we introduced time as an element of architecture and city design. The design of the building was not restricted to the plan we drew, rather it allowed for the inevitable changes that the future would bring.

The Agricultural City Project (1960) is a metabolic city capable of growth and development. It exists without a center, the elevated pathways forming the megastructure of the agricultural city. Building the city above the rice paddy fields expresses the symbiosis between the urban and the rural, city and agriculture.

The Helix City 1961 is a man-made, 600m-tall spiral megastructure. Houses can be freely built on this man-made structure. The Helix City describes the text of the DNA double-helix structure announced in 1954 by Watson. The gene is the symbol of the Age of Life Principle. Designed to be built on a lake or sea, the Helix City realizes the symbiosis between nature and city. Furthermore it can grow upwards and sideways, making it a model of a metabolic city.

Defined by the lake in the center, the island is a Ring City, the prototype for the 21st century.

The Nakagin Capsule Tower (1972) can accommodate the individual as either a study space or a small sleeping space. The stairs and elevator are contained in the core column, sustaining as the vertical megastructure. The capsules are installed with 2 high-tension bolts, the wiring and ductwork all running exposed along the core column. The capsule's wiring, piping, plumbing, and fixtures can all be easily exchanged and recycled, giving the Nakagin Capsule Tower a long life span as an architectural expression of the concepts metabolism and recycling.

Capsule House K uses the same capsule as the Nakagin Capsule Tower. However, cor-ten (atmo-

spheric corrosion resistant steel) is used for the exterior walls. To preserve the nature of the surrounding steep terrain, the core column is the only part of the architecture that makes contact with the earth. The capsule is mounted an the core column in a cantilever structure. The capsule is composed of a kitchen capsule, two bedroom capsules, and a tea-room capsule.

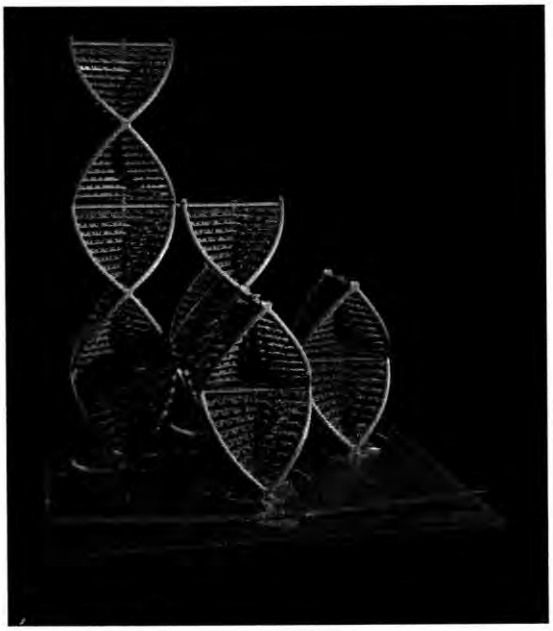


Fig. 1- Helix City Plan

The Sony Tower in Osaka (1976) is the vertically standing showroom for Sony Electronics. The elevator, escalator, and toilet are all capsulated, ensuring easy exchange and recycling in the future.

Metabolic architecture and the metabolic city are symbiosis between time—the past, present, and future. Under the ideas of life cycle and recycling, we researched how to construct an architecture that was a sustainable megastructure complete with fixtures that could easily be replaced. Recycling system is another theme of metabolic architecture and the metabolic city. In my theory an urban planning I proposed the idea af planning the city on the metabolic cycle. This idea is close to Louis Kahn's idea of Master Space and Servant Space.

The Life Cycle is divided into lang-term naturally existing megastructures—forests, rivers, and man-made megastructure—artificial land, and also into the canstantly changing Mechanical System—the wiring, piping for water and sewage, etc. It is thraugh this recycling system that the life of architecture and the city can be extended longer.

In 1971 I named the city of the Age of Life Principle the Eco-City when I had the discussion with economist Professor Kenneth Bolding based on his idea of Eco-systems. In this Eco-City numerous Eco-Technologies came about. For example, garbage piled up in neglected heops during the Age of Machine Principle, but the Age of Life Principle City employs garbage as a valuable source for energy and recyclable resources. Through permeable pavement, rainwater can be easily recycled back into the earth. The city that adapts and develops these Eco-technologies is a sustainable city. The design of the city is not anly to draw up a terminal master plan, but to organize a master system of structure.

The Age of Life Principle is not based on homageneity or universality, but on diversity and symbiosis. Culture and the arts should be regarded with the same importance as science, technology, and economics, and thus the Age of Life Principle endeavors to be an age of the information society.

The ideas supporting the Age of Life Principle should change the former notions of Logocentrism and dualistic ratianalism to Ecology, sensitivity, and the philosophy of symbiosis.

The belief that man, next to God and holding onta the tenet of reason, is given free reign aver all living things is outdated. We now understand that humans are not king of, but *part* of this intricate and expansive ecosystem. Human existence is dependent on the existence of the natural surroundings. The philosophy of symbiosis developed beyond the dualism between city and nature, between man and nature. The city is for humans, but a place to support all sorts of living things, a place to live symbiotically.

The philosophy of symbiosis traverses the dualism between man and nature, between nature and other living things. Therefore, the symbiosis between cutting-edge technology and nature, between multimedia technology and the genetic engineering or biotechnology of living things plays a very important role. Bioelectranics may become the largest industry af the 21st century. If that is so, then we can expect agriculture, biotechnalogy, and multi-media technology to be in symbiosis as the 21st century's advanced industry. For this up-caming era, the Eco-City has already been progressing, to the Eco- media City I gave name to long ago.

The 21st century's largest growing industries will be the multi-media industry, the logistics industry, and the ecological industry. Further into the future the union of these three industries, Eco-Media and Bio-Electronics industries will be the dominating industries.

In Japan alone, the market size of these three industries is speculated to become 420 trillion yen, 140 trillion-yen per industry, from the year 2010 ta 2015. This will of course have an impact an the future's cities, cities that I call Eco-media Cities.

The three infrastructure systems important to the Eco-media City are: aptic fiber and wireless com-

munications, the so-called information super highway are infrastructure far the multi-media industry; airparts, harbors, highways, railways, and related facilities are infrastructure for the logistics industry; nature which contains genetic resources and Eco-corridors are infrastructure for the Eco-industry.

All these infrastructure must be combined for the future city.

A new highway system needs to be constructed to link the airports, sea ports, harbors, and cargo railway stations.

Ten years ago at the environmental summit in Brazil, a treaty was signed to promote the diversification of living species, or bio-diversity. The purpose was to prevent the extinction of the earth's valuable species of plants and animals, and thereby protect global bio-diversity. From the point of view of Darwin's theory of natural selection, the disappearance of valuable forms of life is a natural consequence of evolution. The Brazil summit indeed announced the inauguration of an Age of Symbiosis with its rejection af the virtually supremacist way of thinking and its assertian that the proper way towards evolution is in the symbiosis af diverse species.

According to current research, worldwide urbanization and the destruction of forests for agricultural purposes, etc., have severed Eco-Systems everywhere, interfering with the species passing back and forth between different Eco-System areas. The creation af linear forests and ecological corridors ta form networks among isolated areas of Eco-Systems makes it possible for insects, butterflies, birds, small animals and other living species to move back and forth through large areas. The resulting interaction and symbiosis of various species of life is the most effective means af maintaining bio-diversity. Recent experiments have demanstrated that a corridor of forest as little as 20 meters wide is sufficient to support the movement of diverse species.

The importance of the Eco-corridor lies in its strategic value as a means of preserving bio-diversity, but there are two further implications to this, as well.

One is that our concem for diversification of species is implicit within a new vision of symbiosis among differing cultures which would encompass the wish to preserve all of the world's diversified and mutually distinctive cultures and to encourage cultural pluralism.

A second is that the three infrastructures of the Eco-Media City—interactive worldwide netwarks such as the Internet, borderless logistics, and Eco-corridors for promoting bio-diversity—are all infrastructures of the Future City far the Age of Symbiosis which will follow modernism and industrial society.

Symbiosis between nature and architecture

The symbiosis between nature and architecture can be realized through the intermediate zone, the man-made landscape (roof garden) that joins the wild, existing nature and constructions like architecture and cities.

The architecture follows alang the cantaur line ar undulation of the land as symbiosis between the architecture and nature is realized through the landscaping and plantation of the raaftaps.

In the design for the Public Space System along the Central axis of Shenzhen, (1997-) next to Hong Kong, I proposed the new city center of Eco-Media City. The axis of the city is 300 hectares, with a width ranging from 350m to 700 m, including Lian Hua Mountain, which is equal in size to Central Park in New York City. This axis contains ane and two-story buildings (one floor above and one floor below the ground). It is alsa quite possible to create an ecological corridor with the roof as man-made ground for an experimental park.

Fig. 2 - Shenzhen

The Eco-media City will be an experimental city for the symbiosis of man-made nature and cities; Eco-systems and electranics and human beings and other life.

The man-made nature created on the raof of the huge one or two-stary building will become an urban ecological corridor connecting man-made forests and the Lian Hua Mountains and extend to Shenzhen Bay.

Nature is important not only as landscape, but also as the shelter for the genes existing an the earth. Genes will be strategic resources of the 21st Century. The leading industry the 21st Century will be the symbiosis of genetic engineering and electronics (multi-media), the sa-called bioelectronics.

This huge low rise city center contains a city hall, an information center, a business support center (incubation center), a convention center, an art center, an art gallery, a recycling center, an energy center, a distribution center, a shopping center, a parking lot among other facilities.

60 km south of Kuala Lumpur, the initial stage of the New Kuala Lumpur International Airport has been completed. 2 highways, a high-speed railway,

fiber optics and other infrastructure will be constructed between Kuala Lumpur and the airport. Two Eco-Corridors are planned between the existing city Kuala Lumpur and the new airport.

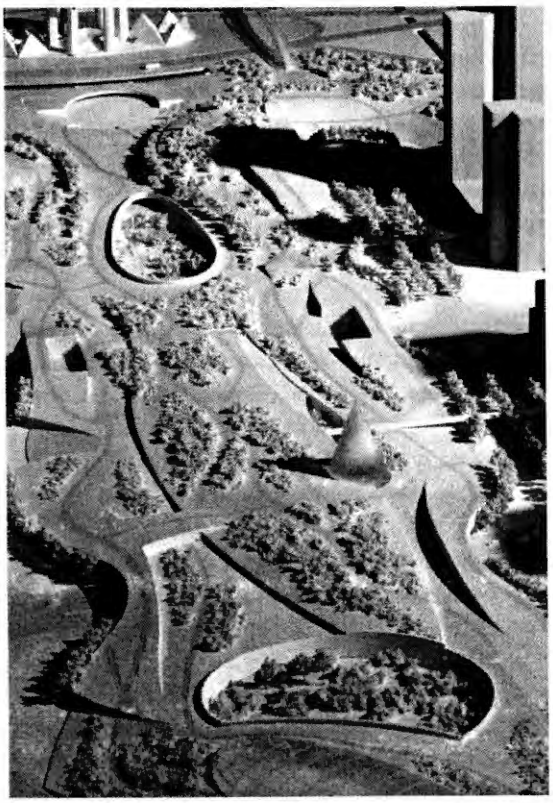


Fig. 3 - Kuala Lumpur

Except for a few hilly sections, this land is flat and measures 10 kilometers by 10 kilometers, or 100 square kilometers.

After selected as an architect, by International Nominated Competition, I suggested to the Malaysian government that they should formulate a regional development plan before random development overruns the area between Kuala Lumpur City and the new airport. This was the Eco-Media City concept, a KL Linear Capital Corridor Concept.

My proposal called for the creation of a completely new experimental city for the 21st century by building logistics, information, and ecological infrastructures in the area between Kuala Lumpur City and the new airport.

Later, the Multimedia Super Corridor (MSC) plan was formulated as the plan for the information infrastructure. An intelligent city (IT)— the Cyber Jaja— is developed as a Silican Valley-type area as part of the new capital plan.

The new capital plan was put forward as a plan to move the government offices to a location midway between Kuala Lumpur City and the new capital. The Prime Minister's residence and other structures have already been completed at the same time as the new airport.

The ecological corridor is still in the planning stage. This will gradually take shape for the future.

Creating a forest surrounding the airport would be the most effective method for blocking the airport noise. This is the basis of the concept for the symbiosis between forest and airport. In addition, we also think this would be effective far expressing the identity of the Malaysian topography.

The symbiosis between forest and airport invalves more than a forest planned for airport's exterior. In addition, a miniature tropical rain forest will be created inside the airpart between the main terminal building and the contact pier, and in the inner court in the center of the satellite building. It means Forest in Airport, Airport in Forest.

Both the people arriving at and departing from KLIA will come into contact with this forest, providing them with a sense of the Malaysian identity.

The completion of the current Phase I of KLIA will result in two 4,000 meter runways and a 334,300 square meter main terminal building. Phase I will enable the handling of 25 million passengers a year. Ultimately, however, the airport will be able to handle 120 million passengers annually by 2020.

The metabolic system was emphasized for this ambitious plan for an international hub airport. The idea for this airport to be comprised of cell units of Hyperbolic Paraboloid shells (H-P shells) with large spans of 38.4 meters was planned through the program for future expansion.

The concept of a structure with a conical shape and an H-P shell would be the best way to express to the greatest extent possible the identity of the Malaysian traditional and Islamic culture in abstract form.

The cross-section view of the H-P shell central axis is an arch.

An interior space created by the integration of the H-P shells would connote a continuous Islamic dome. Horizontal thrust would be generated at the base of the H-P shell. Though one method for resolving this would be to place tension wire between column capitals, we decided on a conical column made by cantilever column fram the base.

The city of the Age of the Machine Principle was separated into functions—giving rise to the commercial, residential, industrial, and recreational areas. But, the city of the 21st century will be a symbiosis of different functions with more complicated and integrated cambinations.

The symbiotic city also demands symbiosis between the generations. From babies to teenagers, and anta the elderly, they all need to communicate and interact. It is such a symbiotic city that will be the city af the 21st century, the city of the Age of the Life Principle.

This 21st century city also demands symbiosis between the past and the future. As our genes contain

our historicol information, the city, too, must olso contain historical information.

Information can be inherited from old buildings, old towns. Buildings that have no academic value must be preserved if they tell an important story of history. Hirashima's A-bamb Dame may nat have academic value, but is a tangible reminder of the tragedy that befell the city, and to alsa serve as a monument vowing to preserve peace.

Transpartation of the city af the Age of Machine Principle played an important role as the belt connected the parts. In the Age of Life Principle, in addition to transportation, information further joins people together, and information plays a role of connections between peaple and spaces. Alvin Taffler proposed the concept of the Electrical Cottage in his book *The Third Wave*. He made the prediction that in the information society, thraugh the computer, people could live anywhere, work anywhere, thus decentralizing the city. I, however, predict that the information society will thrive more on the centralization of cities. One reason being that through the Internet, people will be stimulated to meet with each other, and thus, will need urban spaces for face-to-face communication.

Therefare a high level of attentian is devoted to the streets for pedestrians, and also given to the design of an atrium inside the building to allow for direct interaction between peaple.

Architecture and urban space from the era of Madernism, from the Age of Machine Principle, were split too clearly into the binary of public and private. The life principle city will strive to recognize the intermediary area between the public and the private spaces, the common space. Long ago internalized exterior space, for example the portico and galleria that is covered street, played an important role as common space that was neither public nor private. The scale of the shared space meets the scale of the architecture and the city, connecting the groups of architecture and the rows of towns together.

The thaught for regarding this intermediary space with importance can also be found in traditional Japanese culture: the engawa, or, covered terrace, from the Sho'in and Sukiya styles of architecture was the space between the interior and exterior; the reserved white space in calligraphy; and the intervals of silence, *ma*, in music.

The Age of Machine Principle, a high populatian density was an evaluated bad condition, and the low-density garden city was idealized. The Age of Life Principle's city will perhaps be compacted and densely populated. This compact city can be high-rise-high-density; mid-rise-high-density; low-rise-high density. The variations of these are of course dependent upon variables such as climate, culture identity, and the surrounding environment.

To talk more about the ideo of spoce for direct interaction and face-to-face communication in the housing area, however, we need low-rise-high-density space that allows for these.

It is believed that the world populatian will reach 10 billion by the year 2050. If we cantinue to live in such low-density populatian areas, urban sprawl along with the forced expansion of farming land will destray the forests, paving the way for our own extinction. Saving the forests and preserving the variety of natural species in symbiosis with each other is the only way to preserve our own existence into the 21st century.

To provide for that, even each regional towns and country villages must make efforts without exception to live in these compacted, densely populated cities.

These compacted regional cities should create a networking system. The nature and agricultural and landscaped areas between these cities must be preserved in order to protect our eco-systems.

City parks should not be set apart in their own neighborhood, but should be integrated as green linear networks. These green networks are not to provide exclusive safe pathways for humans; they exist to support areas for small animals, insects, and birds to roam and inhabit as ecological corridors.

The Age of Machine Principle was the age of humanism. Things were designed exclusively for humans.

In the Age of Life Principle, the city's parks will be designed as part of an ecological corridor. The Future City of the 21st century is a city of symbiosis, a metabolic city, a recycling city, a sustainable city.

Now I would like to talk about a project I've been working with, the 21st century's first experimental city, the plan for the new capital of Kazakhstan. This new capital, Astana, is a metabolic, symbiotic, and sustainable Eco-city.

I received first prize in the intemational competition held in 1998, and currently, the planning is being funded by the ODA, of the Japanese government.

Three major characteristics of the new capital Astana are the following: first is Astana will be a symbiotic city. As protection against the strong winter winds, 10,000 ha of forest in the sauthwest region are planned. Further forest development is carried aut through the technique of alternating forest and wheat fields in a banded fashion. To regenerate the ecosystems of Kazakhstan plains, a green network and Eco-Corridor connect the forests with the city parks. This is an experiment to harbor the symbiosis between the new city and the forests.

The center of the new city is set along the Ishim River that flows along the south border of the existing city. The river, as nature, along with the man-made lake that also serves as a balancing pond, is in symbiasis with the city.

The streets of the existing city will also be preserved as much as possible in symbiosis with the new capital, symbiosis of history and the future.

To ensure the symbiosis between the historical and the contemparary, strong efforts are being paid to preserve the streets and historical architecture of the existing city.

Astana will strive to become a city where the different peoples—Kazakhstanians, Russians, Kirgizians, Germans, etc.—and their different cultures exist in symbiosis.

The region will keep the know-how gained from wheat agriculture and latest biotechnology to foster the new agriculture of soybeans and corn as one of the new capital's industries. It will also develop the symbiotic relationship between the city and agriculture, high-tech industry and agriculture.

The second characteristic is that Astana will be a metabolic city. Because the government officials' residences are the first to be relocated, the capital will become a city that grows quickly. To follow the changes and to grow, a flexible master system and master program are employed rather than a fixed master plan.

A linear zoning system that can expand along the east-west axis is also being proposed. Through the 3-ring road system and the cluster ring road system in the housing area, the capital can grow like the cell-city metabolically.

The third characteristic is that Astana will be a sustainable Eco-City. Rainwater is recycled back into the earth through permeable pavement, supplying water to the trees along the roads and forests. Garbage from kitchens will be produced as solid fuel and as fertilizer for agricultural use. The city's sewage and drainage water will be purified and used for the forests and farming. Natural gas power stations will be introduced to replace coal power stations to help reduce carbon dioxide emissions, making a contribution to improve the environment. To make use of the strong winds, a large-scale wind power generation system is also planned.

By the year 2030, the whole picture of metabolic symbiotic Future City of the 21st century will be seen.

Architecture that strives to foster symbiosis between the past and the present cannot simply copy the shapes of architecture as they were—this would be nothing more than creating works like the vulgar toy "historical" buildings of Disneyland.

I propose using the abstract symbolic method, of which there are 2 approaches.

The first approach is to use signs, like the letters of the alphabet, which are then combined to create a word, leading to the combination of words which create literature. When applying this method to architecture, I use geometric shapes, like the cube, the sphere, the cone, the cylinder, the pyramid, the ellipse, the triangle, the half-circle, the hemisphere, signs like the alphabet common to everyone. From the time of ancient Egypt and China to the contemporary era, these shapes have been used as letters of architecture's alphabet. By altering the proportions of the geometric shapes, varying the materials, or changing the placement within an identity of cultures and regions and meanings can be expressed.

For example, a splayed cone can represent the Japanese traditional hat of a woman, the hat of a Chinese farmer, or the roof of an Indonesian village.

The towers of European castles are topped with cone-shaped roofs, the titanium noses of jet fighter planes are sharp cones.

The Chinese-Japanese Youth Center was built in 1990 by a grant-in-aid from the ODA of the Japanese government in collaboration with funding from the Chinese government, becoming a symbol of the relationship between China and Japan. This architecture is additionally an example of abstract symbolism.

The hotel, gymnasium, and training facility are rendered in abstract geometric forms like the cylinder, square, rectangle, ellipse, and circle.

One important characteristic is the hotel and auditorium, the sphere resting on a square base. This square-circle element is a symbolic quote of the outlook on the universe from the *tennennchihau* belief, written in *Enanji* in the era of Han dynasty of ancient China, where a circle represented heaven and a square represented the earth.

By escaping a completely symmetric form, the architecture also expresses the Japanese aesthetic of asymmetry.

Through the use of pretextual symbols and traditional aesthetics, the Chinese Youth Culture Center expresses symbiosis between the past and the present abstractly.

Furthermore, symmetrical arrangement of geometric shapes means a classical European aesthetic sense, while an asymmetrical random layout describes the unique Japanese aesthetic.

The second method is using ideogrammatic symbols, like those of Chinese characters. Chinese characters, or *kanji*, are a result of taking the shape of something like a bird or mountain and then abstracting it into a character.

If I copied traditional shapes directly, it is not creative, but once abstracted like a Chinese character then it is a creation.

Architecture must express the spirit of the era from which it was created.

I believe the spirit of the Modern era can be expressed by the word 'abstract'. Abstract painting, sculpture, music, modern architecture that are all examples of abstraction. It is through the abstraction of traditional forms and shapes that we can realize the symbiosis between the past and the present.

I.M. Pei's glass pyramid at the entrance to the Louvre and Danish architect Sprekelsen's Grande Arche in Paris are masterpieces representative of abstracted symbolism.

I believe thot abstract symbolism is an important creative method capable of fostering symbiosis between glabal standardization and local identity, between the past and the present.

Architecture and cities in 21st Century will be created by the philosophy of symbiosis.

KEYWORDS

Metabolism, Recycle, Ecology, Symbiosis, Informotion.

Kisho Kuroka. Hon. FAIA, Hon. FRIBA, Founder of the Metabolism group (1960). His recent works are the New Wing of the Van Gogh Museum in Amsterdam, the Kuala Lumpur New International Airport, and the Osaka Internatianal Convention Center. He is currently planning the new city center of Shen Zhen"11 (pop. 4 million) in China, and the new capital of Kazokhstan in central Asia. He is author of the renowned Philosophy of Symbiosis (Tokyo, Tokuma Publishing Co.)

MAIN THEME LECTURES

Jean-Louis Cohen

Fernando Perez-Oyarzun

Milton Santos

Main Theme Report

by the chair, Hubert-Jan Henket

The city is the result of intellectual develapment and material requirements over time, argued Jean Louis Cohen. A variation on this was given by Hilde Heynen (see page 120) of these proceedings) referring to Sibyl Moholy Nagy who wrote that the city is the result of the collective desire for that city and thus citizens should porticipate in the forming of their city. The Brazilian social geographer Milton Santos presented a clear underpinning for these theses talking about the South American Metropole. The city is a living organism, he said, in which the artefacts are static and human action is transient. So whatever happens the physical structure is always outdated in relation to the socio economic requirements and greed. How to get this into a workable and democratically controllable system? One thing to him was clear: large scale and total concepts will not do because money flows in any direction where profit can be made leaving behind what is not needed any longer.

Yet, Jean Louis Cohen pointed out, the contradiction between radical global plans and local discussion was the most striking peculiarity of Modern Movement Urbanism. A very striking demonstration of this argument was presented by Fernando Perez Oyarzun. He showed Le Corbusier's scheme of 1929 for a viaduct of 45 km long structure radically solving the urban traffic problem in a mountain environment os well as solving the housing shortage. How disastrous this project would have been if (only portly) realised, seen through the eyes of Cohen, Santos, or Moholy Nagy? One was reminded of the peculiar contradiction in Corbu's work between his extreme sensitivity in some projects (take for example 'The Currutchet House in la Plata Argentina) and his extreme radicalism in this case. But more importantly one wondered what influence this scheme has had on the development of the South American city. Before the arrival of Le Corbusier, South America cities had a similar scale to their European brothers. But inspired by the vastness of the South American landscape Corbu changed his concept of scale and it seems that his local disciples adopted this concept to put it into practice.

Countering a questian from the audience how to approach the conservatian of Modern Movement cities like Brasilia, Cohen said 'you can't conserve a social structure'.

Later on Jadish Sagar in his beautiful presentation on Chandigahr (see page 302) of these proceedings) developed this argument further. It is unavoidable that the values of the mix with new needs and provided extremes are reconciled or at least if plurality is accepted the outcome can be influenced in a positive and constructive way.

Jean-Louis Cohen

The Modern Movement and Urban History

I will first of all thank all the organizers for assigning me the difficult task of opening the debate at this sixth conference of Docomomo. It is both an honor and an embarrassment for me to be asked to comment on "The Modern Movement and Urban History". An honor to throw some wood into the fire of scholarly discussion, and an embarrassment, because I am not, and this is something I should confess right now, a true believer in the "Modern Movement". Faithful to my master and friend Manfredo Tafuri, I can only put this term in quotation marks, for several reasons:

- first, because of the wide extension of radical design strategies throughout the XXth Century well beyond those of the founding "moderns". These strategies often took visual expressions that were traditionalist, but nonetheless incorporated attempts at breaking with eclecticism and historicism.
- second, because of the multiplicity of "movements" involved in modernism itself, and overlooked by the founding modern historians who developed narratives based on inclusion rather than inclusion. As soon as a thorough and objective record of the encounter between modernism and modernization is constructed, one is forced to detect parallel and contradictory movements.
- and third, because of the sheer propagandistic dimension the term "Modern Movement" has taken. After all, the slogan was not coined by Nikolaus Pevsner in his 1936 *Pioneers of the Modern Movement*, but exactly forty years before by Otto Wagner in *Moderne Architektur*.

A new stage in terms of research and preservation policies has to be acknowledged in many countries today, and the scarcity of publications has given place to an indigestible mass of monographs and studies, that no collective effort can sort out. This year's Docomomo conference is an meaningful step in a process of expansion, at it confronts scholarship from several continents.

Balancing these doubts that are by no means only my own, I am on the other side a true believer in Urban History. I will borrow here a definition given in 1994 by Swiss historian André Corboz in his introduction to F. Walter's *La Suisse urbaine 1750 1950*. Corboz identifies the *History of urbanism*, dealing with the "theories" and what I should call the methods of self-conscious transformation of urban space ; the *History of cities*, dealing with their "marphological and typological evolution and their topographic peculiarities"; and *Urban History*, or the "history of the practices societies develop of their territory".

I will try to focus here on issues and situations dealing with these three levels, and mainly with the third and last one, as I guess from the program that urbanism and specific cities will be considered by many contributions to the conference.

Markers of ideals

Let me start by pointing to one of the long lasting tropes in the historiography of the "Modern Movement". Many narratives relative to the encounters between Modern architecture and the city have been constructed in the epic mode.

"Victorious" attempts at creating new towns, such as Costa's and Niemeyer's Brasilia or Le Corbusier's Chandigarh, are balanced by "failures", such as Le Corbusier's uncompleted Plan Voisin in Paris or Plan Obus in Algiers. Failure in these cases and many others has been often interpreted by architects themselves as the "betrayal" of political élites, unable to see the virtues of grand plans.

On the other hand, Modern architecture has been perceived by critics of a different persuasion as a cluster of strategies opposed not only to the existing city, but also to the very concept of city. Simplified interpretations of the History of urbanism are common and are often absorbed by contemporary architects. When Christian de Portzamparc affirms in 1995 (introduction to Olivier Mongin, *Vers la traisième ville ?*, Paris, Hachette, 1995) to be designing for the "Age 3" of the city, after "Age 1", i.e. the traditional continuous city, and "Age 2", i.e. the discontinuous city of Modernism, he overlooks, all the moments in which attempts at partial reforms have produced stimulating developments that have been consistently well-received.

In the case of Ernst May's Frankfurt *Siedlungen*, in relation to city expansion, or in relation to city reconstruction, as in Hans Scharoun's plan for the *Hansaviertel*, radical architecture has been able to produce workable contributions to the modernization of cities. This has been done less with global plans, like Scharaun's own 1946 *Kollektivplan* far Berlin, than with limited schemes providing convincing representations of a desiroble future.

Here we meet of course the first pattern articuloting Modern architecture and Urban History : *duration*. For me the issue is less to know what types of cities ar af components of cities Madern architecture has generated directly or indirectly, than to question how Modern buildings condense and document past attitudes and uses. In short, how they belong bath to intellectual history and the history of material culture in urban space.

If the chord of "failure" has so often been struck by historians, it is because failure is the index of a forbidden future. I will here inscribe my remarks within the theoretical framework provided by Reinhart Koselleck *Futures past : on the semantics of historical time*, originally published in 1979. The German historian locates historical present, that is the time of action, ar of project in our particular case, at the intersection of the "space of experience" and the "horizon of expectation". French philosopher Paul Ricœur, in many writings such as *L'initiative* (1986), discusses the way the "horizon of expectations" seems to be fleeing an the "space of experience" shrinking in utopian discourse. This is, I believe, an excellent definition of many modernist strategies.

What the historical interpretatian of Modern architecture can produce in this instance is to revive lost "horizon of expectations" or in other terms forgotten urban futures, that have become nonetheless sometimes part of contemporary urban practices. Former futures have not been systematically linked with Modernism however. In my investigatian of Americanism, for instance, I have met many architectural aspects of the phenomenon that were not embodied by radical buildings –those of Walter Gropius, Le Corbusier, Mendelsohn or other Modernists, but by seemingly conservative designs.

But there are instances where Modern architecture has embodied the vision of the destiny of new nations, this is of course true of Brazil, as it is true, for instance, of inter-war Czechoslovakia. The Renaissance of the nation and the status of capital city regained by Prague had to be underlined by buildings breaking the former connections with Vienna and looking at radical strategies as developed in Paris or in Moscow.

In the case of Czechoslovakia or Finland, Modern architecture has almost taken the status of a tradition condensing part of national identity. But Prague's architecture of the inter-war years, taken here as a brief example brings me to focus for a second again on the question of temporality. This short-lived production can be read according to a *synchronic* way as a component of European Modernism or of the emerging new Czech culture.

Fig. 1 – Ludvik Kysela, Bat'a commercial building on Venceslas Square, Prague, 1928-1929, photo Jean-Louis Cohen

If we want to frame an interpretatian inscribed in Urban History, we have however to read it according to a *diachranic* thread, as a particular moment in the modernization of Prague, a process that had started with the Industrial revolution and immigration. Kysela's Bat'a building and Havlicek's and Honzik's Pension Institute bear witness of the two shaping forces in the process : advanced business strategies and progressive social policies.

I will not elaborate anymore, but we have here the most obvious figure in the articulation of the "Modern Movement" and urban History : architecture as a marker not of the internal changes of architecturol discourse, but of the modernization process at large.

The core of this talk will however deal with other issues inscribed in temporality. I will try to use as illustrations analyses coming from my own research of the past years, namely projects dealing with French/German occupation, Paris's suburban belt, and with colonial Casablanca.

Markers of conflicts and unresolved issues

I would like to contrast with the idealized image of smooth modernization the dimension of conflict at the core of contemporary history at large, but olso of Urban History. Urban space is shaped, determined by conflicts between nations, social classes and ethnic groups, and architecture is not immune, but rather exemplifies and condenses these conflicts.

There are of course rather benign conflicts. Rather basically, buildings remain markers of negotiations between different types of agents. They document the changes in zoning principles and building regulations (Baupolizei), and therefore give an account of the balance between public control and private interest. In this respect, episodes like the 1902 Paris urban regulation, drafted by Louis Bonnier, or the 1916 New York zoning ordinance, drafted by George B. Ford, are extremely interesting. Significantly, these regulations are shaped on new types of buildings, higher, more complex and more individualistic in both cases.

Common rule, as applied to the entire city, derives from radical architectural experiments –those of late Art Nouveau in Paris and af the massive early skyscrapers in New York. And this rule will then provide the framework for the practice of development for many decades, including the completion of buildings pushing the rule to its limit, like these two.

But there also more violent patterns of conflict, in which architecture is involved. I will focus here on the sequence of projects and buildings than can be observed in a territory extending from Switzerland to Belgium, and alongside which France and Germany have been constantly and rather brutally switching hegemony since the XVIIIth Century. And here we have an interesting manifestation of a diachronic pattern. In the sequence of Nazi (re) annexation of Alsace and Lorraine, from 1940 to 1944, and of French occupation of Baden, Rhineland and the Saar, from 1945 to 1955 in the latter case, Modern architecture condenses conflicts between states and long duration patterns of city development.

In contradiction with superficial views of orchitecture in Nazi Germany, the Germans sponsor modern traditionalists like Schmitthenner, as well as radical functionalists like Neufert, at that time head assistant to Albert Speer.

In the small village of Boust, the conflict is today documented by the remaining church of Steffann, a beautiful interpretation of Lorraine's rural heritage, as well as by the later and extremely different church of Pingusson, head planner in neorby Sarre.

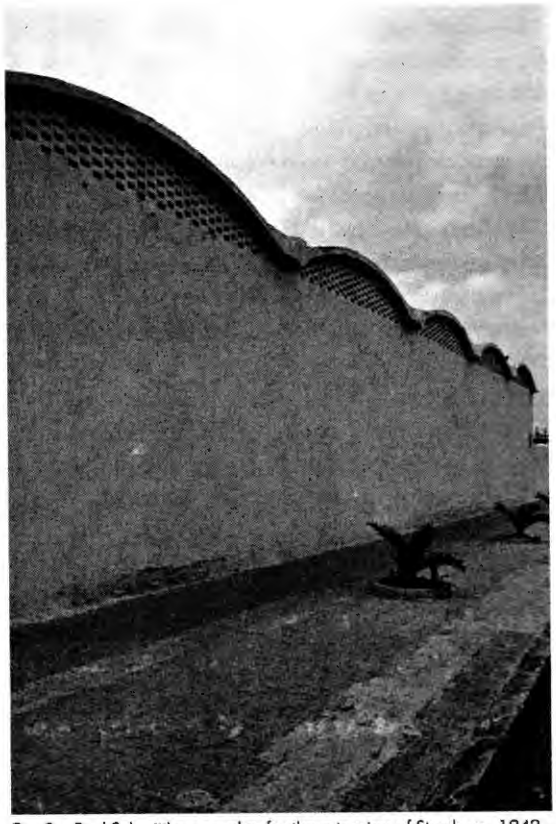


Fig. 2 – Paul Schmitthenner, plan for the extension of Strasburg, 1942.

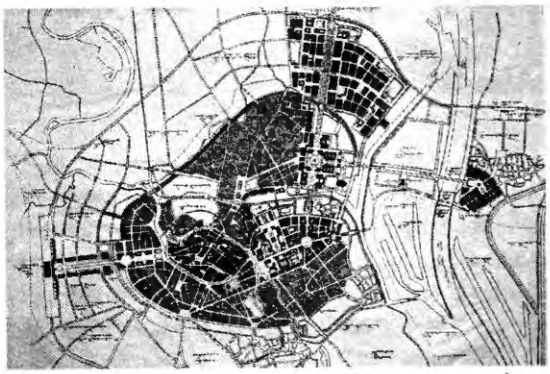


Fig. 3 – Georges-Henri Pingusson, plan for the reconstruction of Saorbrücken, 1946.

Not only do the French promote new radical plans, in this case for Sarrebruck, capital of Sorre, a regian they planned to keep forever, but they also use the industrial context for experimentation such as Prouvé's prefabricated houses. But they also promote actively the ideals of Modernism, through exhibitions and publications.

In the case of Mayence, a medieval city located on the Rhine, Marcel Lods designs a reconstruction plan based on the Athens Charter, translated into German by the French and advertised by Gerald Hanning's extraordinary cartoons (Hanning had been the head designer for the Modulor in Le Corbusier's office).

But Lods' plans for a radical reconstruction of Mayence are blocked by public opinion and the French withdraw them, as Paul Schmitthenner, initially an authentic early Nazi, but indeed a great traditionalist designer, develops a more respectful plan for the central city and conservative-looking high-rises.

In short, whereas the Germans had been able to build several schemes without interference from local society, French projects were doomed as Allied occupation was meant to restore democracy, implying a public intervention fatal to radical plans (like in the case of Le Corbusier's Saint-Dié's plan). Buildings remaining today in Alsace, Lorraine, and Pingusson's former French Embassy in Sarrebruck still bear witness of these intense conflicts and belong to the region's urban history.

Fig. 4 – Henri Prost, plan for Casablanca, 1917.

I will now shift my focus south, to a scene of colonial conflict : the city of Casablanca, as practically refounded by the French during the Protectorate years –1912 to 1956. Here, too, plans and buildings have to been fromed in a broad historical sequence. The city was of course shaped by strategies of domination that were alternatively or simultaneously brutal and subtle. But policies promoted by Gen. Lyautey and his followers also aimed at modernization not only of Morocco, but also of France, through the experience gained in a non-bureaucratic and technologically advanced society.

Fig. 5 – Auguste Perret, France-Maroc warehouse, Casablanca, 1915, photo Jean-Louis Cohen

The contradictions between these different sides of colonial Casablanca can be grasped at many levels. The first one is the issue of technological innovation. The colonial context and the freedom in respect to conservative controls helped Perret to develop in 1913 thin shell vaults featured in all major books of the 1920's, from Giedion to Hilberseimer.

More than thirty years later, the same context allowed the Honneger brothers, Swiss architects and contractors, to experiment with lightweight concrete systems, later to be used in their Geneva housing schemes.

The tall office or residential buildings are not only the index of urban regulation much more open to innovative high-rise projects than the Paris one, but also reveal the ambition of Casablanca's Jews to excel in architectural statements representing new typologies. These buildings also reflect the liberation from the *dhimma* or Islamic protection, forbidding Jews to build houses and synagogues that were higher than Muslim houses and mosques...

Architectural invention in Casablanca reveals the many facets of the leisurely colonial life, and also the madern face of a city born with the movies and the automobile, and whose most meaningful landmarks are not churches but cinemas and garages. Lyrical statements also appeored after 1945 in the work of the remarkable Jean-François Zevaco, who was obviously aware of the issues *L'Architecture d'aujaurd'hui* devoted to Brasil.

But of course the determining conflict opposed the colonial bourgeaisie and a growing Moroccan working class, and here again, built programs are meaningful markers. Whereas the workers housing schemes of the 1920's were base on the imitation of oncient Moroccan or Andolusian quarters, post-1945 projects developed a more abstract geametry.

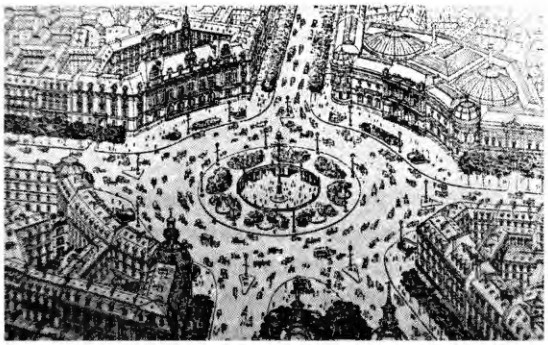


Fig. 6 – ATBAT Afrique (Georges Candilis, Shadrach Woods), "Beehive" housing block for Muslims, Casablanca, 1952.

This new geometry is nowhere more visible than in the "Beehive" low-cost building with stacked patios built by Georges Candilis and ATBAT-Afrique in 1952. It is in itself the expression of a contradictory strategy aiming at providing newly urbanized Muslims with

the collective housing they were aspiring to, without depriving them of their traditional patios.

A shift of references is visible here, from the early Moorish patterns found in Boyer's Townhall to the vertical villages surveyed later that helped Candilis to legitimize his high-rise designs.

In cantrast to the simplistic views of the colonial city, often based on a naive projection overseas of Michel Foucault analyses, field research and interpretations reveal the complex and changing web of oppositions and conflicts inside Moroccan urban society. Architecture becomes as important as historical evidence as series of economic data or political archives. I will return to the reception of these buildings in today's Morocco.

Markers of sick, contested territories

But let me return to Paris with a third and last example, to focus on a cycle of projects spanning a period of 130 years, from the completion of a retardataire fortification belt in 1845 to its belated replacement by a triple ring of housing, parks and freeways in the 1970's.

Already obsolete at the time of its completion, the rampart was standing alone as an abandoned structure an which Parisians would go out for picnics. Shanties similar in many ways to Brazilian favelas would appear on the "zone" adjacent to the 33 km long ring, popularizing a term, used for instance by Guillaume Apollinaire in the title of one of his most famous poems. By 1930, 50.000 people would inhabit the zone in precarious conditions.

But what the chronicle of projects connected with the return of the belt to civilian life indicates is a sort of mutual attraction between innovative design and a territory considered by many to be in crisis. The first decade of discussion an the decommissioning of the rampart and the zone coincide with Eugène Hénard's investigation in modern town planning. His idea for the belt is to create a system of large parks and to unify the street network of Paris and the outlying suburb, instead of creating a new isolation belt of houses and parks.

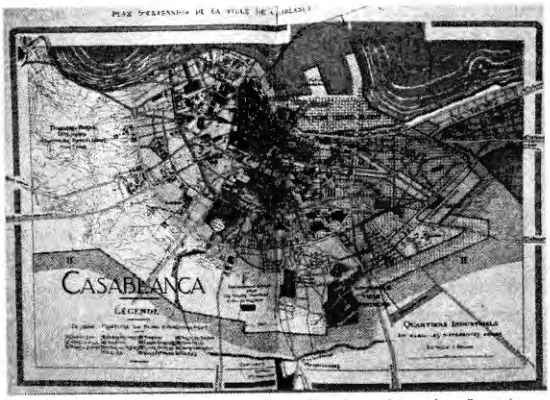


Fig. 7 – Eugène Hénard, project for a "boulevard à redans" on the Paris fortifications, 1903.

In the first moments of the controversy, Hénard works specifically on an alternative to the fortification belt based on the invention of a new type of boulevard with indents, studied in two basic versians.

After the war, a new arrangement is finally put in place, whereby the rampart is scheduled to be replaced by housing and the "zone" by parks and sports facilities. This new organization will not be implemented as such, since the political pressure of the "zone" inhabitants will prevent their expropriation until Vichy's government authoritarian rule.

The ideal type of the community planned on the belt is the Cité universitaire, first designed by Bechmann. Of course, Le Corbusier's Pavillon suisse will completely break with the rules established by Bechmann. But Le Corbusier's encounters with the rampart and the zone are nonetheless a clear evidence of what I should call the opportunism of Modern architecture in dealing with urban issues. I will focus in this respect on two striking examples.

When Le Corbusier designs the 1922 Immeuble-villas, we now that the commissionemanates from a program written by the "Groupe de l'habitation franco-américaine". But the letters of intent sent by the architect to the Groupe show that the lots selected for the scheme are all located on the Western segment of the former Fortifications, devoted to luxury housing. The exact dimensions of the blocks confirm the choice made by Le Corbusier at this early stage of using the most widely discussed urban enterprise of the interwar times to root his first provocative project in the field of collective housing.

An indication of his interest for the belt is given in the sketches that accompany *The City of Tomorrow*, published in 1925. He prescribes a presence of XXth century invention precisely on the perimeter of Paris, as an answer to previous major urban compositions.

In preparation for the 1937 International Exposition, Le Corbusier selects once again a site on the former rampart, at the Kellermann bastion, pretending to be at once producing a striking example of innovative housing architecture and preserving the old rampart. In short, we see here how a major modern architect uses a sensitive area of the city to stage his novel proposals.

To make a long story short, let's focus for a minute on the last episode of this Parisian saga. When the "zone" is finally cleared, in the 1950's, the State's civil engineers manage to use it to build a ring freeway and slab housing. The sketches of Raymond Lopez for the reconstruction of the areas give the impression of a thoroughly modern and empty Paris with the basic corner bistrot replaced by a cafeteria housed under a Niemeyeresque shell... Altogether, built or unbuilt architecture remain eloquent witnesses of the farmer rampart's difficult destiny.

Markers of collective memory

To return to the notion of Urban History as a discussion of spatial practices, the question of memory has to be mentioned. I will not abuse the term of "places of memory", that has proven so productive as a historical slogan, notably in the collective investigation led by Pierre Nora. There, the notion of "place" is essentially metaphorical. But, if I subscribe to the concept of collective memory, as defined by Maurice Halbwachs, there is no doubt thot territories touched by modem urbanism keep their former meaning. This is the case with the Paris "zone", still present in suburban memory, notably through songs and movies.

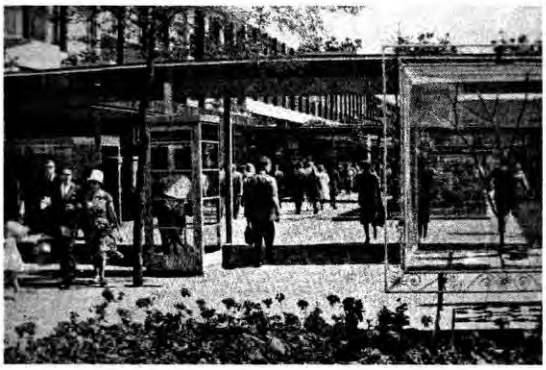


Fig. 8 – Marius Boyer, Banque commerciale du Maroc, Casablanca, 1930. photo Jean-Louis Cohen

To return now for a minute to Casablanca, the most striking buildings of the 1920's have become part of the urban landscape and their initial meaning has been lost. No one sees today in Boyer's bank an expression of colonial financial capital or in Brion's Bendahan's building the ambitious attempts of a Jewish community now reduced to a spectrum. Both buildings now bolster the pride Casablanca's residents take in a history of creativity opposed to the supposed lethargy of traditional cities.

At this point, we are forced to deal with politics and the place of political struggle in today's city. Architecture can also be a marker of past fights. Lurçat's school in Villejuif has remained since 1933 the evidence of a strategy aiming at providing the best services to a suburban proletarian township. On the contrary, Sert's and Tarres-Clave's Casa Bloc in Barcelona has been transformed under Franco into a Guardia Civil barracks and has only recently been restored to its identity as an experimental building.

Bath buildings remain vestiges of larger urban schemes for the development of suburbia in the case of Lurçat or for the complete reorganization of the Barcelona region –the Macià plan- with Casa Blac. The theme of the conference is "the modem city facing the future". I can only retum now in conclusion to my initial skeptical remarks. With some happy exceptions like the Plan Pilota area of the large city that is now Brasilia, there is no such thing as a fully "modern" city if we define it conventional terms. There are modern islands in the contemporary city that deserve our understanding and our care, and these two are good examples of fragment that are still pointing out to the project of modem architecture.

Concluding remarks

The buildings designed by modern architects have initially interiorized elements of urban cultures. They are now discrete, objective components of metropoles that have grown, and where their original subversive meaning is often obscured. The radical schemes ond buildings of the Modern movement are not only in this regard markers of inventiveness, but also records of political, social and cultural change. They document the process of modernization as much as they crystallize new architectural ideals.

In terms of methadology, this condition implies a wide opening to parallel strategies. Art history cannot alone provide the conceptual framework for an interpretation of modern architecture as inscribed in urban history. A wide range of materials and issues have to be tackled, but salvation cannot be found only in better monographs. At this year's world historians' conference, the need for new synthesis has been discussed. Architectural history has yet to rediscover its desire for synthetic interpretation, in order to frame the necessary microstudies.

But, beyond the scientific criteria and objectives, what is at stake here is also the awareness broader audiences can build of the necessary conservation of modern buildings. Ginzburg's Narkomfin and Eileen Gray's Roquebrune house might be difficult to understand as major episodes in modern culture. I am convinced that, in order to address audiences beyond the professional and the academic ones, mediations have to be found, that would help citizens to see in Narkomfin a generous but doomed attempt at collectivizing daily life, and to perceive in E 1027 the search for a renewed life under the sun. These mediations can be found in narratives shaping Urban History as a powerful tool for the development of what Docomomo stands for.

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KEYWORDS

Urbanism, Schools, France, United States, Morocco

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Fernando Perez-Oyarzun

Le Corbusier and Latin America: Urban Thinking/Urban Projects

Abstract

Le Corbusier showed an interest for travelling and for remote countries since he was a young student. Travels made part of his architectural education and later of his professional career, partially developed abroad.

Since his first travel to Latin America in 1929. Le Corbusier developed strong links with a continent, which he dreamt as an ideal setting for works and projects. On the other side, the master was a deteminant figure in the process of reception of modern ideas on the part of Latin American architects, As a consequence of this fact, many Latin Americans were part of that crew of young architects working at Rue de Sevres 35.

The possibility of developing urban plans and projects was at the base of Le Corbusier's connections to Latin America. That fact motivated his first travel to Argentina. Brazil, Uruguay and Paraguay and also those he made the continent in the following years.

A series of urban proposals for Buenos Aires, Montevideo. Sao Paulo and Rio de Janeiro, sketched during his lecture travel in 1929 was the pregnant nucleus from which a series of urban plans and projects were later developed by Le Corbusier and some of his collaborators, Those plans were significant and influential both in the history of Latin American urban thinking and in its architectural culture in a variety of forms.

But Latin America wasn't merely a possibility of applying the ideas of the mas ter and developing his projects. Latin American experiences left a recognisable imprint on Le Corbusier's biography and ideas. In facto some ofhis proposals for Latin America can be recognised as inflection points in bis career and in the development of his ideas.

Trying to reveol the kind of connections estoblished by Le Corbusier with Latin America: recounting the main episodes of thot connections, mainly on the urban level, as their consequences on the Latin Anlericon scene: and finally, identifying the more significant inflections provoked by Latin Americo over Le Corbusier's ideos and biogrophy, is the main aim of this presentation.

KEYWORDS

Le Corbusier; Latin America, urban thinking, urban projects

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Milton Santos

A Third World Modern Urbanism

I am grateful for having been so kindly invited by the organizers of this meeting, thraugh the person of Frederico Holanda, to be present here today.

I must say that I rise to this podium with great and justifiable fear. It is very difficult, first of all, when one endeavors to be an epistemologist, to speak in a way that might immediately ar mechanically interest epistemologists of other areas and, secondly, to speak of things one truly believes in to an international audience, since concepts are rarely capable of crossing borders. There is a border between geography — or, rather, geographers — and urbanists, which constitutes a challenge when trying to bring forth something that might be of interest. Perhaps that border to be traversed together is the city itself. Or, more than the city, the urban.

What I have been asked to da may at first sight seem like futurology. In fact, it is much less than that and much more than that, since what I have been asked to talk about here is the future. And the end of the 20th century finally allaws us to treat utapias in a scientific manner — that old dream of thinkers and scientists — in sa far as this end of the century appears to be a great life jacket for thinkers, since for the first time in the history of Man we have before us the idea and the fact of empirical universality. That is, it is the first time in the history of Mon, and therefore in the history of thought, that the world reveals itself everywhere in the plenitude of things known (or not), of ideas known (ar not), of relationships known (or not), as a system of empirical data, part of which is used here and there to build the so-called concrete history, while the rest remains outside of it, yet ready to be used as true, concrete, empirical facts in the creatian af a new cancrete history. Thus the discussion of the future becomes possible. Thus the idea of utopia can no longer be called pointless. Thus it becomes our duty to be utopian above all, since the job of the intellectual is only truly worthwhile when it focuses, first of all, on the interest of the majority, and, secondly, on the possible future.

What might this urban future be? What might be the concrete possibility of bringing forth the new that has not yet become? How can we mentally gather the elements that have been taken from the existing reolity, or the reality to become; the materials that will make that future reality? I start by recalling Jean Jacques Rousseau's words when, referring to the cities, he said, "The city is not the things. The city is the things plus the people." The city is, abave all, a live work that in the end becames a universal work built on dead work, which also appears ta be universal. Dead work that acquires significance and value through live work). Live work that permits the intellectual operations necessary to turn the dead thing — the landscape — socially significant through the life injected to it by man's actions. Those human actions that provide intelligibility ta technique, because technique is not intelligible by itself. In fact, technique does not exist by itself. It only acquires historical existence thraugh human action. And this end of the century shows us, more than other centuries and millenniums could have shown us, that history revalves around twa poles: technique and politics. I say this precisely in order to be able to talk to urbanists, who are the men and women that work with things and who believe that things can command politics, when, if we want things to have social significance, we must conceive them as being produced by politics, as acquiring significance through politics, as being prone to change through politics. I believe this discussion is necessary for all of those who work with space, but it is above all indispensable for urbanists, those men of space that work much more with things than they do with actions in their transience, because they apparently work with ready-made actions and they believe that these dead actions can have an effect on life.

In order to continue the argument, it is necessary to discuss, however briefly — and I apologize for doing so, since I imagine that all of this is well known, if only to point out some of the traits that underlie everything I will say, ond therefore will not be repeated in the following pages — some of what in essence characterizes today these two pillars of the history of Man: technique and politics.

Technique, the technical system that surrounds us and that somehaw constitutes the framewark of our lives, is highly scientific, highly artificial, highly intentional, strongly systemic and invasive. And politics, which rules our lives, decides the way in which technique imposes our destiny upon us. Politics, which is today characterized by being as technical

and scientific as technique, tends nonetheless to be privatizing, anti-republican, anti-citizen — and it is important to discuss this when talking about urbanism and *urbis* —, and tends to be controlled by businesses, so much so that in some states, especially those of poor or politically impoverished countries, businesses govern more than governments.

The result of the conjunction of these two factors is that large cities — especially the large cities of today — have finally become the concrete realization of that which in the 70s was called capitalist socialization. Without this capitalist socialization it is impossible to understand either urbanism or the work of urbanists in relation to cities and citizens. This capitalist socialization can be measured through some data of which I will speak briefly. The first is the appetite for competitiveness exhibited by large businesses. Competitiveness, as everyone knows, is competition exercised without compassion. And this competitiveness is creative. It imposes the need to create potential fluidity, which by the way is one of the guiding lights of contemporary urbanism and may be more so in the urbanism of the future, if the current political system continues. This potential fluidity, which is one of the most remarkable aspects of today's world and reflects directly upon the city and the urban — it is the creation of potential fluidity that allows businesses to become more fluid in the urban space and in space in general —, leads to the need to expand the new, to exacerbate the new. But now, thanks to the virtualities of the technical system, of a new that is hypertelic, in other words, a new that is created with a plethora of intentionality, an intentionality that is adapted to the necessities of fluidity of these same large businesses — less and less numerous among the ensemble of businesses, more and more dominant in the national and international urban scene, with extremely large and grave repercussions on urban life, especially urban reconstructions, in sum, on current urbanism, especially in underdeveloped regions. And this is the consequence. The so-called renewal results precisely in the premature aging of the city, because by renovating a part of the city — based on a hypertelic urbanistic perspective, that is, an urbanistic perspective plethoric with intentionality —, I am at the same time aging the rest of the city. And the rest of the city, which is rarely of interest to urbanism, becomes increasingly distant in the time of economic life — not the time of clocks or calendars —, increasingly distant and older and less effective than the part of the city that is necessary to the wealthy life of those large businesses.

Premature aging of the city, premature aging of urban objects. The so-called urban renewal, whatever its name might be, is at the same time an instrument of aging of the city as a whole. And one of the results of this is the widening within the city of functional contrasts and value differences, whatever the meaning of word value, which in turn results in a race for renewal; in other words, the need to renovate presents itself in a much stronger and more urgent manner than before, increasing the possibility of an even more conflicting urban growth devoid of social control. "Speed" always brought with it differences, and in the cities these differences increase as the distance between the new and the old increases. And yet only the new is encouraged, only the new is favored. The most that is done for the old is to ask it to renew or adapt itself, which results in an evolution that is chaotic and even faster than before, compatible with the speed inherent to neoliberalism.

The differences and even the oppositions between the users of the new and the users of the old increase, which is equivalent to a veritable revolution of urban values: a widening of the differences between urban agents, firms, people, and institutions.

In the Third World... I prefer that expression to that of "peripheral country" — I will not subscribe to the absurdity of supposing that 5 billion people are peripheral in relationship to that small billion that makes up the so-called Western World. The Third World has experienced through this evolutionary framework a series of consequences that I will also briefly address: the first is that the city becomes a place where variety is greater and the levels of activity and wealth are more numerous. The second is that individual differences increase, including differences of opportunity.

There is also in the Third World a most important urban factor, which is the absence or precariousness of citizenship. Citizenship is a central datum in the understanding of urban directions. It is a central fact when trying to understand why such and such urban approach was taken. It is a measuring rod for the form in which cities may evolve. I insist on this because I believe that it is a subject that is not being sufficiently dealt with. It certainly is considered, but in a tangential manner, when it could be extremely useful in distinguishing urban forms and contents in regions such as the underdeveloped world and especially in regions such as Europe, where the notion of citizenship, albeit strongly eroded by neoliberal assaults, still persists.

And there is above all the escalation of the tendency of large cities to attract poor people, because the countryside is modernized and it drives away the poor, who migrate to the cities, the only places capable of providing activities for the poor, of storing the poor — the city as a warehouse for the poor —, of producing poor people — the city, through its organization, as capable of being a factory of

poor people. This is what under current circumstances makes every new brick a piece of the urban crisis, an engine of the urban crisis. The Urbanism of renewal creates more problems than it solves.

Within this context we need to ask ourselves what is the current role of large businesses and international banks on urban approaches and urban production. This is an extremely important piece of data: to investigate, on one hand, how international banks interfere in urban life, especially in larger cities of underdeveloped countries, but also to investigate how businesses, insofar as they locate themselves and impose a certain type of consumption of space, a certain functionality of space, demand that the government adapt itself to their needs, those of large businesses. A distortion that can be easily observed in Brazil, that of the territorial architecture of the nation as a whole, but also of each of its subsets, beginning with the city, resulting from the action of large businesses, which have their own spatial needs in the avid world of fluidity and in a world where production is increasingly dependent on the conditions offered by space.

Note how the issues for the city and for urbanism get complicated in this end of the 20th century for underdeveloped countries. Large businesses, large international banks. International banks choose the investments they want to make, pay the research studies that justify such ventures, publicize the ideas that encourage this type of renewal, and build both the new city and the new urban ideology. Large businesses interfere on urban renewal, but they also interfere on everyday urban reality. The cities are so large that the so-called rational solutions to its problems — energy, water, transportation, garbage, and services in general — are entrusted to those large businesses whose participation is suggested to city and national governments by the international banks in charge of "helping" solve the urban problems.

Note for example the various contracts signed by the IDB, not to mention the World Bank, with Brazilian and Latin American municipalities. This happens also because within each country — as we all know, Brazil is perhaps the best example of this — the legislative bodies — the Senate of the Republic, the House of Representatives — govern less than the Central Bank does. The Central Bank disposes, sets the conditions to respond rapidly to demands that are highly mutable within the short response time dictated by the interests of large international firms, and thus the nation is led in respect to that which is its most important. The legislation relevant to the reorganization of the territory and the city is thus driven, directly and indirectly, much more by the Central Bank, through decrees developed overnight, than by the Senate of the Republic and the House of Representatives, whose decisions are considered too slow.

I could not discuss the question of urbanism or even the urban question if I were to omit this fact, which is a new yet genuine fact of the history of the world and of the history of each place. This indicates that it is time to go back to the debate. It indicates that it is not enough to add words of indignation to outdated formulas. It indicates that we need to have the courage that only intellectuals are capable of; that is, the courage to forget, because without forgetting it is impossible to renew anything, especially ideas. Ideas are a product of forgetfulness. And this is the reason why academic institutions are often an impediment to the progress of ideas, because such institutions are for the most part intellectual places where repetition is preferred to innovation, where carbon paper has a more important role than discovery, where conciliation has a more decisive role than debate.

This debate should perhaps begin with that set of ideas inherited from the 19th century, which in universities is known by the name of Marxism. All of us know that Marxism was not created in terms of the territory, but we also know that the territory, through its realization, through what it is, through the way in which it is structured, through the way in which it evolves, is the best philosophical place to develop Marxist concepts, which have become indispensable given that only capitalism exists. The "death" of socialism — a death in quotes, of course —, the victory of capitalism, means, as we all know, the present or impending triumph of Marxism.

Now, what to do today with ideas such as the notions of general capital and particular capital? Particlar capital leads us to consider the technical side of production. But it is the general capital that forces us to think of the political side of production, which is global. This means that when we think of either São Paulo or [for me] the most beautiful small city of the Brazilian interior, Birigüi (Ana Fernandes' homeland), we take the world as our reference, the world in its workings. But this leads us to abstraction, which often bothers us, because we are asked for concrete solutions, as if that had never existed.

And the notian of value — use value and trade value —, so abundantly applied to urban studies, when today we know that trade value precedes use value in the current conditions of globalization and not the other way around... how do we learn it and even teach it?

And the notion of absolute and relative surplus value, which also demands a different interpretation? And all of this is related to the production of the city or, as was said in earlier times, to the production and reproduction of the city, because a good Marxist never used the word "production" without adding "reproduction," even he did not know what

he was talking about. But it is related especially to the issue of depreciation of non-hegemonic capital and to the issue of depreciation of labor within the city, without which it is impossible to understand what the city is.

It is this new organic composition of the territory that causes technical or scientific informational work to have such an important role, and that shifts the focus from the secondary to the tertiary sector, a fact that we have difficulty accepting, especially in Brazil, because the country's hegemonic University of urban thought is located in a city that until recently was considered locomotive because it was the industrial capital, and it took 25 years to realize that it was no longer so, but that it continued to be locomotive because it was the relational capital of services.

I believe that the role of large businesses, of giant businesses, and the relationship they have with the government — or, rather, the non-government — are facts of the urban crisis that we sometimes approach with a purely instrumental vision, which is not nearly sufficient.

The ungovernableness of the cities we are experiencing goes hand in hand with the ungovernableness of countries. Latin America is a continent that is currently ungovernable, which points to the need to substitute the system of neoliberalism and globalization in its current form for something else.

The city is precisely the place that represents the change that society demands, since in it, in different ways, is taking place what economists like Montchrétien and William Petty suggested existed in their days, when they wrote that we should pay attention to the explosive political content of unjust cities. Unjust cities; in other words, cities where the citizen is not supreme.

In the Third World, and especially in Latin America, the city is the source of employment for most of the active population; the city is the means of subsistence for most people. All of this, I repeat, is what leads to a shift in the role of tertiaries, all tertiaries, the very new ones as well as banal or primitive ones, as revealers of the future.

But this also points to us, and our job is to think. It points to the fact that the city in this turn of the century is doubly critical. It is critical because of the life that is lived within it, but it is above all critical, and this should be our first concern, because of the fact that the city highlights the dysfunctions of the political and economic system in which we live. At the same time this presents itself as a warning, because the city becames highly critical in a world that tends to be highly uncritical, a fact that widens the scope of our duty as thinkers of the city, of our duty in the idealization of the city of the future... and this task is Herculean. I hope that urbanists will accept the help of other specialists in this task. Sometimes one gets the impression that they want no help. The Brazilian case seems to me exemplary of this near monopoly of thought and action on the city still held by urbanists. I think this is a pity, because it limits the possibility of a vision that goes beyond the vision of objects and things, which Rousseau already condemned, and assigns to actians a secondary or residual role.

Urbanism is the — sometimes — scientifically founded art of arranging things. But we need more than blind practice; we need a theory capable of uniting things and actions, in other words, capable of uniting technique and politics. And this is where the role of ideas comes in, of an urbanologic and not merely urbanistic imagination, without which there is no hope for thought on the city and will most likely be no hope for urban practice.

I suppose that given this proposal we need to beware of the danger of invalidating the debate. For exomple, as a result of a rejection of a notion of the future that is inconsistent with our vision of what is to come, but also as a result of seeking shelter in the dictionary.

An example can be found in the difference between the notion of landscape and the notion of space. Obviously, this legacy was handed down to us in part by geographers, by European geography, which during this entire century made the terrible mistake of assimilating the idea of space to the idea of landscape, which for geography and its parallel disciplines made it difficult to understand the process of action, attributing virtues to materiality that it cannot have. I believe it is now time to set into motion that urbanologic imagination, that jump from urbanism to urbanology, an urbanology of which urbanism will always be an important part. Today we find it difficult to do so because the other disciplines of the urban were somehow eclipsed by urbanism: urban geography was somehow eclipsed; urban sociology lost its vitality; urban anthropology reduced its field of action. And, on the contrary, there was, on one hand, an ascendancy of intellectual practices that give pure materiality the prerogative over action: studies on transportation, public spaces, etc.; and on the other, intellectual practices that are not committed to the importance of material reality: studies that imagine they can address the urban question solely through culture, ideas of identity, the imaginary. We need to go beyond the stage where we maintain a separate vision of processes, which are by nature a piece of the urban whole. This is not easy because we live a moment of history that is imbued with a strong feeling of urgency, resulting from a fast and bustling world

that discourages lengthy studies and all-encompassing practices, so that even progressive administrations fail to look for progressive solutions. It is no longer surprising to find municipalities headed by progressive mayors adopting neoliberal practices.

I believe it is urgent. I am sure that urbanists will make a formidable contribution because they are above all men and women who never lacked the imagination I advocate, allowing us to rapidly reach a citizen urbanism instead of an entrepreneurial urbanism; a citizen planning instead of a planning that interests and benefits only a part of the population.

Once again I would like to thank Frederico. I also reiterate my gratitude to the Organizing Commission for the great distinction of making me one of the speakers of this meeting.

KEYWORDS

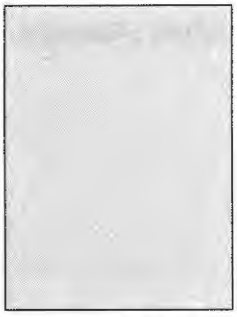
globalization, third world, urbanism, citizenship.

Milton Santos (1926-2001), a geographer born in Bahia, was one of the internationally most known Brazilian intellectuals. Due his political ideas, he spent two months in a military prison in Salvador, Brazil. Released after the symptons of a heart attack, he left for France in 1964. The forced exile projected him internationally. He became professor of the universities of Paris, Columbia, Toronto and Der Assalaam and lived in Venezuela and United Kingdom. He returned to Brazil in 1977. Doctor in Geography for the University of Estrasburgo and honoris causa doctor for various Universities in Brazil, Italy and France, he became professor of the Federal University of Bahia, visiting professor in Stanford and titular professor of the Geography Department of the São Paulo University and member of the National Advice of Human Development, Brazil. For a long time, he has been UN, OEA, UNESCO and OIT advicer, whose Committee for the Study of the Urbanization and the Work he has been the manager. He was the only scholar outside the Anglo-Saxan world to receive what could be considered the Nobel Prize for Geography, the Vautrin Lud prize in 1994. Miltan Santos searched to free geography of its isolation, adding to it contributions from economy, sociology and philosophy. He has published more than 40 books and 300 articles. His more important works are: "The Center of the City of Salvador" (1959), "The City in the Underdeveloped Countries" (1965), "The Divided Space" (1978), "Space and Society" (1979), "Space and Method" (1985), "The Brazilian Urbanization" (1993), "For an other Globalization" (2000). Besidesf ten of medals, he had been awarded with the following prizes: "Technological Merit" in 1997 (Union of the Engineers of the State of São Paulo), Personality of the Yeor of 1997 (Institute of the Architects of Brazil), and the Jabuti Prize of 1997, for the book "The Nature of the Space, Technique and Time, Reason and Emotion".

MAIN THEME SESSION

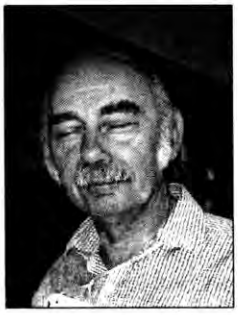
Silvia Arango

Philippe Panerai



Maria Letizia Conforto

Hanna Lewi



Jurgen Lafrens

Silvia Arango

Latin-American Cities

Abstract

The Latin American City has no nature... but history. From the formal-esthetic point of view, its particularity results from the moment of its historic consolidation. While the European City consolidates in the 19th Century, it is in the 20thCentury that this will happen with the Latin American ones, in great speed. The architecture and, moreover, the urbanism of the first modernity -very little understood -will for ever imprint themselves in the principal Latin American cities, with the generations which have worked between 1930 and 1950. The architecture of the second modernity has acted mainly in the successive growth belts, but its "CIAM" urbanism has limited itself to isolated areas, producing the sensation of disorder and fragmentation that today supposedly characterises those cities.

KEYWORDS

Latin America, cities, history, urbanis, modernity. fragmentation

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Philippe Panerai

French Modern Cities

Abstract

1920-1940:

facing the conventional urban development some experiences prepare the future:

-municipalist and SFU (French Society af Urbanists) urbanism;

-social housing in Paris: the red bricks wall af H. B. M. in Paris and the dutch influency;

-garden-cities in the suburbs: between english garden-cities and german-siedlungen;

-modero groups ofbuilding fram Le Corbusier (Pessac, near Bordeaux), Mallet Stevens (in Paris) and others...

1940-1955:

war, damage and re-building: the birth of french state urban policy:

-the idea of planing towns and territolles;

-tradicional versus modero: the debate af the french reconstructian (Saint-MalO, Le Havre);

-Charta of Athens as state doctrine;

-first modero buildings in Marseille (Le Corbusier), Strasbaurg (Beaudouin) ou Le Havre (Perret).

1955-1970:

from the rationalism afbuilding process to the french «Grands Ensembles» (large social estates):

-Sarcelles and the «Caisse des Dépôts»

-Massy and the composite conception :

-Toulouse-Le Mirail and the french Team ten :

-Grenoble-la ville neuve and the french brutalism.

1965-1982:

apogy and decadency of the french centralicism:

-the '65 « schéma directeur » and the news towns «à la française »;

-Paris-ta Défense : a state project during half-century;

-the «Plan de Sauvegarde du Morais» and the preservation policy;

-urban renovotion.

1980-2000:

new direction in french urbanism:

-ZAC (concerted planning areas) between new haussmonism and new modernism;

-the question of peripheries;

-new centralities in the large town.

KEYWORDS

France, conventional urban development, re-building after war, rationalism, Grands Emsembles, new directions

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Maria Letizia Conforto

Rome, the city of the future in the lessons of history: typological models and strategies of intervention

Introduction

The Historical City and the Contemporary City

The connotations of modernity are not always evident in recent architecture, not exclusive to it. Perhaps even today, Rome cannot define itself as a modern city, in spite of the fact that most of the buildings of the city's metropolitan area were built in the past one hundred years. Instead, it was the scale of ancient architecture,its spatial conception and language which served as starting points of many significant studies by masters of the Modern Movement. The rare quality constructions of the past century have not, in fact, been able to imprint their own language on the collective memory through the creation of spaces suitable for the public. Meanwhile, the successful and diffuse formal solutions of historical structures, though equipped with inadequate infrastructure, are evermore being forced to accomodate sometimes incompatible functions.

At the end of the XIXth century, this culture of separation already characterized the efforts to transform Rome into a modern capital. In the case of street systems, existing patterns were widened and regularized without realizing the quality of the built environment. With regards to services, buildings of the historical center were substituted by new, often overscaled, uni-functional spaces. In the case of historical monuments, their effective dimensions were ignored, thus isolating entire sectors of the city.

Still today, in the disorder of the metropolitan chaos, modern projects, projects for the reuse of historical structures and projects for the restoration of ancient monumental complexes risk mortifying the city's identity, because they are conceived of for separete and often conflicting fields. In spite of restraints and improper transformations, any intervention must make the most of existing conditions and anticipate future needs. That is, if we don't intend on relegating the livable city to some utopia.

The objective of obtaining widespread quality urban space, such as expressed in the redundancy of the major efforts of the past or in the rationality of nineteenth century engineers and modern architects, must today base itself on the continual process of careful recognition of the urban context and the selection of uses, materials and technology which are compatible with this context.

The Ancient City and the City of the Future

It is possible, at the scale of the entire metropolitan area, to identify new parameters of intervention which, defining the project within the intrinsic qualities of its surroundings, have as their objective the requalification of recent constructions, the recovery of abandoned areas and complexes, and the protection of historical and archeological patrimony. While it started from a very sectorial point of view, this awareness has been the direction of the Soprintendenza Archeologica di Roma for the past twenty years, realizing that the ancient city provided Rome with models, structures and its very materials of construction and that it organized and gave form to a territorial settlement at a metropolitan scale on which the contemporary city still stands. The artifacts and the archeology which are present thoughout the city, constitute an enormous resaurce, not just of symbolic imagery but as an operative part of the contempary city. Although they are a product of antiquity, perhaps these places are the only part of the city designed to receive a tumultuous and intense number of visitors.

As a first step towards an integrated project, a piano di settare was made for the Archeological Area - at the moment within the Aurelian walls - in which various possible interventions and uses were identified, zone by zone. Throughout the city, it was then possible to envision:

1- the spaces to be designated for new infrastructures and new works,

2-the zones where new works must be preceded by an archeological survey,

3-the areas exclusively dedicated to conservation, thus creating completely new typologies.

In the rush to finish works in time for the year 2000 Jubilee, these prescriptions were often undervalued or ignored, resulting in belated afterthoughts and revolving controversies.

In spite of mony contradictions, some projects have begun the long process towards an urban plan which is more respectful of the ancient past and more consistent with contempory life (thus, has the archeological area of piazza Vittorio recovered its nineteenth century gardens and buildings, work is currently underway to re-establish the edges and rationalize the public services at the Baths of Caracalla, while in the area of the Coliseum and the Imperial Fora projects must await the conclusion of archeological investigations as well as the results of surveys for a proposed new subway line). In all these cases, diverse public and private entities have interacted with different competence and responsability.

New Typological Models

In many ways, an archeological presence provides the modern city with specific guidelines for ordering itself: this occurs within the city proper, as in the case of the Imperial Fora, where the city is arranged around a vast central archeological area; in the periphery, as in the excavations at the new Auditorium; and in modern infrastructure, for example, the archeological findings that have informed the ordering of the new high speed railway.

The goal of the Soprintendenza Archealogica di Roma is to preserve the testimony of the past, and to defend it and keep it from degradation; these are choices in favor of the city. There ore two well accepted methods within city planning for achieving this goal: first, the interventian of a guardian who selects projects based on the compatibility between the historic site itself and the proposed function of the ensuing renovation; and, second, the patient work of conservation that strives to restore the site to an original state, thereby opposing the natural will of each built piece to waste away. Good city planning is born from the knowledge of morphology of place, from the understanding of historic processes of construction, and from careful consideration of research and findings.

Planning such as this is indispensable to Rame, which, modernized much later than other European capitals, would like to take advantage of that tardiness and transform it (by studying and avoiding the mistakes of other twentieth century renovations of ancient sites) into a potential progress, in which it uses these recuperated spaces in a way thot integrates rather than isolates them, incorporating on every level their rich historical and archeological lineage with their current cultural functions; the sites can also exist as living architectural archives for analysis of technique and material, and can become part of the heritage of a city that remains a contemporary city. One autonomous contribution of the Soprintendenza Archeologica di Rama can be seen in the method of its intervention at the Balbo Crypt, a city block which has grown throughout the centuries among the vestiges of one of the theatres of the ancient Campus Martius. These monumental excavations and restorations, which have been under way for several years and which cover an area af almost 10,000 square meters (110,000 square feet), strive to restare activity (cultural activity and information services) to this long abandoned space.

In projects such as this, a public space characterized by its important ancient and post-ancient construction, there must be a tight connection between the excavated (dug out and on display) and restored (built up and with current function) parts of the project in order for it to be successfully reintegrated into the modern fabric of the city.

The Restoration Project of the Balbo Crypt

The theatre built in the first century BC by Lucio Cornelio Balbo on the site of the Villa Publica was composed of a hemisphere af seating, or cavea, and a wide, square portico with a structure at its center used either for cult worship or as a fountain. This form, one of the actually visible in the fragments of the Forma Urbis (the etched-stone map of Rome from the age of Septimius Severus) is still recognizable in the Renaissance structure of the city blocks and in the ancient foundations of the present buildings; the black formed by the palozzo Mattei, the palazzo Caetani, and the palazzo Paganica correspond to the cavea, and the block of the Balbo Crypt, separated from the others during the building of the via Caetani in the Renaissance, occupies entirely the ancient portico. The current space of the crypt contains the remains of two convents and some houses, all of which are of medieval origins, were renovated in the sixteenth and seventeenth centuries, and were partially demolished in the 1940's in the course of widening the via delle Botteghe Oscure; since then the entire area has been abandoned. Restricted from being sold by virtue of its identification as o roman monument, the site has only recently been entrusted to the Soprintendenza Archealogica di Roma, which had effected the long task of acquiring the site's scientific recognition.From the demolition of the Renaissance construction, there emerged the ruins of a sixteenth century building, monastic buildings preceding that, medieval houses before that, and, af course, of the original Roman monuments. The excavations and historic research have identified ancient bearing structures up to the upper floors of the pre-Renaissance houses and palaces; this particular city block seems, in fact, to have olways been at the center of the urban life of Rome, and its surviving buildings represent and describe, in their farm, materials, and same contra-

dictions, the growth and transformation of the city. The stratified excavation has revealed parts of the complex that were covered and recovered during its many different states of existence: from an abandoned state to productive, from defense to dwelling, and from its use as apartments to that of a convent. The same method of recognition applied vertically, that is, to the thick, built up layers of the walls of the building, helps to identify the borders and the connections of the origins of the building, bringing to light an extraordinary, built archive. The continuity of the Roman structures here with those of the following eras gives rise to an urban stratification of great complexity and scientific interest rare to find in a city so often renovated as Rome. However, because of the fragmentation caused by the many transformations and heavy demolitions throughout the years, along with the instability of the surviving walls, it is necessary to carry out a project of complete restoration. This restoration cannot oversimplify but must allow for a complexity of diverse yet compatible functions; it must revive adequate conditions of fully functioning contemporary services along with complete conservation of existing historical architecture. However, because no interventions on the city can be hypothesized in solely analytical terms, it is necessary to attempt to restore general discoveries to urban specifics, thereby creating a project synthesis that is capable of formulating a general strategic argument that restores form, use, and meaning to this forgotten piece of the ancient historic fabric.

The archeological monument outlined here is one of maximum value for the accumulation of civil, religious and historic meanings; it is meant to be used by the masses as sequences of administrative, civic, cultural and performance spaces, which took on new collective meanings from the presence of the medieval spaces.

The archeological area, recently brought to light in excavation, is an integral part of the Central Archeological Park that even today informs the structure of many public spaces of Rome. This could accommodate within its restored layers, both ancient and post-ancient, an information and research center relating to the conservation of the historic city, centralizing for the masses this important cultural resource.

This resource will permit the general analytical thinking and the specific project goals to be brought together in this new urban setting, adding to its complexity and multiplicity of readings. For instance, if the morphological and typological particularity of the site requires a very refined technique of survey, this refined technique (and its tools) could be exhibited as well, and with it an explanation of how it was used and what specific archeological findings it recorded. This could also be used in defining the form of the project of restoring the city block.

The proposal to use the Balbo Crypt as the Museo Nazionale Romano's center of medieval archeology stems from the specific nature of its site and how it correlates with what is known of ancient topography, and also with the identification of many layers of the stratified urban complex within it. This new center benefits from a privileged position in the urban archeological park and the historic paths of the ancient Campus Martius, which are home to most of Rome's museums and cultural institutions. From this location it is possible to plan almost any desired visit: to monuments, ancient baths, sites of medieval limestone kilns, defense towers and Renaissance houses, and also to modern archives, laboratories, and rooms for study and exhibition.

Urban Stratification and Manufactured Buildings: Conservation, protection, recuperation and valorization

The scientific survey of different urban layers has enabled the identification and location of the many structures that have occupied the site of the Balbo Crypt throughout the centuries. In some of these surviving structures, identification can only be hypothesized, while in others the intact and well recognizable vertical and horizontal layers are conserved, though they may be inserted into more recent buildings. All of these edifices, resting on roman monuments and built with those monuments' recuperated materials, today are often unfit for supporting even their own weight. Therefore, during the excavation, the sequence of construction was dated, and its sequence and use recorded, and the supporting members were conserved and the added pieces removed, until the extent of the roman monuments were recognized and measured. Also recorded during this process were the historical phases of use: from ancient construction, to buildings abandoned or reused in medieval times, and on to the Renaissance and modern interventions.

This same recording method, applied vertically to the walls, and compared to source documents, has allowed for the recognition and dating of different phases of construction, of the plurality of materials, and of the techniques of construction and quality of finishing touches. This patient labor of research, under way now for more than twenty years, has enormously enriched the topographic, historic and technical knowledge the city has, but the project needs to acquire more adequate instruments to be able to continue. In this scenario, even the physical rebuilding of the various lacunae (missing parts), structures, wall fabric textures, roof systems, and architectural sections, (which would be difficult to represent at

the scole of the plan of the whole site) could be expressed by a series of explanation tags that would define to the visitor the strotegy of each part of the project. Trying to explain architectural processes with words should not be interpreted as a devaluation of architecturol drawing, nor should it be seen as an ambitious desire to go back to the ancient practice of making treatises. Instead it should be seen as a valid instrument of research for the synthesis of a continuous evolution of the actual state of the area and of the project. At an urban level, even the most accurate plan, façade or sectional representotion of this morphological complexity with its superimposition of uses leads to the risk of being overly simplistic. At this scale, the required drawings for the definition of the recuperation plan, which are essential, are presented as inadequate for controlling the project of each building and the entire urban space. To conserve the building or one of its parts, in fact, implies assuming decisions that have to respond to architectural guidelines, while the conservation decisions derive from the specific selection of what could be restored and integrated in situ. The same singling out of which methods to adopt, although it is a fundamental part of the project, is hard to represent at the scale of the building, and even if it is represented, it would be of little operative use. Detail drawings are the only drawings that provide enough information to ensure quality execution both building and strategy.

Therefore, it is thought that the complex intertwining of the analytical phase and the synthesis of the project could be represented not only by drawings but also with explanatory essays (about the decisions and the descriptions of the contents) which could constitute a document of fast consultation for the operative phases of the project, and which could also be used for future works of this kind. The considerable length of time taken by the survey (and by the administrative response to the decisions made) could in the long run compromise the direct control over the project. Therefore these descriptive essays could represent, more than drawings, the dialectic of the project; they would not imply specific solutions, as do drawings, but instead would assert a general strategy with which to proceed. Articulating the plurality of operations, it will be possible to indicate certain programs through a simple system of coordinates, which will correspond to: different materials to be restored (describing with precision the techniques); the integration of certain materials (supported by historical reasons); and the design of modern integrations (to repair the fractures produced by the various demolitions). The ancient and post-ancient structures will be restored within every building unit, emphasizing within the various recognizable phases the less invasive interventions, with homogenous moteriols and construction techniques compatible with the ancient. Anologously, the level changes between modern and ancient layers will be bridged to re-establish the continuity of the ancient fabric.

The liberation of the Roman monument produced by these demolitions can suggest a program of restoration that will recompose the volumes of the city block using the minimum of space, while restoring also the front façade. New demolitions will not be proposed. However, it may be necessary to find a flexible method of intervention in order to recuperate even the partially damaged buildings. In this case, steel or concrete can be used as a visibly separatematerial for the connections or to welcome functions that are inadequate to the historical structures. The modern materials therefore won't be demonized, nor overly emphasized, but instead could be composed in the metamorphism of forms together with traditional and historical materials.

The city block exterior will be presented with the Renaissance profile (which was generated from the Roman monument); while using these instruments of historical sciences, it will be possible in the interior to re-create the idea of the large empty urban space generated by the demolitions of the 1940's. The large container of the Roman monument will go back to its ancient function of providing public space, at the center of the architectural complex of the block. It will be open towards the city through the paths of the medieval alleys and through the gardens and courtyards of the houses.

Many of these, although later incarporated into the palaces, are still visible as ancient limestone paths and wells that existed still in the time of the 1748 plan of Giovanbattista Nolli.

From the street level, the internal space can be articulated towards the excavations and the archeological area, or towards the roofs that define the tops of the volumes which were left open from the demolitions of the 1940's; in this way, the interior can dynamically compose itself of ancient and modern, from continuously varying points of view.

CREDITS

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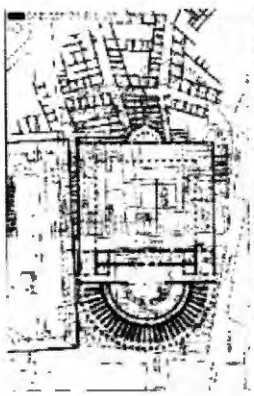
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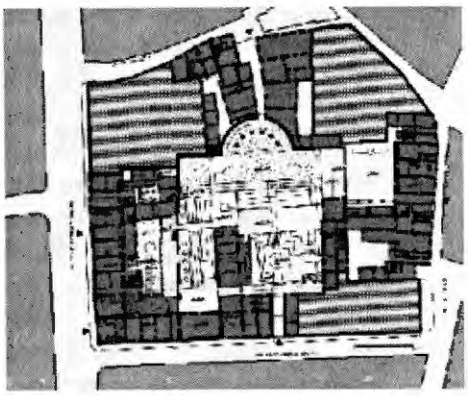
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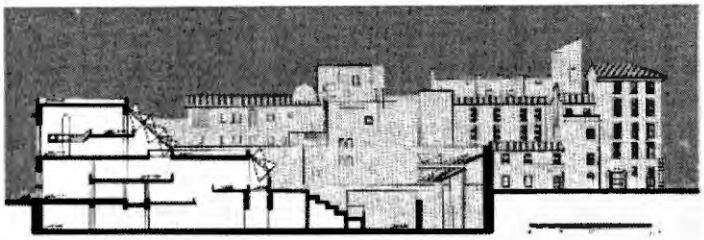
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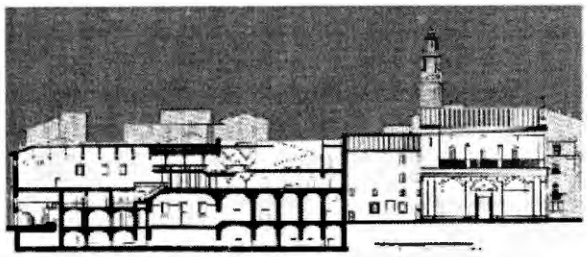
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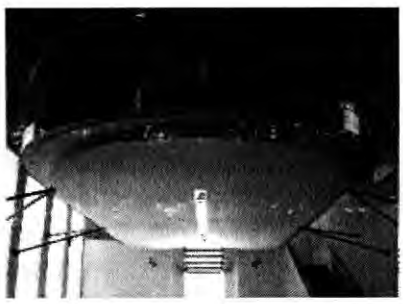
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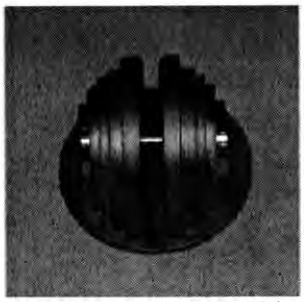
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Fig. 1 – forma urbis romae
Fig. 2 – campo marzio, g.b.nolli 1748
Fig. 3 – via botteghe oscure, the restoration project of the balbo crypt
Fig. 4,5,6 – the restoration project of the balbo crypt, main floor and sections
Fig. 7-18 – ancient walls and new materials

KEYWORDS
Italian, history, restorotion

Maria Letizia Conforto. Born in Rome in the 1940, she earned a degree in architecture in the 1967 and she kept working at the University La Sapienza in Rome as researcher and teacher on Urban design at the Architecture faculty.

Since 1977 she is appointed as architect for the Minister of cultural activities and welfare.

In this role, and detached at Pisa, she directed the restoration of some historical buildings in Livorno, Lucca and Volterra. When she was transferred to Rome, she directed the restoratian works of the Colosseum, the Constantine Arch, the Caracalla Baths and lately of the Balbi crypt.

She published many studies about historical centers and urban restoration, about development of renaissance cities, and about the construction techniques of Roman citites.She coordinated the activities to develop and publish the guidelines for the restoration and recovery of historical center of Rome for the Ministry of Cultural affaris.

She lectured on many Universities about restorations problems and coordination of historical and modern building, difference on thecniques used during the restoraion works between ancient and modern sites. She consulted and published papers in many univertisities and research institutes about this field

She also collaborated as consultant for different insitutes regarding restoration projects, including post-earthuake restoratians. She published on many magaziensand publications.

Since 1998 she is a teacher in the University of Ferrara of the laboratory of historical monument restorations.

Hannah Lewi

Paradoxes in the conservation of newness: the invention of an antipodean 'civic domain'

Conserving the new within the domain of heritage: drawing the battle lines

'As Nietzsche observed long ago, the moderns suffer from the illness of historicism. They want to keep everything, date everything, because they think they have definitely broken with their past. The more they accumulate revolutions, the more they save; the more they capitalize, the more they put on display in museums. Maniacal destruction is counterbalanced by an equally maniacal conservation (Latour, 1991:69).'

In contrast to the 1950s and '60s 'campaign for the present' – with its refusal of historical values, and belief in progress and change – we are now witnessing, in our cities, the re-emergence of architectural historicism through the actions of conservation (Donzelot, 1900: pp. 16-28). Contemporary practices of architectural conservation attempt not only to preserve built fabric, but also to overlay coherent historical interpretations and narratives over existing urban contexts. In the case of Australia, the scripting of heritage narratives is orientated towards imperial and colonial artefacts, buildings and places. And although Australian cities were largely re-written within the modernist era of mid twentieth-century expansion, this vital internationalist episode in the story of antipodean urban development is now often edited out of, or seen as at odds with local historical narratives of place. Precipitated by the general demise of late modernism, as elsewhere in the world, the conservation and commemoration of aged things, places and stories has been re-figured as the panacea for 'recovery' from a perceived condition of historical and contextual amnesia. It is within this climate of colonial historicism that the battle for the conservation of the modern Council House building has been waged in Perth over the last decade.

In describing the award winning design for the Council House competition in 1959, the national competition jury stated that of all the sixty one entries, it immediately and unanimously recognised this design as 'a direct and satisfactory solution ... being capable of development into a most dignified and efficient Town Hall.' It was further added: 'It is characterised by a remarkably simple solution to a complex problem' (The Architect, 1960:19). While a local news editorial of 1963 wrote: 'Already hundreds of visitors have praised the architectural qualities of the building and its garden environment. Council House has became the envy of other cities. And already Perth people were proud of the building which will soon be the centre of the city's administration system' (The Sunday Times, 1963:46). The English *Architectural Review* of 1964 predicted that the completed building 'should constitute one of the most satisfactory civic buildings in the commonwealth ... a praud symbol of the economic, civic and cultural bustle of a city that is currently one of the key growth-points of the Australian way of life' (The Architectural Review, January 1964: 54). (Figure 1)

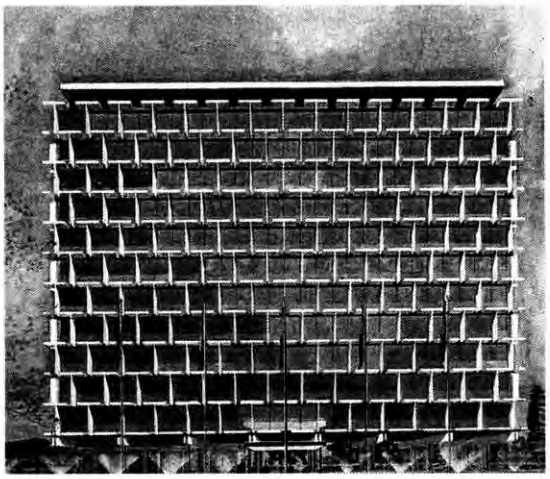

Fig. 1 – Competition Drawings, Howlett and Bailey, 1960 – Elevation/Section sheet 7.

Despite these early accolades, by the late 1980s, Council House had dramatically fallen from grace in the eyes of the local public and politicians. It now found itself sited within an invented heritage domain, encompassing a gardened precinct and a collection of significant colonial public buildings

including: the old Supreme Court of 1837; the new Supreme Court of 1902; the site of Government House, (first built in 1835, and re-built between 1864 and 1899); the Deanery of 1859; late colonial government buildings spanning 1874 to 1902; and, the St George's Cathedral of 1870. While some of these institutions are still used for their intended function, others now bereft of their former purpose, are entrusted to public heritage guardians. Surrounded by this colonial heritage, the modern Council House was now perceived as troublesome and redundant - out of context and "in the wrong place at the wrong time". The then Minister for Planning commented: 'I think my vote would go with preserving the integrity of the domain as it was, and the intrusion of Council House has to be recognised' (The West Australian, 1994:56). The building was further vehemently denigrated by some as a belligerent monument to modernist 'reductivism' (Colquhoun, 1989:218), and accused of breaking supposed continuous threads of tradition and history linking colonial origins to post colonial reconstructions. The physical fabric and facilities were also seen to be in need of major renovation. One representative of public opinion evaluated the building in the following terms in 1994:

> *'It is basically an unsuitable, out-dated piece of asbestos-riddled concrete, metal, wood and glass which communicates negative visions and thoughts in the minds of most citizens through its spectacularly ugly appearance. I think it is just an ugly mal-formed piece of early 1960s junk that has no special use and which not only does not stand above other man-made structures as a work of architecture, but which is also an extraordinarily bad example of a very ordinary man-made structure, and it is still occupying a prime position in our central place, in our forum, in our space (Achurch, 1994:19).'*

With quiet yet surgical precision, it was proposed by a West Australian government planning authority that this seemingly mis-fitting modern monument be erased and replaced, in a metaphysical sense with a simulated integrity of colonial ancestry, and in a physical sense with the tempering patina of warm "quality paving" and picturesque landscaping. This proposed action reflected the agenda of recent Australian urban renewal schemes which have aimed for, not just the enhancement of the colonial, but also the occlusion and exclusion of modernism; its confronting brightness and reflectivity being cast as the spectre which eclipsed any sense of colonial past. As Alois Riegl had predicted, places of 'newness-value' which appear as 'stylistically out of key or downright ugly in the view of the modern *Kunstwollen*, generate a demand for deliberate destruction (Riegl, 1982:49).

The government led proposal for demolition did not go unnoticed by the local architectural community. A campaign was mounted between 1993 and 1995 in favour of retaining Council House on architectural grounds. Architectural and conservation studies were commissioned. Arguments in favour of its retention sought to: establish the buildings national and international architectural value; to highlight the already eclectic composition of buildings in this area of Perth; to emphasise the economic value of the physical structure of the building; and, to expose the uninspired option of providing yet more open green space in a city which already has an overabundance of unused, open green spaces. Conservation reports subsequently controversially determined that Council House indeed had historical significance because the building's inception was associated with the Empire Games hosted in Perth in 1962, and because of its perpetuation of governmental functions already housed in the area. The award winning building was determined as architecturally significant within the urban-scape of Perth, and a relatively rare surviving exemplar of the International Style. Its intact design, both exterior and interior, was evaluated as displaying innovative use of technology, servicing, fittings and furnishings.

These conservation evaluations were still rejected by many, and regarded as too architecturally focused on the supposed merit of the one isolated building, rather than the potential value of the greater colonial domain. An antagonistic community dialogue of public versus professional opinion grew, and was played out in the press and on-site rallies. (In one public forum the local architectural body was described as a 'self-interested' minority.) However, political and public opinions were ultimately swayed sufficiently to halt the demolition of Council House in 1995. Extensive restoration work began soon after, and the building and plaza has since been returned to a state of pristine newness – which Riegl identified as essential for any monument to modernism – and re-opened as the revitalised home of the Perth City Council in 1999. (Despite efforts, the building has still not been accepted on the National Heritage list.)

Designing newness

Perhaps the recent public rejection of this building – which had not so long before confidently captured the aspirations of a rapidly growing region – was due to the very adeptness of its design in importing and translating the strident lexicon of late civic modernism to Western Australia. The design was visibly opposed

to what had previously been occepted as appropriate architecture for institutionol buildings. (A never realised second stage of the scheme radically entailed the part demolition of the neighbouring late colonial Supreme Court building to make way for a new Town Hall.) The building was somehow completely of its moment, capturing a resolute optimism in the sustained progress of the city of Perth in the early 1960s.[1] Stylistically, the building has been compored to Breuer and Nervi's Unesco building in Paris, late Mies van der Rohe works, and Bates, Smart and McCutcheon's MLC tower in Australia (Schwagger Brooks, 1993: pp.45-49). However, the Howlett and Bailey design can be regarded as an inflected and intentionally ambiguous reading of the late International Style. And these kinds of broad comparisons are only informative in a very general sense. I will, therefore, now back track a little to describe the building in more detail.

Set back from principal streets and corners, and sited within the open space of a civic square and casual gardens, Council House composes a discrete modernist object. The building thereby belies the traditional architectural concerns of front and back, and of a defined entry – typical of both its late colonial and contemporary corporate neighbours. This concern for the sculpting of space, as opposed to the creation of a contextual streetscape tableaux, reflects a far more general contrast between modernist and contemporary urban design sensibilities. Via the slightly elevated podium, edged by water fountains and ponds, one enters the forecourt through a Miesian-like porte-cochere, elevated by a series of white marble pilotis. Here the modernist strategies of openness and transparency are developed to Australian extremes; a fully glazed foyer filters views of the gardens and horizon beyond through a translucent and aqueous film of glazing and water. Transparency of both entry foyer and building skin reinforces the well worn modernist metaphor, or perhaps myth, of transparency which was applied in both the civic and private domain in Australia as elsewhere. In the civic context, the metaphor of transparency of visible government and minimal bureaucracy – approachable, without obstacles, and open to public scrutiny – was perhaps inaugurated in Terragni's Casa de Fascio and was re-interpreted later in many municipal buildings in Australia. While in the domestic context, the metaphor of transparency, as seen in the design of many Australian homes in the 1950s and '60s, reflected a modern personalisation of social responsibilities through the rendering of the private domain as visible and under public watch (Brown, 1995:159).

The light steel frame skeletan of Council House is clothed in a unique tiled brise-soleil which appears to floot proud of the sheer glozed skin. In striking contrast to adjacent solid and heovily grounded Victorian buildings, which seemed to devote all their orchitectural energy to occupying the empty ground of early colonial urban plans, here extraordinory efforts have been mode to achieve a sense of elevation, weightlessness and thinness. At night the building is rendered shimmering and ephemeral. And it wos this image of the building in darkness that seemed to capture public imagination. For example, one news report of the day commented: ' ... the building will be illuminated as also will the eight fountains and two large pools in the forecourt, presenting a picture composed of light, colour and depth.' (The Sunday Times, 1963:4) Whilst another report wrote: 'Already a city landmark by day ... an impressive beacon by night.' (The West Australian, 1962:40) And another; 'it has the effect of a glittering diamond in the city when night falls.' (The Daily News, 1962:41) (Figure 2)

Fig. 2 – Entrance foyer of Council House illuminated at night, Richard Waldendorp, 1963.

Upon entering the shade of the foyer, the slender white marble T-shaped pilotis visually reconfigure and demarcate the entry hall. Within the interior one views the architect's signature use of a burnt red colour for the lift shaft, and composition of monochromatic surfaces of black tiles, white marble and glass. Ascending the ten floor tower via the lift, access is gained to the open rectangular office floors, minimally enclosed by sheer floor to ceiling glazing. On the ninth floor, this orthogonal regularity masks a remarkable circular meeting chamber room framed in elegant timber cruciform mullions.

Paradoxes in the conservation of newness: the ongoing 'battle of the tenses'

Hilde Heynen has argued:

'Modernity now is no longer a matter of combat, the fight has been fought, now the issue is rather how to deal with a modernity that has implemented itself. This new stage of modernity brings along a certain historical consciousness which embraces modernity itself (Heynen, 1998:34).'

Although campaigns in the construction of modernist places may be over, the gaining of historical consciousness about the modernist period is not occurring without a fight. The battle-lines have rather been re-drawn; shifting forward to deal with the preservation of the remaining vestiges of modernism. Manfredo Tafuri has commented that the construction of any urban place always somehow involves the making of a battle site: 'That such a battle is not totalising, that it leaves borders, remains, residues, is also an indisputable fact.' (Tafuri, 1990: 8) The architectural battle of the tenses which has been enacted over the last decade in the conservation of the Council House - within the boundaries of a colonial heritage domain - is perhaps then the playing out of the aftermath of the original campaign to first construct such a stridently modern building on the site. As Bruno Latour has argued, the term modern, then, has not lost some of its potency or currency: ' ... the word is always being thrown into the middle of a fight, in a quarrel where there are winners and losers, Ancients and Moderns. "Modern" is thus doubly asymmetrical: it designates a break in the regular passage of time, and it designates a combat in which there are victors and vanquished (Latour, 1991: 10)'.

As **appreciators** of architectural modernism, we are thankful for the retention of significant modernist buildings. However, there are paradoxes inherent in their preservation, which become all the more apparent through physical restoration, as opposed to historical documentation. Therefore, whilst the art historian Hans Belting has observed that the icons of modern art can now be comfortably admitted alongside traditional art as historical phenomena, (Belting, 1987:39) the conservation of modernist architecture presents a different case. For, in conserving architectural monuments, their symbolic potency may to some extent been retained in their very physicality. Yet this potency is also compromised, or lost, when ultimately recognised as historically valuable.

Alan Colquhoun interprets this deep dilemma inherent in the conservation of modernist architecture:

' In returning to the past we are turning to eternal aesthetic values. Yet it is precisely the use of past forms that draws out attention to our remoteness from the time in which these forms were originally developed. We are reminded of the past as the past. The only way in which a building could make us feel that the values of architecture were eternal and not subject to historical change would be if its forms seemed "natural" to our way of life, in other words "modern" (Colquhoun, 1989: 240).'

We are indeed poignantly reminded of the end of modernism by the very acceptance of a building such as Council House into the heritage domain. And the original impetus to oppose, or stand outside of, existing historicist styles and traditions in order to frame the new, is thus being re-interpreted into an all-inclusive, historicist narrative of place-making. Perhaps conservation is thereby paradoxically dealing a final blow to the real existence of modernism; un-writing its potency, and preparing the way for its sedation.

Therefore, as the Australian art historian Bernard Smith has argued: 'Moderns, in short, have to learn to live within paradox (Beilharz, 1997:155).' For modernism is time-bound. When assimilated fully into its community context, the values of modernity and exoticness diminish, and, concludes Smith, it becomes paradoxically archaic (Beilharz, 1997: 155). Latour further describes the incongruities of preserving the modern; for to be modern 'one can go forward, but then one must break with the past; one can choose to go backward, but then one has to break with the modernizing avant-gardes, which have broken radically with their own past (Latour, 1991: 69).'

The incongruities of Newness, History and Age

The complexities and incongruities of ascribing and conserving cultural values in things and places was premised, at the turn of the twentieth century, in the writings of Alois Riegl (Riegl, 1982: pp.21-50). In *The Modern Cult of Monuments*, Riegl questioned why some places were chosen to be preserved, and others destroyed or left to ruin. In answer, he constructed a typology of diverse historical and aesthetic values which, in comparison to other nineteenth century conservationists such as John Ruskin, moved on from the basic issue of whether to restore architecture or not, towards a more detailed study of the requirements for the preservation and commemoration of different types of historical and aged monuments and sites. Riegl established three related categories of modern commemoration: 'intentional' monuments; 'unintentional' monuments, retrospectively commemorated for their 'historical-value'; and, 'unintentional' monuments, retrospec-

tively commemorated for their 'age-value'. Riegl accurately predicted the ground-swell of admirers of age-value – an appreciation of the look of aged things and places – in the twentieth century. Yet he also championed the completely new, and the modern, as opposed to the historical copy. And through this discussion of contemporary values, in which functionality and the artistic expression of modernity were both appreciated, Riegl thereby added a fourth value of 'newness' (Riegl, 1982:39).

At the heart of Riegl's investigation of commemorative values was the exposure of inherent contradictions between these values of *newness*, *age*, and the *historical*: 'It would appear that we are facing an irresolvable conflict. On the one hand is an appreciation of the old for its own sake which objects to renovation; on the other an appreciation of the new for its own sake which attempts to remove all traces of age (Riegl, 1982:44).' Riegl thereby saw the temporal relationship of values as complex and contradictory, suggesting on the one hand that the new and the aged could be read as *complementary*; for 'age-value' and evidence of the natural passing of time and memory is dependent on its very contrast with the look of newness. On the other hand, Riegl qualified that things and places valued for their 'historical-value' and historical representativeness were in some ways *irreconcilable* with newness. For historical manuments, unlike aged monuments, must be preserved in a state of completeness so as to conserve their historical and commemorative value. The modern is thus here figured as interfering with the contemporary relevance of the historical, and interruptive of the assumed linear continuum of normative historical narratives. Riegl further elaborated that the historical, the aged, and the new require different conservation practices. He suggested that monuments embodying historical-value should be carefully *preserved*, and monuments of embodying age-value should ideally be left to fade and *decay*, and finally, in contrast again, 'flawless integrity' of form, colour, and detail of the modern should be vigilantly and pristinely *maintained*. Riegl wrote: 'In the new, signs of decay irritate rather than lend atmosphere.' He continued: 'We are disturbed at the sight of decay in newly made artifacts (premature aging) as we are at the traces of fresh intervention into old artifacts (conspicuous restoration). In the twentieth century we appreciate particularly the purely natural cycle of becoming and passing away (Riegl, 1982:32).' Indeed in many modernist buildings, as with Council House, their decay and weathering is seen as somehow inappropriate and ungainly, whereas when fully restored they are far better received by the general public.

The dependencies and contradictions of different commemorative values, as outlined by Riegl, have been paralleled in the debate centred around the Perth heritage domain. For some arguments mounted for the retention of Council House appealed that the now *aged* modern monument would visually contribute to the eclectic collage of other buildings in the domain – also retained for their age-value. Whereas other arguments for its demolition were motivated by the belief that its flaunting presence invalidated the *historical* values of surrounding buildings, and obstructed the proposed curative operation of re-tying the colonial to the post colonial across the perceived rupture of the modern. Riegl's categorisation of values inherent in unintentional and intentional monuments thereby established that buildings and places are conserved and appreciated as both complementary, and yet also highly contradictory types of cultural markers within our contemporary urban collage. Therefore, as Forster has recognised, Riegl's thinking should not be reduced to the hope of a simple return to previous values, or banal eclecticism: 'On the contrary, he recognised that the contemporary concerns, the *Kunstwollen* of our epoch, profoundly determined our perceptions of the past: there is no objective past, constant over time, but only a continual refraction of the absent in the memory of the present (Forster, 1982:10).'

In conclusion, I return to our site of the 'battle of the tenses'. Hannah Arendt has illuminated, in *Between Past and Future*, how such cultural battles of the tenses are universal and inevitable (Arendt, 1961:7). She cites a parable by Franz Kafka in which a man is situated on a road, existing in a battleground between two antaganists which represent the force of the past pushing him from behind, and the force of the future blocking him from the front. As Arendt explains, what is significant about Kafka's parable is not only that the future, but also the past, is seen as a force to be reckoned with. The past is not perceived as a dead weight, nor does it pull one back; on the contrary, the past pushes forward in the guise of tradition and remembrance, and the future drives back antagonistically towards the past. The man on the road dreams of a moment in which he may be able to side-step this continuing temporal contest of the tenses, yet the battle lines are constantly shifting forward; pushed into the future by the growing force of the past. Each generation, suggests Arendt, must find its own space between the tenses, and 'ploddingly pave it anew' (Arendt, 1961:13).

In a sense this parable may be applied to the shifting ground of architectural history and conservation, upon which modernism is currently crossing the front-line of newness, progress and anticipation, backwards across the space of the present, towards the realms of historicism and memory. The status of

modernism is thus wavering uneasily upon contested territory; both representing the recent post, and on the verge of being embraced by the estoblished heritoge values of age and tradition. Hence, whilst modernism moy have been famously characterised as a time of tumultuous transformations – when 'all that wos solid melted into air' – this belief is being eclipsed by the postmodern longing for the fixing of historical continuities, the re-invention of traditions, ond the simulation of permanences. For the conservation of modernist artefocts and places seeks to estoblish some form of temporal reconciliotian; to 'ploddingly pave anew' the space of the present by bolstering the forces of tradition through the assimilation of modernism within its ranks. Yet, if we are to embrace the productive incongruities of newness, history, and age, conservation practices must resist the tendencies to generate totalising ond historicising narrotives. If not, we remain caught in the paradox that both the *demolition* of modernism in fovour of the aged ond the historical, and also the *restoration* of modernism, are both problematic or illusory solutions; both enhance the loss of what it was to be modern.

NOTES

[1] Hilde Heynen summarises three characteristics of the Modern as: firstly, being opposed to what has past; secondly, the embodying the new as opposed to the old; and, thirdly, signifying the momentary and the transient as distinct from the eternal and the immutable. However Hilde has also qualified this last characteristic as somewhat contradictory – embodying change as either transient, or a more resolute belief in change through sustained progress. See (Hilde, 1999: 9) and (Hilde, 1998: 31).

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KEYWORDS

Australian modernism, urbanism, heritage theory

Paradoxes in the conservation of newness: the invention of an antipodean 'civic domain'

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Jürgen Lafrenz

The conception of Abuja - the new Capital City of Nigeria - as synthesis of planning principles from Europe, America and Japan

Introduction

Abuja is not only the latest, but also one of the most high-flying projects of a new capital, not only in a developing country. Its foundation had been initiated in 1975. The execution of the plan lags behind the schedule, but the project it going forward, and the transfer from Lagos to Abuja has formally been declared in 1991. Meanwhile the growing city has taken over important political institutions.

Basically, the realization of Abuja still follows the original master-plan without fundamental modifications for nearly 25 years, although spontaneous settlements in the surroundings, not having been planned, also came into existence.

The planning of the new capital was strongly influenced by foreign arrangements. The conception really is a work of town- and landscape-planners of industrial nations. The foundation took place during a time, when the planners were hardly engaged to find new theoretical models of whole cities but focussed on solutions for a socially and ecologically sustainable redevelopment. In the case of Abuja the question therefore arises in which way not very up-to-date town-planning principles were used due to lack of new concepts. These guidelines are largely maintained during the long-lasting process of realization of the city, although there were changing general intentions of urban planning in the industrial nations.

The decision for a new capital

The problem of the relocation or new founding of capitals after the colonization of Tropical Africa with the pros and cons of a new start was discussed in many new countries. The motives of alternative foundations result - and this is also the case for Nigeria - mainly from political aims of the young states.

The new capital should
- become a symbol and strengthen the image of Nigeria's aspiration of identity and greatness.
- contribute to reduce strong ethnic and political contrasts in Nigeria, especially of the Islamic North and the Christian South.
- diminish the functional superiority of the primary city of Lagos.
- lessen regional disparities and be a magnet of "pull"-factors" in the "Middle Belt" of Nigeria with low population density.

Planning for Abuja

Location and site

Discussions on a new federal capital to replace Lagos started even before independence, but the realization was not until oil brought an economic boom to Nigeria. Immediately after the coup, which brought him to power in August 1975, the late General Murtala Muhammed set up the Aguda Panel to find a new Federal Capital.

The committee, which set the process of selecting the location in motion, started out with at least 33 candidate sites north of the confluence of the rivers Niger und Benue. In the end, the Federal Capital Territory was chosen in a relatively uninhabited area drawn together administratively from four States. The site had the advantage of being nearly equidistant from the borders, and therefore easily accessible from all parts of the country, and also offers an almost limitless area for expansion.

The area protrudes the humid hot river flats in a height of about 100 to 600 m southwest of the Jos Plateau. A rugged topography with buttes (inselbergs) like Aso Hill would give the city a hilly character. The area belangs to the guinea savannah with pockets of rain forest, woodland savannah and park shrub savannah, and is part of an economically disadvantageous region in comparison with other Nigerian areas. Villagers formerly living there had to evacuate, and were given homes elsewhere to make way for planned development of the city.

Realization of Abuja

The plan of the new city was based on the assumption that, by the end of the 20th century, the city would have a population of 1.6 million and later on an ultimate population of 3.1 million on

an area of 250 km². The whole city was planned to be constructed in four phases. The realization thaugh, went more slowly and Abuja does not even amaunt to 0.5 million inhabitants nawadays.

At some times the develapment of the city only advanced very slowly, several crises paralysed the palitical management. Meanwhile however, after much capital had been invested and partly wasted, the "Operation Abuja" reached the "point of no return". Just recently the growth of the city has consolidated after a relative stagnation.

Layout of Abuja

The efficiency of town planning is normally very slight in Nigeria, with exception of Abuja where the government has at its disposal the total territory of the city. The Federal Capital Development Authority (FCDA) became the government agency being responsible for management, construction, and design of the Federal Capital Territory (FCT).

The plans for Abuja were prepared by the FCDA in corporation with various international experts. The International Planning Associates (IPA) of the USA drew up the city master-plan. The subsequent proposals for the first housing areas were initiated by the Milton Keynes Development Corporation. The urban centre with dominant political buildings was begun by plans of the famous Japanese architect Kenzo Tange in 1981.

The international planners had knowledge about the other prominent projects of town planning, like Brasilia, which was built mainly from 1955 until 1960 in a short-term, or like Milton Keynes, a new town of the "third generation", between Birmingham and London, begun in the 1960s.

The plan of Abuja follows a historically pattern of politically inspired foundation of other new capital cities. A comparison does in fact show some similarities that would lend credence to the feeling that the basic concept of the Abuja plan is somehow related to the one of Brasilia.

The IPA presented a master-plan for a city in the form of a dragon-fly. (Fig.1) The general plan divides the city into two principal parts, the monumental civic axis and the crescent of residential zones, the later in turn divided into two split wings. Both axes give the possibility of future expansion.

By such a construction the "total design" induced a strategy to conduct the expansion of the city over long time through the phases of a module development program. This concept presents a city whose principal pattern and future extent would be evident from the earliest possible moment. The city would be born with an adult skeleton.

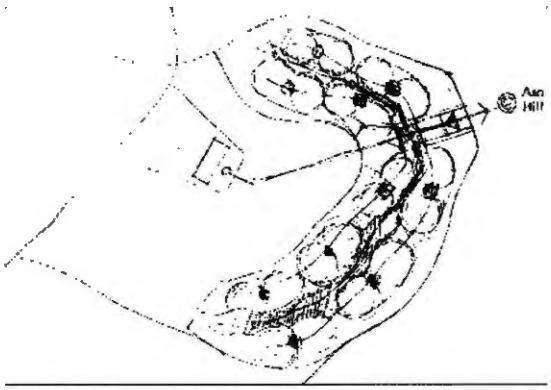

Fig.1 – Abuja - Concept Sketch of the New Capital City

1 Central axis

The ground-plan of the master-plan provides the city with a monumental character. The new capital city had to present a sense of unity and national identity. The central area was designed around two important and perpendicular axes, the central axis focussing on Aso Hill, and a much shorter cultural axis. (Fig.2)

The prominent huge granite butte, the Aso Hill should be the most dramatic or easily conspicuous feature in the FCT, which inspite of a distance of nearly thirty-two kilometres, clearly marks a site of particular visual merit. The monumental axis was opposed to Aso Hill, that the three arms zone immediately contrasts scenically. With the background of the hill, it situates a spatially distinct area, which stands out prominently in central location with the national assembly and, sideways in front of it, with the presidential office complex and the supreme court. These buildings were developed rather horizontally than vertically.

The zone of the ministries is south of the three arms; here all gavernmental institutions will be located around the National Mall, with small several plazas symbolizing each of the national tribes. There are also shops and restaurants intended along stepped terraces, which will provide security to the area after office hours of the ministries.

In the heart of the central area is the location of the municipality, at the crossing of the central axis and the cultural axis, acting as a gate to city-wide activities. This zone situated east and west of this plaza will be composed of those buildings, which are of cultural and religious importance, such as the National Mosque and the National Ecumenical Centre.

The National Plaza will be connected with the Central Business District (CBD) on the central axis, which is composed as a mixed-use area of the central shopping and office centres in high rise buildings. The CBD will also form the nerve centre for all modes of transportation in and out of the city, accommodating an inter-bus terminal and a future railway station.

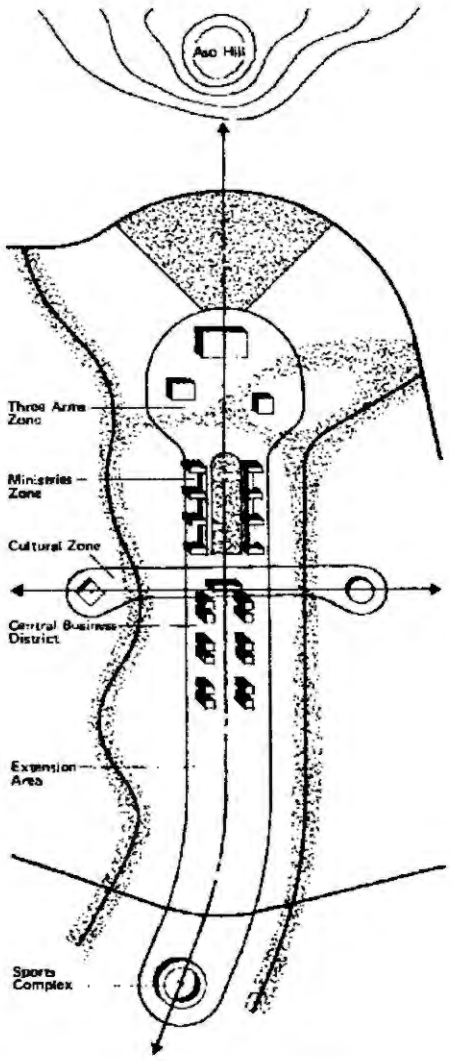

Fig. 2 – Abuja - Blue Print by Kenzo Tange

Beyond the transportation centre, Kenzo Tange proposed to reserve an area for the extension of the central area along the civic axis for future expansion of the city. In the event of this extension he recommended to include apartment buildings. For that reasan he situated the planned sports centre at the far end of this axis, which again would finally be connected directly to the already completed airport.

The central area itself with its linear grid differs from the other development areas. The concept has been over-influenced by a three-dimensional massing of the CBD. The proposed design for the office buildings forms multi-storey-scrappers of about 20 to 40 floors. In this sense is has a strong influence on the observers' ar users' perceptian.

2 Transportation system

The most important single factor in determining the physical organization of the new capital is the arrangement of its transportation facilities. The organization can be seen as a Cartesian geometric structure, as a backbone structure articulating a rigid zoning system of the developing corridor. The overall plan is organized around two parallel transit corridors, which intersect the central care. (Fig.3)

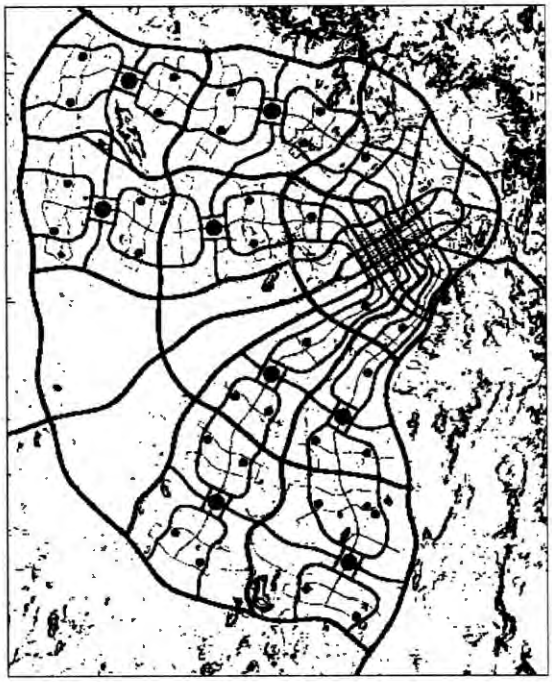

Fig. 3 – Abuja - Concept Plan of the Street Pattern

The residential areas extent in two directions from the central area and are to link to the city by a system of different types of transit ways. The roads play an important role in determining the phases to develop the wings with residential areas.

3 Residential axes

Some hills surround both the city centre and the residential areas. They will be a boundary to prevent uncontrolled development.

The internal structure of the residential axes follows the idea of a structured and low-density pattern that was principally postulated in the 1930s. Abuja should be a city of a hierarchical sub-division with sectors, districts, and neighbourhoods:

- growth modules in the form of discrete sectors of 12.000 to 15.000 households focused on internal secondary employment centres, and subdivided into residential districts
- residential districts of 6.000 to 10.000 households focused on a hierarchy of commercial, community, and utility services, and organized into a hierarchy of small-scale residential neighbourhoods, which are composed of 500 to 750 households.

There should be a mix of residential representing a range of housing options with respect to size, lo-

cation, and access to service, while concentrating high densities directly adjacent to transit corridors, and lower densities an the periphery.

A citywide open space structure based on a longitudinal parkway system, far which a water course network would be retented for both aesthetic, and drainage purposes, and the surrounding escarpment of hills, which form the visual backdrop to the city, and major focal points within the city.

4 Principles of the Nigerian tradition in the urban structure

The IPA tried to trace that some local tradition had been considered in the master-plan. For that reason they tried to identify a vague formal correspondence of hierarchy in the intra-urban differentiation:

> *The traditional Nigerian cities exhibit a functional core consisting of three elements: a major open-air market, a government centre of palace and social institutions (usually religious in nature). Around the core elements, which were usually located in the centre of the urban area, the remainder of the urban areas of cities were generally orgonized around sub-nuclei repetitions of the core elements. There was a mixed land use without clear lines between different functions.*

The Nigerian towns though have a much more intimate functional mixture than the hierarchically structured new capital. Altogether, the new city lacks of ony noticeable Nigerian lines of tradition. The question arises, whether this was the objective of the officials in the first place, or if they were not probably aiming for a "progressive" modern city of western style.

5 Problems of resettlement

Although Abuja as a growth pole already has a certain economic attraction, the socio-economic contrasts in the Nigerian "Middle Belt" have increased altogether. There are major resettlement problems in the areas surrounding Abuja. Existing settlements have to be given up und moved away. A difficult question is the financial compensation of the resettlers, and the selection of new locations for the settlements. The different stages in the education and civilization on the resettlers have to be considered. Especially the continuous growth of unplanned spontaneous settlements within the town and at its periphery will have negative effects.

Evaluation of Abuja

Particularly firms externally made the master-plan of Abuja, from Western countries. The mast guidelines fram the viewpoint of town-planning are evidently corresponding international principles.

The planners - like in Brasilia – should have been engaged in the imageability by the creation of a city in which the observer would be able to perceive the purpose, organization and symbolism of the various important functions of the new capital.

Brasilia and Abuja have two crossing axes. The wings form crescents where the bend is less one in Brasilia than one in Abuja. The intersection of the two major axes creates the location of the central core. The further divisions of Abuja into sectors, districts, and neighbourhoods are more similar to new towns in Britain.

In Abuja and in Brasilia two main town-planning guidelines were combined:

- the principle of the functional segregation, as in 1933 Le Corbusier has put it in the Charta of Athens. The different functions are divided into homogeneous activity zones, linked by transportation facilities. The IPA also intended the functional division within the central city of Abuja, but that at least was slightly moderated there by the definite plan of Kenzo Tange.
- the idea of "neighbourhood units", which was explicated by Clarence Perry in 1925, and especially applied to British new towns with a hierarchical structure of centrality and road traffic.

Meanwhile the term "neighbourhood unit" mostly disappeared from the vocabulary, and from the concepts of the planners. However, the intention of a separation of urban territory by main traffic lines, and its structural division by green space belong to general accepted planning intentions.

Abuja has been conceived as a national monument as well as the new capital visually symbolises a degree of mechanisation, which Nigeria has not achieved but seeks as a national goal.

A new capital is primarily a city with an environment in which a large number of social and economic activities should be effectively interrelated. The planning though, does not lie in an ecological scenario of a city-to-be. The general efforts to gain a sustainable city or of the "ville durable" have not yet been completely realized in any model of the land use pattern, and thus not in Abuja nowadays.

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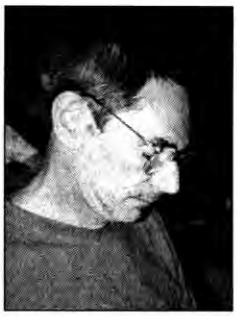
BRASILIA SESSION



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City and Citizenship A contribution to the study of the modern city considered a work of art - Chandigarh and Brasilia

Before the appearance of a work of art,
One has not the slightest notion of its possibilities.
Goethe (Letter to Schiller - January 6, 1798)

The city as a work of art

Chandigarh and Brasilia are product of artistic imagination, they both refer to the world not as it is, but as what it should be. The degree of integrity or the social disintegration of the context which originates them is not determinant (Wind, 1988: pp. 27-41).[1]

Described here as works of art they will be so qualified for being beautiful. As significant shapes of a human totality are, in fact, autonomous; a decoding will not depend on external factors but on the disposition of the design. The idea of autonomous will contain the idea of beautiful, and self-asserting as a factor of sociability is the postulate which fundaments the notion of modernity.

By promoting inter-subjectivity, Chandigarh and Brasilia, each in its own way, either by the "esprit de géométrie" or by the "esprit de finesse" contribute to the establishment of the condition of a possibility of citizenship in the plane of artistic creation and within the framework of modernity, this is the thesis hereupon exposed.

Metaphysics of subjectivity

The thesis of autonomy as basis to modernity implies in the negation of metaphysics, in other words, the assumption of the preexistence of a value which imposes itself as a norm of behavior, transcendent to the existence of a being as an individual.

Upon rereading Nietzsche, Heidegger recognizes a contradiction in the voluntary and ethical character of modern viewpoint. Enlightenment, viewing liberty and auto-determination subordinates will to an end, preserving the metaphysical character for, a notion of humanity placed as absolute would impose itself as a postulate, as "a feeling that lives within the hearts of all men" (Kant, 1990: 97).

The key question is how to conciliate the universal value, true for all, without reifying the identity of the individual, the plenitude of the subjective, sensitive, volitional, and rational human capabilities. The projects here analyzed are postures in the face of such contradictions. Methodologically, it is due to begin by pointing out the similarities and the differences in the design. In both, a system of axis, the neighborhood unit and a regulating trace are structural factors.

The axes

The principle of segregation of the pedestrian and the car, common to both projects, implies in the suppression of the corridor - street, aim expressed by Le Corbusier when he referred to the "7V" system adopted in Chandigarh:

The rule of the 7V by which the pedestrian's march can be separated from the mechanical speeds (Corbusier, 1951).

The corridor-street gives place to the axes as one of the spatial principles of urban structuring.

Once the practical aims are attained, that is, to make the flux that link the activity sectors viable, the circulation routes form an axial system that organizes plastically the parts. The axes marks, both in Chandigarh as well as in Brasilia, the volitional character; a gesture of auto-determination made explicit by the architects:

Basically, it was born of the primary gesture of one who signalizes or takes possession of a place: two axes crossing at right angle; or else, the very sign of the Cross (Costa, 1991: 78).

The axis is perhaps the first human manifestation; it is the instrument to any human act. The child who hesitates tends in the direction of the axis, the man who fights in the tempest of his life draws an axis for himself. The axis is the organizer of architecture. (Le Corbusier, 1995: 151).

1. The technical-functional performance and the adaptation of the design to the particular practical, psychological, physical and sociological contingencies, needs and convenience of the users will not be the aim of the verification of this work.

Brasilia

The system of axes in Brasilia identifies the principal functions: the monumental axis, the residential axis and the urban center; on the other hand, the 7V system consists of a homogeneous framework which neu-

tralizes the functional differences. The activity sectors of Chondigarh, except the Capitol, are orgonized, without distinction, within the orea defined by the axes. In one the oxial principle is subordinoted by the programmatic contingency, while in the other the program is occommodated in the geometrical principle.

As one circulates on the axes in Brasilia, one notices its specificity: the residential axis is arched and framed by "a wide belt densely covered with trees", the monumental axis organized symmetrically by perspective, and the urban center by the inflexion signaled in the crossing of the two axes by high buildings. We can read in the report of the pilot plan:

> *The creation of these blocks, in other words, tree-lined contaurs in great quadrilaterals, had at first, as first objective, to articulate the residential scale to the monumental scale, and this way guarantee the general disposition of the urban structure [...] The importance attributed to these great green quadrilaterals results in that, aside from contributing to the safe-guarding of the blocks, they guarantee, by their mass size and dimension, the integration of the residential scale in the monumental scale [...] so much more that the final objective is maintain the horizantal plane in these six kilometers in those six kilometers on each side, so that the urban center may be defined in height in the crossing of the axes (Costa, 1991: pp. 23 e 24).*

Chandigarh

Distinct is the image made along the motorized axes (V1, V2 e V3), deliberotely orranged so that these routes are not in reference to any visual frame capable of, by particularizing them, interfering in the noumenical mode of reading of the system. In opposition to the scenery of Brasilia, which reveals its variety along the axes, Le Corbusier creates a barrier which neutralizes the singularity of the scenery for those who circulate along V1, V2 e V3 (the routes of motorized circulation). There is no interface between the road flux and the other urban functions, camouflaged by the continuous presence of the wall which surrounds the habitation sector along all its perimeter, or that of the Capitol safeguarded by artificial hills. The "Edict of Chandigarh", the regulation code for constructions engraved on a commemorative tablet on the margin of the dam decrees:

> *A wall shall seal the V3 roads from the sectors (ANQ: p 26);*
> *This way the traffic is situated on the outside of the sectors; the sectors are circled by 4 road ways enclosed by walls without any opening. And this (unheard of in modern urbanism, it is decisive) was adopted in Chandigarh: no residential (or house) door opens to these arteries of fast traffic (Le Corbusier, 1951).*

The non-hierarchic mode, along with the homogenized sectors and viewings moke an abstract geometrical-mathematical image privileging intelligibility, in contrast with the sensorial apprehension of Brasilia. The arrangements below corrabarate and reinforce the patential of this mode of interaction with the urban space:

- The "Leisure Valley", exclusively pedestrian, the only link between the centers of collective interest (cultural, urban and civic centers) do not interfere with the integrity of the grid, situated on a lower level, on a depression due to erosion.
- The alteration of the first project of the Capitol, which substituted the secretariat black for the present shorter one, eliminating a vestige of visual reference to preserve the conceptual character. Such arrangement is corroborated by the artificial hills and the "Waters Boulevard ", landscape resources introduced deliberately to segregate visually the Capitol from the rest of the city.
- The inflection of V2 disqualifies, in opposition to the solution found in Brasilia, one of the axes going in direction to the Capitol, as a counterpart, not one of its monuments is in reference to the axis of access.

The neighborhood unit

The presence of a module which is generator of the urban net, the residential unit, is common to both projects. The sector in Chandigarh and the super block in Brasilia. This device has two aims: practical and aesthetic. Initially it is thought of as a framework of domestic life. The physical-spatial arrangement is of functional and technical order, it attends the quotidian needs and conveniences - "contenant de la vie familiale" - as Le Corbusier refers himself to them. As practical device, the shape is heteronymous, the reason for its shape is its performance.

As aesthetic device it is an autonomous manifestation, plastic factar of the articulation of its parts; a pattern that, multiplied, it generates and organizes the urban net harmoniously, in other words, it determines, by the co-modulation, the integrity between the parts and these with the whole awarding it a systemic character. In the condition of an organized structure, as a system - a group of inter-agent elements coardinated among each other - becomes intelligible. It is important to recognize the unit, for it is in the perceiving of this concrete single entity that the whole can be reconstituted conceptually and/or by the senses. The double character utilitarian and esthetic is reminded to us by Lucio Costa in his report of the pilot plan in reference to the super blocks:

This layout has the double advantage of guaranteeing orderly urbanization even where the density, type, pattern or architectonic quality of the buildings varies, and of giving the inhabitants tree-lined strips in which to walk or take leisure, other than the open spaces foreseen within the blocks themselves (Costa, 1991: 82).

It is important to note that this mode of composing based on the unit is analogical to the modern thought, where the individual is the constitutive factor of the collective. The whole (collective) preserving the particular (individual) reaffirms the principle of unity in diversity - the human totality (individual/gender), and which the work of art has as prerogative to be able to express.

The cell

Corbusier borrows from biology the term which he designs to the sector - the cell - the basic structural unit of living beings. He gives the dimensioning of the sector (800m X 1200m) universal value:

Adopting a harmonious proportion rich in combinations [...] being 800m X 1200m. This way the "Sector" born from an ancestral geometry and still valid established in the past by the steps of man, ox and the horse, but from here on appropriated to mechanical speeds (Le Corbusier, 1951).

The 15 sectors hold, aside from the residential areas, the commercial center, the cultural sector, the hotel sector and the university campus. Only the civic center, the market and the industrial sector are out of the grid.

The population of the sector varies between 5000 to 20000 inhabitants, or else, occupation densities of 50 to 210 inhabitants/ha grouped in nucleuses of 750 inhabitants. Spread in lots of 100m2 per family and within a square of 140 meters per side. The project of "Maison du Péon" illustrates the way in which Le Corbusier conceived a village of 750 inhabitants.

A type of small independent village. The solution is extended to all parts of the city, the poor neighborhoods as well as the rich (Le Corbusier, 1953, p.158).

Super-block

In Brasilia the common minimum denominator is the super block dimensioned 3000 to 4000 inhabitants, this way, justifying the establishment of a school and a kindergarten.

The neighborhood unit, constituted of four super blocks, therefore 12000 inhabitants, stops being the nucleus of promotion of conviviality around the school and around the equipment of the neighborhood, to reinforce the interaction with the city through its re-dimensioning of the local equipment. Situating them along the principal road system and not in the center of the unit in a introverted mode, it reformulates the proposal made by Clorence Perry and Henry Wright in 1929 for Radburn, adopted in the mojority of the new English cities. (Gorovitz, 1991: pp. 45-52).

The dimension of 250 by 250 meters, in various ways determined by the density adopted, 500 inhabits/ha, permits comfortable access to the school through unobstructed routes by the pillars. The conjunct is surrounded by a twenty-meter strip of trees of big-size species (only in a few blocks was adopteed this guidance to distinguish each block by vegetal species).

The segregation between the motorized traffic and the pedestrian transit does not acquire, as in Chandigarh, doctrinaire orientation. In super blocks and in the other sectors the conviviality of the pedestrian and the driver are, as the architect would say, domesticated:

With the general network for automotive traffic thus established, independent paths for local pedestrian traffic were created both in the central and the residential districts, ensuring free circulation. This separation of automotive and pedestrian traffic was not, however, carried to systematic and unnatural extremes, for it must be remembered that nowadays, the automobile is no longer man's irreconcilable enemy: it has been domesticated and is now, so to speak, one of the family. It only becames "dehumanized" and reacquires its menacing and hostile aspect to pedestrians when incorporated in the anonymous mass of traffic. A certain degree of separation is therefore necessary, but under certain circumstances and for mutual convenience coexistence is at times indispensable (Costa, 1991: 79).

The module, which originated from the practical aims, takes aesthetic proportions as it organizes the unit of the residential sector integrating it through a logical-geometrical sequence.

- 4 blocks compose a neighborhood unit;
- 8 lined neighborhood units form a segment of the wing identified by the odd hundreds, and mirrored by the residential axis of the blocks with even numbers.
- The conjunct of 8 units of neighborhood, or 32 super blocks - the wing - described above, is mirrored along the monumental axis. The south and the north wings are organized in this way.

The arched shape in contrast with the hieratic feature of the monumental axis, appropriate for the civic activities, distinguishes the colloquial nature from the residential sector. These physical-spatiol frameworks distinguish the solemn mode of interaction (abstract-conceptual) from the commonplace (sensorial- phenomenol) evidencing the three hu-

man scales that structure the city: monumental colloquial and gregarious (Gorovitz, 1985).

The regulating trace

The regulating trace, associated to the unit systems and the axes, reiterates the autonomy of the conjunct, enabling the decoding of the work of art and its apprehension as a totality structured concretely by relating the parts between each other through a geometrical framework.

Chandigarh

Through the following arrangements we can verify the regulating trace:

- Rectification of the Mayer plan awarding it the axial character and accommodating it to a geometry dimensioned by the rule of the Modulor, referred to by Le Corbusier as a guidance instrument for the whole sketch of the city:

A special mention must be made in favor of the Modulor which permitted to organize all dimensions harmoniously and with extraordinary assurance in the course of two years of work (Le Corbusier 1951).

- The proportion adopted for the sector 800 X 1200 is an aureate rectangle.
- The dimension adopted for the cell-sector: 800 X1200 determines a square of 4000 m. of side when grouped together: 5 modules in one sense (5 X 800 = 4000) and 3 and 1/3 (3 +1/3X1200 = 4000) on the other;
- The master plan of the Capitol is organized by a sequence of virtual squares, intention expressed by Le Corbusier:

Four obelisks (or any other shape) will establish in plain nature the angles of a square of 800 meters; four others will mark the square of 400 meters containing the buildings of the Secretariat, the Congress and the Knowledge Museum. The Supreme Court Palace occupies the second square of 400 meters to the east. (Le Corbusier, 1951)

- The area in which the "Maison du Péon" lies is a square of 140 X140 meters;
- The Supreme court reflected on the surface of a small lake reproduces a double square:

The conjunct markedly drawn is reflected, when the wind stops, in a perfect mirror which duplicates the image in 100% (Le Corbusier, 1951).

Brasilia

The geometry of the regulating trace is present:

- In the determination of the two axes that cross each other orthogonally;
- In the arching of the axis to accommodate it to an equilateral triangle; according to the architect for plastic and practical reasons:

It was then sought to adopt this sign to the local topography, the natural drainage of the area, to the best possible orientation: one of the axes was curved in order to make it fit into the equilateral triangle which limits the urbanized area (Costa, 1991, p. 78).

- In the symmetry of the wings, of the ministry esplanade, of the commercial, bank, hotel and leisure districts, and the local commerce streets;
- In the square of the super - block;
- In the equilateral triangle that circumscribes the plan of the Three Powers Square, thus described by Lucio Costa:

The most outstanding buildings are those which will house the fundamental powers, and because these are three in number, and autonomous, the equilateral triangle seemed the elementary form most appropriated to enclose them (Costa, 1991: 79).

In both capitals the nomenclature of the roads reiterates intelligibility. In Brasilia the geographic link (N/S/W/L), and in Chandigarh the internal logic (7V system), to which Le Corbusier explains:

Digression: The eight "V" created in Chandigarh an extraordinarily clear vocabulary in all discussions related to the urbanism of the city. When one says, "Republic Avenue" or "Lotus Street" there is no notion evoked. On the other hand, if one says: "A V2 Republic" or "V5 of Lotus", everything becomes explicit; instantly one understands the nature of the roadway, its importance in the city, etc. (Le Corbusier, 1951).

The city and its image

In its objective exteriority, the conformities described predispose as esthetic manifestation, each in its own way, to the formation of images constructed by the subject in his reception process: "An act of constructive perception" according to Jauss, qualifying the work as a mode of legitimization of the subject - creator or receptor:

The work of art and exists as such while it demands an interpretation and works through the multiplicity of significotion [...] It is precisely in this indetermination that the effectiveness of the work is measured [...] The aesthetic values and in general the "essence" of the work of art is not manifested unless it is in a succession of different images created by perception, and are not discernible as permanent substance (Jauss, 1978: pp. 43,124,130).

The subjective component of the aesthetic phenomenon does not exclude the horizon of expectation preexistent to the mode of reception, Jauss observes:

All new reception is developed based on an expected or preexistent sense, whose confirmation or not reveals its implications and triggers the process of re-interpretation (Jauss, 1978, p. 124).

This predisposition is the object of the comments that follow.

Brasilia

Brasilia predisposes an immediate apprehension, a non-mediated image as of Chandigarh where the course of perception of the whole work is from particular to general. Lucio Costa determines a generol framework that by hierarchy, perspective ond symmetry, brings together in one the diversity of the civic, residential and entertainment sectors. Image which rises from:

- Synchrony - the parts that compose the space ore perceived in o simultaneous manner, concomitance favored by the rapidity of the motorized displocement;
- Pregnancy - the synchronicity and the sensory-motor interaction contribute for the physical-spatial structure to favor the creation of an emblematic image, distinctive and unique, easily remembered;
- Finitude, hierarchy and anisotropy - both the monumental axis as the residential axis are limited and develop linearly in a predominant direction. The displocement, along the course with a determined beginning and end imply a sequence and a finitude. The monumental axis is signoled by the bifurcated tower of the Congress in one extremity and by the Television Tower in the other. The group of central buildings signalizes the beginning of the wings by being taller.
- Polymorphism: the different arrangement of the sectors (residential, monumental and of entertainment) are made explicit to the user that moves along the principal axes.
- Variance : the perspectively arrangement in perspective provokes a persistence in the landscape that as it shows along the displacement, promotes the formation of an image pregnant and distinctive of the city.

This sensorial apprehension of the vectored and anisotropic spaces is reiterated by linear time. The phenomena are altered with the passage of the finite living time in contrast with the cosmic and infinite cyclical time (referring to eternity) as in Chandigarh. Movement is here considered an esthetic resource; beauty in mobility is qualified by the grace and eurhythmics. The lexicol item grace makes it clear:

Fluidity ond lightness of slender profiles, the elegance of the curves, multiplicotion of empty spoces, substitution of mass in fovor of volume and maximum incidence of light (Souriou, 1999, p. 801).

Chandigarh

Differing from the "aerial and highwoy capitol" of Lucio Costa, Le Corbusier priorizes the pedestrian: ot the Capitol, in the V5,V6,V7, ot the "Leisure Valley" and at the commercial center - "pedestrian paradise"; excluding the V4 where the motorized traffic is shared with the pedestrian, Le Corbusier qualifies the nature of this rood principle:

In Chandigarh one moves out af the cars [...]One walks among people, trees and flowers [...]Walking half an hour or mare, men and women erect. Happiness of walking, withaut getting tired in Chandigarh, marching city and not of vehicles. The pedestrian is alone in V4 and V7. (Frampton, 1997: 150)

The non speedy routes of the pedestrian have the following arrongement:

- Diachrony - the construction of the image of the city as a whole is made diachronically: by successive and partial impressions captured in displacements. This reconstruction, intelligible and anamnesic of the whole, instrumented by pedestrian usage is eminently individual and, in the absence of hierarchy, the routes on foot are product of particular choice, the exclusive criterion is personal convenience. By moving along the net which has no referential marks, the individual, when motorized, decides his route in a rational autonomous form and in this elective process personalizes it. The diachronic appreciation comes from the distinction af the parts without privileging any of them by conspicuity, hierarchy or directionality, for two reosons: First, the subordinatian of the parts would imply in privileging a peculiar woy of reception, promoting an image of an archetype, which would reify the subject. Second, it is through the identification of the part as a monad that the conjunct is reconstructed.
- Isomorphy - the links of motorized traffic are distinguished because they always provide the same viewing - homogenized and non-hierarchical. The V1/ V2 /V3 are articulated by immense empty round turns areas.
- Polycentrism - both cities are polycentric. In Brasilia, the urban center and the administrative center are

linked visually by the monumental axis, independently from the displacements. In Chandigarh the linkage is guaranteed by the "Leisure Valley" giving continuity between the Capitol, the Cultural and University sectors, the Commercial and Entertainment districts through a mnemonic reconstitution of the fragments lived in the paths taken on foot. It is through these images that the conjunct is constructed.

• Mobility - as in a labyrinth, the open form of the spatial daedalian web, unlimited and isotropic, without preferential direction (different from Brasilia, therefore), predisposes, thanks to the non-hierarchical road system, an unlimited variety of routes, a form of appropriation that corresponds to the passage of cyclical time, non-temporal, cosmic, universal and absolute.

• Ubiquity - The net promotes the consciousness of being able to see all its parts simultaneously due to the similarity and the recurrence of the indifferent situations, which are diverse from the hierarchic space structure referenced to one or more poles, experienced in univocal and differentiated mode.

About the city as artistic language

The recognition of the image (subjective) created from the tangible phenomenon (objective) - the work of art - awakens a consciousness of it as support (significant) of meaning. Instrumented this way by a language the subject can communicate. The work of art, in this case study of the city, in fomenting inter-subjectivity aims at a social dimension of the individual and, last of all, citizenship.

The end of art has always been to widen awareness by promoting dialogue. In the modern optics, a consciousness does not preexist as a factor of determination of the social being. Cohesion before tributary of common values determined by cosmogonic systems, now resides in the transcendence of values imminent to the individual; the concrete existence of the individual is the condition of the possibility of the collective, of his social consciousness.

In face of the new view of liberty, that Rousseau situates as capacity to emancipate of all determination natural or historical, we can asks ourselves: which values could this infinite liberty refere ta? This is the challenge that the moral or modern man should face. (Ferry, 1990: p.336)

Such illuminist warding, of Kantian origin, suggests the fallowing central problem to modern art: how to avoid that "common sense", generated by the beauty of the work of art, reify subjectivity, therefore, negating it. The question can be formulated as such: how to maintain the idea of a possible universality af taste without permitting that common sense negate subjectivity (Ferry, 1998: pp. 51-53).

How can the uninterested action determine which direction this selflessness should take? How to award an aim without reifying the subjective character? It is about determining which are the "moral" aims that an action of free will proposes to put in practice. We set out the questian of universality of the common wealth, of the "general interest".

From the subjective point of view, autonomy implies in an uninterested action, the moral of duty rules above all opposing our inclination of our selfish nature ta imperative rules.

From the objective point of view, the term suggests a double connotation: objective is an end and at the same time all that is not subjective: that which is true nat only to me but to the others as well. The end of our actions becomes real under a universal law, valid for all, but that modernity distinguishes from religious ethics because of the fact that this law is a law or reason originated by the autonomy of the individual.

Chandigarh and Brasilia point out two paths to construct sociability based on the subjective prerogatives that distinguishes the individual.

Chandigarh

We identify in the thought of Le Corbusier a notion of the sublime described by Schiller:

> *We call sublime an object in front af whase representation our physical nature feels its limits, at the same time that our rational nature feels superiority, its independence from all restrictians: an object in front of which we are physically weaker, while marally we heighten abave it by the ideas. Only as sensitive beings are we dependent; while rational beings we are free (Schiller, 1997: 39).*

Chandigarh celebrates by the esthetics of the sublime a consciousness of reconciliation of nature and spirit by the capacitating that is proper to the individual - the will for power. In this way it becomes objective:

> *One can risk the hypathesis that great emotive works, works of art, are born from the happy integratian af passion and knowledge (Le Carbusier, 1980: 44).*

The moral liberty, the savereignty of the spirit over the body, is expressed thraugh the feeling of dignity:

> *The city must give happiness and enable the manifestation of dignity (Le Corbusier, 1980: 100).*

The infinite space, decentralized, multi-facused, anti-perspective, referenced to the cyclical time, pro-

mates a diversity of ways of appropriation. This spatial open arrangement, by favoring polyvalence of interpretations, awakens the consciousness of individuality. Le Corbusier avoids in Chandigarh, as in its painting the Euclidian perspective, which presupposes the observer situated in a fixed position. Nietzsche translates this convictian:

The world has become infinite to us in the sense that we cannot refuse the possibility of lending itself to an infinite number of interpretations [...] there are no facts, only interpretations (Ferry 1998: pp. 90, 234).

Space is not contemplated as a sensory and finite entity, as in Brosilia. The abstract character, intangible and sublimated, transported to the plane of spirituality, it celebrates volition, a way of affirming liberty that distinguishes the human being as an individual. The supremacy of the spirit upon the changes, considered aggressions to human destiny, and in face of which stands dignity:

The disorder which multiplies itself is offensive: it humiliates our self-esteem and hurts our dignity (Le Corbusier, 1980: 102).

History is considered a constraint to the supremacy of the spirit, like the natural contingencies and the sedimented tradition. Nietzsche's argument:

Teaching man that the future of man is his will, that he depends on a human will, prepare him for great risks and vast tentative to liquidate this horrible kingdom of non-sense and of chance which until now takes the name of History (Schlechta, 1960: pp. 63-64).

History loses its value of example and, being considered a contingency and not a dialectic synthesis between contradictory situations, it must submit itself to the will of power. At the end of his book "Urbanisme", Le Corbusier, when he refers to Luis XIV as "a homage to a great urbanist", reveals this line of thought:

This tyrant conceived immense tasks and realized them. His glory radiates throughout the whole country. He knew how to say: "I want it!" or "this is my pleasure" (Le Corbusier, 1980:285).

Liberated from the constraints of history, the imagination is guided in mathematical rigor, in the organic and biological causality, in the mechanical rationality and in the technical efficiency of the machine, so as not to lose itself.

Economic and social progress originates from technical problems conducted by a good solution (Le Carbusier, 1980: 283).

Le Corbusier's doctrine echoes in Nietzsche's:

The greatness of an artist is not measured by the "good feelings" that stimulate him, it resides in the capacity to dominate chaos which exists in ourselves, to force self chaos take shape; turning itself logical, simple, without error, mathematical, to construct a law, this is the great ambition [...] The beautification and the consequence of a great force, the beautification as expression of the victorious will, of a more intense coordination, of a harmonization of all violent desires, of an infallible perpendicular balance. The logical and geometrical simplification is a consequence of the enlargement of the force (Ferry, 1990: 246).

Brasilia

The project of Brasilia has as lead the conjugation of the individual and collective interests, not the agreement between the dionistic and apolinic impulses. Contradiction expressed by Lucio Costa:

The interests of man as an individual not always coincide with the interests of that same man as a collective being; it is then the job of the urbanist to try to solve, in as much as possible this fundamental contradiction (Costa, 1962: 50).

As in the corbusian doctrine, the uninterested action legitimate the condition of the individual in social interchange. Not that determined heteronomically by affective ties, anchored in tradition, or by religious, ethnical, national or familial community feelings (Ferry, 1996: 95). The virtuous conduct is not evaluated as indulgence or piety, behavior that tributary exclusively of the feeling lose its universality. On the other hand, virtue cannot be mediated by the social contract, as proposes the general will of Rousseau's, since its universality would reify the uninterested action.

The universality and the transcendence of subjectivity, now resides, not in corbusian dignity, but in the authenticity: the possibility of being himself, once he is truthful, it has, as a corollary, the installation of a dialogue in which truth is tributory, it presupposes an interlocutor. Here as is by Corbusier, the sensitive universe must bend to the intelligible universe, not by will of power, but by the force of dialogue, presupposes coexistence. Of the dialectic confrontation between concrete historical alternatives comes the truth. According to Ferry:

If the socratic method takes up via dialogue, it is better to refute the position of the adversary trying

to attain a superior truth, of the idea (of the intelligible) (Ferry, 1998: 87).

Within this frame where the referential is history, the actualization of it signalizes a condition to the possibility of the exercise of liberty. Lucio Costa synthesizes in these terms such posture:

The best form of predicting is by looking behind (Costa, 1962: 114)

The multiple historical typology incorporated in the project of Brasilia contrasts with the only tribute made by Le Corbusier to history: a referential to a physical dimension borrowed from Boulevard of Champs Elisées.

The emancipoted action in manifesting itself, be it by dignity or by authenticity, have as implication the right to the difference, the recognition of othemess. These libertarian versants within the rationalist and empiricist of illuminism are recognized by Argan as metaphysical and historical (Argan,1989: pp. 11-31).

Both view the promotion of dialogue as a way of founding citizenship. For Corbusier dignity echoing in a fellow being deserves respect and in this relation dignity-respect emanates the dialogue. For Lucio Costa the feeling of authenticity in the consciousness of the willfulness of the acts, their counterpart is the responsibility. Authenticity and responsibility are protagonists of a dialogue in search for veracity. Truth is the dialogue.

About the Sublime and Beauty under the guise of conclusion

Chandigarh expresses metabolism between spirit and nature, in Brasilia, in the terms of Lukacs, "the submittal of nature to the necessities of a concrete human community, both at the level reached in this territory in each case as at its human aims effectively realized in this process" (Lukacs, 1967: p.57).

The way in which the notion of scale appears in the projects reiterotes the views of the world exposed. In the Edict de Chandigarh we can read:

Human scale: the city of Chandigarh is planned to human scale. It puts us in touch with the infinite cosmos and nature [...] Here the radiance of nature and heart are within our reach (ANQ: p. 25).

For Lucio Costa the notion of the scale is tributary of the historical and cultural synthesis:

Brasilia was conceived precisely for man and this in function of three different scales because the so called human scale is relative. The Italian of the Renaissance, for example, would feel diminished if the door to his house was less than 5 meters high. This way the game of the tree scales will characterize and give sense to Brasilia when the city really begins to exist (Costa, 1962: 343).

When he discusses about the feelings of beauty and the sublime, Kant sets out categories that hold to the reading of the projects here confronted:

The sublime qualities incite the esteem, the beauty qualities love [...] Win over passian by principles is sublime [...] The fundament of a pleasant sociability is beautiful [...] The beauty of all actions consists principally in the fact of seeming to have been made without any effort, and the overcoming af the difficulties, pravaking admiratian, carresponds to the sublime (Kant, 1990: pp. 85, 93, 96,122).

The way in which the Civic Center interacts with the city is revealing:

In Brasilia it is a hegemonic and subliminal presence, sensarialy at hand and independent from displacements, in Chandigarh it is peripheral and its access praceeds from a deliberate decision as pure concrete will af a planned actian.

The introductory drawing to the project of Chandigarh "naissance d'une capitale" (Le Corbusier, 1953: 113) reminds us of the sublime atmosphere of the work of Cospar David Friedrich.

Fig. 1 – Le Corbusier - croquis

Fig. 2 – Caspar David Friedrich - Woman facing the sunset - 1818

NOTE

[1] The technical-functional performance and the adaptation of the design to the particular practical, psychological, physical and sociological contingencies, needs and convenience of the users will not be the aim of the verification of this work.

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KEYWORDS

City, citizenship, aesthetics, urbonism, art.

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Rosane Bauer

Living with Brasília: a residents' perspective of the confrontation between heroic vision and social reality

Introduction

Conceived as the symbol of a new era of development and progress, a new way of life and an egalitarian society based on democratic principles, Brasília embodied a spatial order that radically opposed the traditional everyday life in Brazil. The illusion of this new life was everywhere reinforced in the modernist city, transforming Brasilia's project not only in a political, but also in a heroic social project.

To what extent do the residents understand the effect of the modernist design on their way of life and on their ability to appropriate the city? What is the actual relationship the inhabitants have with the modernist city? Have any significant changes in the way people appropriate modernist structures occurred since they were implemented?

This paper discusses everyday life in the modernist city and its contribution to the production of city space through the analysis of the appropriation of space in three residential areas of the Federal District, the urban area formed by the Pilot Plan of Brasilia and the satellite towns. The aim is to offer an interpretation of the genesis of the user's own space in the modernist city.

A superblock was selected in the Pilot Plan – the 312 North – because this type of housing scheme constitutes the predominant mode of the modernist city. The other two areas are located in two satellite towns, the Block 8 in Sobradinho, and the Block 431 in Samambaia, which area satellite towns that have residential areas with a modernist design. These areas embody similar design concepts and their design present the same characteristics existing also in the majority of the other housing areas of each area where they are located. The extensive presence of the highways, the elimination of the traditional streets formed by the façades of the buildings and the new conception of space that radically changed the proportion of voids and grounds in the urban space introduced to the Brazilians an urban space radically different to what they were accustomed to live in and provoked different reactions.

Significant changes have occurred up to the present days in the relationship the residents have with their environment, especially those that occurred after they established an intimate link with the city. This intimate link has been established through a process of identification that allowed the residents to feel a cultural belonging related to these areas, leading them to a process of appropriation of their space.

After four decades of existence, Brasilia is rather different from the city the planners intended to be. What has been attained by the popular restructuring of Brasilia is a peculiar urban setting that, although to some extent it keeps modernist characteristics, it also reproduces the spatial and social organization common to other Brazilian cities.

Today, behind Brasilia's monumental modernist appearance, lies a city that has been physically and symbolically rearranged by its residents. This has allowed them to transform the rigid modernist structure into a living city that seems to be fully acceptable by them.

Housing Areas: a brief description

The superblocks, which area the predominant mode of dwellings in the modernist city, introduced a new concept of space in a residential area. They area self sufficient areas with their own facilities such as an elementary school, medical services, a child care unit, recreation and some commercial units. Each superblock is linked to three of its neighbors by shared facilities. Its design proposes the ultimate segregation between the vehicular and pedestrian traffic. The traditional street formed along the façades of the buildings is eliminated, and there is a predominance of the green areas and an easy accessibility to all through the ground floor of the buildings.

The commercial buildings, usually situated between two superblocks, originally faced the feeder paths between these superblocks, instead of facing the main road.

Other characteristic typical of this type of residential unit is the presence of huge open spaces that surround the buildings. They usually are green areas of non-descript function, which might suggest expectations that residents would appropriate them freely.

In Sobradinho, the residential areas are divided into different estates sub-divided in several blocks. On each side of the residential blocks are commercial areas as it is in the Pilot Plan.

In the different blacks, the entrances of the houses face a common green area, forbidden to vehicle traffic. Traffic is directed along the street located behind the plots. The backs of the houses face this street that separates one block from another. This design inverts the function of the traditional street, that of being the public outdoor space of sociality.

The residential areas in Samambaia are characterized by a series of blacks that also share common facilities, applying the some system of shared facilities of the Pilot Plan. Many of these facilities have not been built yet, which requires constant struggle by potential users for properly planned and constructed services facilities. The urban design of the residential area is heterogeneous including different public areas, depending on the spatial organization of the plots in the site. The area is connected to the neighborhood by main roads on both sides where the local commercial center in located.

The residents interpreted most of these design characteristics as being in huge contrast to traditional residential set-ups.

Residents' interventions along time: Modernism confronted by the reality of everyday life

These residential areas embody design characteristics that were perceived as quite unfamiliar by the residents. The superblocks suggested a new way of life. The idea was to influence a profound chance towards a progressive social integration based on the neighborhood unit.

The residential areas in Sobradinho inverted the function of the street and suggested the users to perform their public social life in green areas that area usually left empty. The residential areas in Samambaia did not pravide all the necessary conditions for the performance of the traditional social life required by the users.

The elimination of tradition in the modernist city was not interpreted as an attempt to create an orderly space or resolve the traditional urban chaos in the name of progress and development, but rather as an attempt to neutralize the familiar human crowd and its diverse and dangerous social implications. Interestingly, while the traditional city was conceived as a bastion of chaos, Brazilians in general did not necessarily interpret this as negative. On the contrary, that chaos was perceived as the most valuable expression of urban life, which the modernist city has failed to generate.

The interventions done in the Superblock 312 North range from the residents' demands to provide venues for social activities, demarcation of territory, change in the uniform visual appearance of the buildings for strengthening local identity, to the appropriation of public areas for private use and to change in the layout of commercial buildings.

The commercial center had their main entrances changed and located facing the main roads that surround the area, where the street movement is, creating an environment quite similar to the existing in other traditional Brazilian cities.

The initial public character of the ground floor of the residential buildings gradually became semi-private. Intended to be an extension of the public area that surrounds the residential buildings, this area was supposed to provide free accessibility to all. The intervention done by the residents denotes their demand of rigid demarcation of individual territory that is a physical expression of conflict between the original intention and the residents' life style.

The residents of Block 8 in Sobradinho spontaneously changed the use of the vehicular street. They usually reach their homes through the back door located in this street. It is here where the residents circulate, chat and meet the neighbors. This contributes to increase intensity of street life in an environment that originally was not designed for it.

The main entrances to the shops were changed from the feeder road at the edge of the residential area to the main traffic road, similar to what was done in the Pilot Plan.

In Samambaia, most of the changes have to do with demarcation of territory, creation of new spaces for the fulfillment of the demands of the residents, as well as changes in the original layout of the commercial buildings, similar to what happened in the other two areas. The public spaces are often used by some residents to socialize with neighbors, even though there are no proper facilities for such activity. This activity of socializing with neighbors in public spaces that surround the houses replicates again the street life of the traditional Brazilian cities.

The plan's disregard for architectural roots and for traditional social practices had a deep impact on residents, who have struggled ever since to restore the traditional way of life. The architectural and urban elements that support traditional street life, though absent from the modernist city, are nevertheless preserved by the culture, deeply affecting the symbolic meaning and conception of the representational space. Residents took over the city, in spite of the plan's powerful inherent mechanisms for preventing change, and produced their own space within the modernist environment. Out of the popular rebellion against the rigid plan emerged an unpredictable new urban reality in the Federal District.

The changing face of the Federal District

Behind Brasilia's monumental and rigid modernist appearance lies a city that over the past years has been physically and symbolically rearranged by its residents. As a result, they have established an intense emotional bond with their environment. The initial incapacitating feeling of being absorbed by the unfamiliar modernist city was gradually replaced by a sense of home and the satisfaction of being actively involved in the production of space and in the transformation of an alienating space into a familiar and lively environment.

The rearrangement of the city's residential environments is the result of a long process of interpretation and adaptation through continual intervention. The residents have now reclaimed the superblock after its first years as a cold, rationalist environment. The spatial structure of the superblock imposed a collective social life unwanted by the residents. But it forced them to assess and identify their own values, and the residents then began to rearrange their neighborhoods. They transformed the public areas to create a social space, similar to a *barrio*, based on the values of privacy, individuality and diversity. Ironically, a new collective social has now emerged in the superblock, fulfilling the intention of the original plan, but through a different, character, to a different tune.

The same values of privacy and diversity were reproduced in the rearrangement of space in the satellite towns. Individuality, however, did not seem to have the same importance for the residents. Here they attempted to create the kind of physical environment necessary for intense social interaction. The residents reproduced the environmental characteristics of a tradition *barrio*, thus infusing their space with traditional meaning. The original attributes that did not motivate social interaction were neutralized by the creation of this new social space.

Brasilia's residents in spite of the rigid character of the modernist plan have created a new urban reality. They have transformed the built environment to reproduce traditional social practices. In so doing they have revived the city's defunct image. Today Brasilia is seen as a city founded an a completely new lifestyle, neither exclusively traditional nor modernist, but rather a synthesis of the two. While the urban chaos of the modernist plan has not been entirely repaired, at least some of the excessive space initially proposed has been eliminated. The residents have infused the rationalist city with a cultural and human dimension embodying the meanings they attach to the space around them. The huge avenues and modern buildings are now interspersed with spaces for social interaction, where people pass by and casually meet others, where various activities promote exchange between people, where human warmth combats the coldness of the city's reinforced concrete structures. The result is certainly far from the familiar traditional urban space, but it is equally far from the intended rationalist space. What has been generated is a space that, though it retains most of its modernist physical attributes, has been transformed into a living phenomenon that reflects all the social contradictions and conflicts of a society based on diversity.

Conclusions

There have been many debates on modernism and the negative effect of its authoritarian design on peoples' lives. What is of concern in this paper is not the failure or success of modernist urban planning, but the users' interpretation of their audacious city.

The dream of achieving sociol change through a new spatial order, which was fundamental to the project of Brasilia, no longer has much influence on residents' interpretation of the city.

Brasilia has gradually become a living city capable of sotisfying more of its inhabitants' needs. The residents' view of the city has become decidedly positive since they realized they could oppase the authoritarian design and rebuild the city according to their needs. The years of living and contributing to Brasilia have given its residents an emotional band to the city, and a much more intense relationship with their environment, further motivating them to reinterpret it.

Although the inflexibility of the modernist plan still negatively influences the residents' lives in some respects, their transformation of Brasilia into a living city testifies to the positive effects of active popular opposition to planning rigidity. Social forces infused the modernist city with unexpected events every day, lending it a new intensity, a dynamic urban life, and pointing toward an amodernist horizon.

Brasilia was from the beginning an audacious experiment, the manifestation of modernist urban planning theory. The residents of Brasilia have now acquired for their city a new symbolic significance: the transformation of a modernist urban environment into a living city that reflects in its utilization of space the social contradictions planners tried meticulously to avoid. Moreover, the residents have transformed Brasilia into a city fully acceptable to them, not only because they have regained the freedom to produce their own space, but because of the rewarding feeling of self-empowerment that goes with.

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KEYWORDS

Brasília, modernist city, production of space, appropriation

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Ruth Verde Zein
Ana Gabriela Godinho Lima

What do we really know about Brasilia? Misleading and prejudice in canonical books

The purpose of this paper is to draw attention to the way that Brasilia has been described in cononical architecture books, read and studied all over the world. We believe that, through a series of misleading information and prejudiced interpretation, Brasilia, in the last decades, has not received the appropriate approach it deserves. On the contrary, the critics disdained Brasília when they should consider it one of the greatest achievements of the modern movement. This work does not aim to be a deep analysis of the architectural historiography of Brasilia, but to suggest that critics should consider this capital city, four decades after its completion, as a lively, strong evolving city and not as a photograph of the past.

Brasilia became known to the world not as an urban plan, but mainly as a set af architectural still photographs, showing isolated governmental buildings in the middle of the dust, taken while the city was under construction. These images were repeated over and over through articles and magazines, and were reproduced almost the same way in the canonical architectural handbooks, that transmitted them through generations of architecture students. Those frozen images of the past were seemingly used as utterly information for the authors' understanding about the landscape, the urban plan and the architecture, interpreted as of desolated and oppressive appearance. This "traditional" set of pictures were taken as the image of Brasilia in its totality, when they were just showing one of its particular aspect, even if a very important one, namely the governmentol buildings Niemeyer conceived with a proper ond necessary monumental choracter. They seem not to distinguish between Lucio Costa´s urban plan and Niemeyer´s buildings: this very important fact is not at oll dealt in the cononical books. Besides that, the only ospects most authors emphosize obout Brasilia are the novel forms and visuol drama of Niemeyer´s buildings. The urban design is generally briefly mentioned as a "two wing" or "cross" form, with no consistent references to the urban concepts that guided the design of one of the greatest "Modern Cities" of the world.

Nevertheless, in the meanwhile the vegetation was growing, the buildings were being completed, people were living their daily life and Brasilia was gaining reality in spite of its initial crudeness. However, even later critics, writing in the 80´s, retained those primeval images of an uncompleted city, and apparently made no other efforts to verify its reality, or its possible change. It is interesting to note how prejudice and misleading were transmitted from a canonical book to another, almost untouched, which let one imagine the extension of the damage a wrong approach may cause.

In order to exemplify that, let us call attention to a passage in Tafuri´s and dal Co´s *Storia dell´architettura. Architettura Contemparanea II* (1979), precisely, at the Chopter XVII, written by Tafuri (Tafuri,1979:337)

> *"...born from demagagic intentians,* ***in the middle of the jungle,*** *is guided by a childish allegaric plan, that tries to reinterpret an urban model already experimented in Saviet Unian in the 30´s"*

That´s all he says about Brasilia´s urban design, referring to it as "childish" and "allegoric", and giving the reader the impression that it is not serious or worth any kind of description or analysis. When he locates the city "in the middle of the jungle", it seems to be clear that the affirmation is tainted with the stereotypical image of Brazil as a tropical country covered by an uninterrupted jungle. Well, this represents a geographical mistake in two aspects. First one, in Brazil we have rain forests, not jungles; second one, the Amazon Farest is thousands of miles away from Brasilia.

And he continues:

> *"Niemeyer showed the limitations af his paetic, that became a common maniera repeated to nausea [...] with spectacular, but superfluous fancy." (Tafuri, 1979: 323)*

Maybe he is right but this do not alter the fact that no consistent reasans are presented to justify this opinion. At least not like Leonordo Benevolo, in his

1960's *Staria dell'architettura moderna*, nineteen years before did:

"As Haussman in his time, Costa and Niemeyer proposed themselves the creatian af a new urban landscape, experimenting already acquired compositional formulas in a new scale. Although the critiques we make today to Brasília are very similar to those made to Haussman's Paris one century aga, emphasising the artfulness and the abstraction of the adopted instruments without valuing the methadalogical importance of his usage in new circumstonces and its thoughts, be then problematic or not, that derives from the future city design systems.
If we can judge Brasilia's architecture in a severe way, but in its real own terms, it will be as a new urban space which tokes this form. Because the Brosilio's experiment employs the modern urban culture and anticipates, in various aspects, the development possibilities." (Benevolo, 1966:1026)

Benevolo's book, written soon ofter the inauguration, shows a balanced position, and suggests that Brosílio, even when judged in a severe woy, should be taken in its own terms. Unfortunately, this is not what happened with other "canonical", which includes Tofuri's, thot appeared de following decades. When we toke Kenneth Frampton's *Modern Architecture: a Critical History* (1980), we are led to deduce that his vision is influenced by Tofuri's, be by the position of his interpretation, be by the presence of the some geogrophical mistoke, as follows:

"... soon after its foundation, Brasilia emerged as two cities: the manumental city of gavernment and big business to which the bureaucrats commuted by air from Rio, an the 'shanty town', or favela, whose inhabitants served the 'radiance' of the high city."
"... his wark (Niemeyer's) at Brasilia which, together with Costa's grid, evoked the aura of the genre terrible, the assertion of implacable form against remorseless nature; for beyond the order af Brasilia's Capitol, edged by an artificial lake, there lay the infinite extent of the jungle (1980)." (Framptan, 1980:256)

Frampton refers to the town right after its foundation. And what about a decade loter, or soy two, when the text was written? Not even a word about, even in the revised edition, of 1997, where the term "jungle" was replaced by "sovannah" (Frampton, 1997:256), which is the African correspondence for what we call "cerrado".

The term jungle started to haunt Brasilia's landscape in August, 1958, in the American Architectural Magazine Architectural Forum, in a note: Brazil's Jungle Capital

"One of the most ambitious, start-from-scratch building projects of all time is Brazil's building of a new capital city in the midst of a ***desolate jungle*** *area some 600 miles north of Rio de Janeiro. Brosilia, as the city will be called, was the dream of Brazilian President Juscelino Kubitschek, and last month he saw the beginning of his dream coming true. The first two major buildings of the new city were opened: the President's own place, colled the Palace af Dawn, and a glass-walled 135-room hotel. A small chapel was olso completed recently. Under construction are apartments, government ministry buildings and other buildings. Brasília, which in ten years is expected to be a city of 500,000 persons, will cost at least $70 million, probably eventually nearly $ 1 billion, including private investment. The overall plan for the city was by Architect Lucio Costa. The major government buildings in Brasilio were designed by Architect Oscar Niemeyer, wha will move his own office there soon. The white marble, glass and aluminium palace is called "Oscar's cardiogram" because of the jagged line of reinforced concrete pylons that guard the entrance." ('Brazil's Jungle Capital', 1958: 13)*

Back to Frampton, his text may lead the reader to imagine thot there are no middle classes in this city, only bureaucrats and the shonty towns inhobitants interact. So we have no clue what the 'supercuadras' (with a "c") that he mentions in his text, are all about. (Frampton, 1980:256)

About Niemeyer's designs, it hardly could be interpreted as an assertion of implacable forms against remorseless nature, but rather an attempt to give monumental character to govemmental buildings. [He clearly states that in his testimony of February 1958, not mentioning a word about the remorseless nature or even a possible return to Classical absolutes].

Finally, when we examine William Curtis' Modern Architecture Since 1900 (1982), we find again an emphasis on Niemeyer's forms and only a minimal comment about Lucio Costa's plan:

"Oscar Niemeyer's State buildings at Brasilia, built in the late 1950,s drew more on the example of the pre-war Le Corbusier, or on the model of Harrison's and Abramovitz version of the U.N. than on the style of the late works. As at Chandigarh a new urban form had to be conceived on a virgin site, Lucio Costa, the architect af the overall plan, designed wings spreading out in a slight arc from the focal point. The president's palace and main

congress buildings were laid out in front of vast piazzas with water and sky becoming essential elements of the composition. But Niemeyer's buildings lacked the force of those at Chandigarh. The president's palace, for example, had a mannered façade of smoothly finished inverted arches. The main chambers of the congress were expressed by saucer-shaped elements – one face down, the other face up – alongside the dominating element of the secretariat slab. It is possible that this imagery satisfied the technocratic aspirations and a thirst for grandeur on the part of the Brazilian élite: but the forms were inflated, diagrammatic and lacking in symbolic or sculptural substance." (Curtis, 1982:307)

Here, the wide spaces around the president's palace and the congress are understood as "vast piozzos". But the aim, in this case, was not to create an urbon space with the function of a piazza, a square, but to accentuate the monumental character of the buildings.

Curtis uses the same concept that Tafuri an dal Co: here a "mannered façade", there, a "common maniera", to criticise in a negative way the expression of the governmental buildings. In addition to this, when talking about Brasília, Tafuri and Dal Co employ terms such as "childish", "allegoric", "nauseo" and "superfluous"; Curtis uses "saucer-shaped", "inflated" and "lacking in symbolic or sculptural substance". In both cases, the reader may feel that there are too few lines of real analysis for so many adjectives.

The same proportion of adjectives can not be found in two works written specifically about Brasília: Norma Evenson's "Two Brazilian Capitals: Architecture and Urbanism in Rio de Janeiro and Brasília" (1973), and James Holston's, an American anthropologist, "The Modern City" (1993). Both books follow Leonardo Benevolo's proposition that Brasília should be understood in its own terms. It is important to observe that both works are result from rigorous academic researches, and do not have the same widespread dissemination of the canonical books. But their existence reinforces the idea that, in order to make an critical assessment of the architecture of Brasília, it is necessary to restore the facts and deepen the analysis, opening the debate on a clearer basis.

We hope that the next canonical books will offer us, and all over the world, a fairer critical view of what Brasília really represents in the Brazilian and the International architectural context.

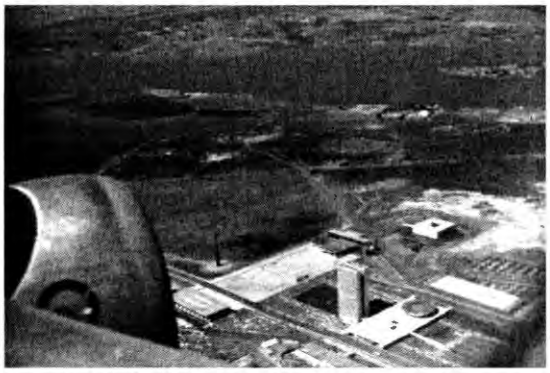

Fig. 1 – Brasilia Air View.

Fig. 2 – Brasilia. "Super quadra".

Fig.3 – Brasilia. Monumental Axis.

KEYWORDS
Brasília, Modern, Architecture, City, Books, Critics

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A legal system for urbanism: the Modern Movement's unseen face

The CIAMs, urbanism and urban legislation

An analysis of the texts produced by architects identified with the Modern Movement reveals that legislation was a fundamental issue, and that their propositions reached far beyond the Athens Charter and so-called functional zoning. The subsequent development of a sound understanding of urban legislation hinged on questioning the regulatory system based on hygienist urbanism which prevailed in the twenties, notably in France and Germany.

The Modern Movement criticized several aspects of the hygienic model of legislation, including its affirmation of the traditionol family as expressed in low-rise, unicellular dwellings with private gardens; its disregard for the potentiolities of vertical collective housing, such as free spaces and community-shared facilities; its hypocrisy, as manifested in unhygienic, poorly insulated and ventilated dwellings designed to answer to speculative interests; its rigidity and inadequacy in responding to to the population's economic circumstances; and finally, its dismissal of users and professionol entities as participants in the development and implementation of laws.

The recurrence of the legislation theme at the CIAMs meetings signals the importance of urbanism in the perspective of the Modern Movement, since the quest for legislation broached not only questions related to the forms of buildings but also to their urban insertion and to the town's spatial order as a whole. The constant effort to establish a close architecture-urbanism dialogue reflects the consensus amongst modernist architects that the issue of modern life encompasses urbon living. In this respect, according to Gold (1997: 16), it is in the city and by means of the city that the challenges of modernity are to be found.

Therefore, radical changes in the legislative approach were seen as intrinsic to finding a solution to the problem of designing a minimum living space within a framework of vertical construction, which featured good lighting, free and flexible design, green outdoor spaces, standardisatian, rationalisation and economy, the use of new construction methods demanded by the industrial era, while still preserving the concepts of the housing unit, of the neighbourhood, and of the city in its totality.

The Preparatory International Congress on Modern Architecture held in 1928 at La Sarraz (France) - later known as the CIAM I-, already included urbanism as one of the topics for discussion, relating it to other issues – standardisation and rationalisation in construction, and the relationship between architecture and economic order. In the Congress' final declaration, urbanism was defined as the organisation of functians in collective life, involving town and country. Three key urban functions - shelter, work and leisure-, were to be articulated by a fourth function: circulation. In order to make these principles effective, mechanisms such as control over land-use, legislation and regulation of traffic are outlined.

It was at this first meeting that the idea of land redistribution and the end of private property emerged, as well as its less radical formulation, which called for the abalition of the chaotic partition of land through sale, speculation and inheritance by redistributing between landowners and community the unearned increment resulting from works of joint interest. (Gold,op.cit.: 59)

In subsequent meetings, the understanding of the relationship between housing and the city acquired more and more complexity. CIAM II, held in Frankfurt am Main in 1929, with the theme "Housing for lower income groups and the notion of the minimum dwelling", con be understoad as the moment in which that relationship was first emphasised at the level of the neighbourhood. Public facilities – nurseries, sports areas, refectories and laundries -, were incorporated in the concept of habitation. To resolve and organise those and other urban spaces, vertical construction and increased population density were introduced os key elements.

Two papers directly broached the subject of urban legislation: "Sociological fundaments of minimum dwelling", by Walter Gropius, and "Building codes and minimum dwelling", by Hans Schmidt.[1]

The debate on legislation emphasised, an the one hand the need for laws adequate to new materiols,

new construction systems and new ways of life. On the other hand, legislatian was viewed as the state's instrument of intervention to assure housing quality and protection from speculative interests, in order to develop potentially low-cost housing for workers, and to control tenancy rent. Legislatian must alsa be flexible, involve the participation of different professionals in its implementation, and address both construction and urban planning. This set of issues would direct the debates an legislation at later meetigs.

At CIAM III in Brussels 1930, where the theme was "Low cast housing and ratianal site planning", cancerns moved from the scale of the neighbourhood to that of the town. The same biological reasons that influenced the determination of minimum dwelling – space, air, light and heat, essential for the full development of mankind's vital functions —,were transferred to and deemed decisive on the scale of urban planning. One could say the assumptions for the discussion of the Functional City in CIAM IV were established at the meeting in Brussels. The Ville Radieuse scheme was presented for the first time by Le Corbusier in Brussels. Le Corbusier's plan featured standard housing units organised in blocks, with separate circulation for vehicles and pedestrians. Other propositions of urban organisation, mostly by German architects, were grounded on the same principles, and aimed towards the creatian of a healthy, green town with orderly traffic.

Parallel to the rise of urbanism as an area of concern, legislation became more and more widely an object of consideration, and was more emphatically viewed as an indispensable element to put into effect the proposals. This can be observed in the introductian to the CIAM III minutes by Giedeon and in two papers on the problem of urban legislation, "Low-rise, medium height and high-rise buildings " by Gropius, and "The partition of land in cities", by Le Corbusier.[2]

In his essay, Gideon pointed to the rigid and retragressive aspects of urban legislation and to the need for improved flexibility as fundamental to solving the housing problem. For Le Corbusier, the central concern was the opposition between the dispersed city – the garden cities—and the cancentrated cities, vertically canstructed. Beyond simply raising the issue for discussion, the Congress saught to change municipal laws in many towns and cities in the world. The modernist proposals, according to the architects, could nat be accamplished with partial changes; instead, they demanded a whole new set of rules, starting fram redistribution of the land. Redistribution was seen as the "only pathway to urbanism", since praperty is subdivided, its inalienable character condemns "all attempts to collective betterment". Therefore, along with an urban system adequate to the machines era, new laws must effect what Le Carbusier called "the true revolution in the sacred notion of property": the re-arrangement of the partitioned? land. This was a pre-condition to ensuring the collective attainment embodied spatially by vertical buildings, wide open spaces, suppression of patias and passages, "pilotis" and roof-gardens. (Le Corbusier,1930: 233-242)

In considering the proper spatial organisatian of the large city, CIAM members believed that vertical housing had the advantage of precluding large commuting distances and consequently would save time and resaurces used in locomotion. It would also allow for the creation of large public green areas, which they considered more viable than the private gardens linked to unicellular dwellings. Gropius reinforced his 1929 theory that instead of restricting building heights, populotion density limits ought to be applied. Correct arientation in terms of sun and site would ensure better insulation as well as lower urbanisation casts and provide quieter roads, by allowing for lower-circulation routes and pedestrian precincts. CIAM argued for zoning legislation for the whole town, to promote that urban condition.

CIAM IV, structured around the theme "Functional City I (Analysis)", was the decisive mament in terms of modern architects focus on urban issues, with the presentatian and discussion of 33 city plans elaborated by 17 international groups. CIAM IV established a course that would be followed until CIAM VII—namely, the attempt by architects, to expand their field of action to the realm of urbanism. Although the conclusions reached by the Congress were never published due to lack of consensus, the two most accessible documents — Le Corbusier's 1941 "Athens Charter", and "Can our cities survive?", assembled and edited by José Luís Sert (1942), both attempted to legitimize architects' claims for participation in city planning, and in the design of neighbourhood units and expressway systems.(Gald,op.cit)

The Athens Charter repeatedly referred to legislation as an instrument for improving modern housing. Not only did the Charter encampass the repertoire of modern architecture, but it also incorporated urban solutions already being implemented in the large cities af Europe and America. In the Athens Charter, Le Corbusier (1941) again emphasised the urgent need to establish rules to dispose by legal means of usable land, essential to balance harmoniously the vital needs of the individual with the collective. To that end, he proposed the creation of the "land statute" to regulate the balance between built and unbuilt areas, thus demarcating green areas, systems and facilities for all residential

districts. The Charter also reinforced zoning as an instrument for ordering urban space, taking into consideration the four basic urban functions.

In his essay, Sert (1942) focused on legislation as one of the obstacles the urban expert was likely to confront; to overcome this obstacle, he should associate with other experts, such as legislators and economists. Comprehensive planning would require land acquisition as well as specific legislation to enable national and regional enforcement.

If one reflects upon the themes of the meetings before CIAM IX, (after which revisions of concepts and a leadership crisis took place), it is noticeable that they were all linked to the great directives consolidated in the CIAM IV. At the 1937 CIAM V meeting in Paris, the theme was Functional City II (Housing and Leisure), while at the 1947 CIAM VI in Bridgewater, the discussion on planning at multiple scales prompted two new fields of action—national and regional planning. Two years later, during the CIAM VII meeting at Bergamo, Le Corbusier presented the CIAM Grid, consisting of a methodological proposal for developmental analysis of cities in different scales, functions and contexts. At Hoddeston in 1951, the theme was "The heart of the town ".

The prevalence of urban concepts demonstrates the extent to which the legislative principles established in the Athens Charter were adopted after CIAM IV. The discussion stimulated by Schmidt, although partly incorporated in the architects' discourse was never fully adopted. Instead of viewing urban legislation as an instrument for the control and assurance of rights, the law was seen as a means for realizing modern urban and architectonic principles. In other words, legislation continued to be understood as just a rationalised technique for the ordering of space

Hans Schmidt: urban legislation as an instrument of control and assurance of rights

The German architect Hans Schmidt contributed, in 1929, the most innovative text on urban legislation to be presented at the CIAM meetings. Some of the issues raised by Schmidt are relevant in the current debate on urban legislation in Brazil. In "Building codes and minimum dwelling," Schmidt argues for conceiving of legislation not only as a rationalised technique to order space, but also as an instrument of control and assurance of rights involving the state, user and professionals.

While the majority of discussions on legislation at the CIAM meetings were generally concerned with strategies for making architectonic solutions and their insertion in urban space possible, Hans Schmidt dealt not only with technical issues but also with the social and economic aspects of legislative reform. Consideration of these aspects required a redefinition of the relationships between the state and other actors engaged in the construction of towns. Furthermore, Schmidt gave primacy to the role of architects and their associations, evidently with the intention of displacing the influence of doctors and engineers in urban legislation.

Schmidt indicated above all the need for distinguishing two levels of legislation: the urban level and that of construction and habitability; the former concerned the limits of individuals in their mutual rapport, and the latter of the individual towards the community, which must, by means of technical criteria, assure a given degree of quality in construction.

Second, Schmidt designated flexibility in legislation as essential, and pointed out that, with the exception of laws limiting property rights, all rules concerning construction must be passed in the form of codes. Whereas the technical criteria related to social and hygienic issues should be general norms, those regulating stability and fire prevention; must be precise rules implemented and enforced by means of updated scientific methods. But in both instances, flexibility must be assured for defining housing programmes and fulfilling social and hygienic needs, as well as for selecting materials and construction systems.

Schmidt discussed a third aspect, the role of the state, which he said must be limited to that necessary to produce quality control. According to Schmidt, from the moment construction turns into the speculative production of goods, criteria become essential. If the state sponsors a free market in which virtually anyone is allowed to establish himself as a builder of residences, it is the same state's responsibility to protect tenants against losses resulting from the actions of irresponsible and unqualified builders.

However, to guarantee the quality of housing, Schmidt claimed that some measure of state regulation over the economy was necessary. In other words, laws must consider innovations in construction methods and hygienic requirements, as well as new ways of living proposed by architects, while always keeping economic circumstances in mind. The standard of ideal housing imposed by a strictly legalist view had not shown itself to be economically viable in post-war times. Consequently, less expensive housing forms started to materialise without a proper legislation to follow suit. Making a decision on housing quality for the poorer population always comes down to the inevitable dilemma of calculating production costs versus feasible rent.

Fourthly, Schmidt argued for the inclusion of professional entities in the process of creating and enacting laws, in other words, removing law-making

from the exclusive domain of the state. He believed that professional associations of architects and engineers should be consulted on the formulation and revision of laws, and also participate in their elaboration and application.

Lastly, Schmidt emphasized the importance of laws for upholding the technical and social responsibility of producers: construction must be organised in communities, guilds and public interest bases. He outlined the role of architects and the nature of their interventions in production: architects must introduce new ideas in the production of habitation and try to re-establish direct communication between user and builder. Instead of allowing themselves to be guided strictly by laws, architects must seek the collaboration of science, industry and users, to originate and advance knowledge.

For Schmidt, it was also part of the architect's mandate to challenge the speculative construction of dwellings, and to free housing from the influence of a-social regulating forces. As responsible specialists, architects should proactively advance changes in methods and deeds, rather than trust that better habitation conditions will come about through the force of norms. The first step in that direction was to guarantee that the construction of dwellings be executed by skilled and reliable professionals who possessed the necessary experience.

Schmidt's formulation positioned urban legislation as part of the legal system that- permeated and structured society, and provided a basic element of predictability and stability in social relations. In other words, Schmidt's modernist perception of legislation was not limited to a set of norms; it took into account not only the passing of laws but also modes of application, public character, independence from the judiciary, etc.

Brasília – legislation as a rationalised technique towards a sole project

Formulated soon after Brasília's inauguration, the legislation governing the capital city revealed the limits of the modern architects' urban vision as it was conceived in the 1930s and 40s. The legislation also reflected the importance of Le Corbusier's Athens Charter document in diffusing modernist notions of the city in Brazil.

If there is one aspect that substantiates Brasília as a veritable CIAM city, it is Lucio Costa's radical dialogue between architecture and urbanism. By introducing himself "not as a fully prepared technician" but as a "mere *maquis* (guerrilla fighter) for urbanism", Costa (1956) clearly wanted to occupy the space claimed by architects in urban planning.

In the remaining aspects, Brasília can be defined as a Corbusian city, a straightforward translation of the principles of spatial organisation set forth in the Athens Charter, which since the early thirties had been gradually introduced in the new town projects and in the urban legislation of a significant number of towns in Brazil

In the thirties and thereafter, layouts of new towns contained a superimposition of the Athens Charter principles over those of Ebenezer Howard's Garden City.The influence of Garden City precepts could be seen in the sinuous and irregular design of residential developments, large green wooded areas and collective facilities. From the Athens Charter they extracted functional zoning and land use parameters which favored free-standing objects, detached from any boundary conditions, such as Atílio Correia Lima's Goiânia plan, Jorge Macedo Vieira's Maringá, Águas de São Pedro and Cianorte, and others.

The Garden City principles had been gradually incorporated into Brazilian towns since the first decade of the twentieth century. In contrast, the adoption of Athens Charter precepts, was paced by the release, mostly by architects' entities, of CIAM discussions being held. The perception of zoning grounded on mankind's four basic functions became emblematic of modernist notions adopted.

The progressive absorption of modernist postulates becomes evident when we analyze new towns and their corresponding urban legislation between 1933 and 1960, from the Goiânia project to the legislation on Brasília. In his report on the Goiânia project, Carrêa Lima wrote that "the town zoning seeks to follow modern tendencies", and stressed the importance of zonal regulations. Goiânia's first Building Ordinances (1937) delineated zones and anticipated their observance. The same applies to the Águas de São Pedro (1938) and Londrina (1951) codes and the Maringá project (1947) and building ordinances (1959). Even rectangular, geometric Panorama, which was designed by Prestes Maia in 1952 along the model of the City Beautiful Movement, followed a self-imposed zonal regime.[3]

The diffusion of comprehensive zoning reached to the Brazilian capitals, and in 1936 and 1937 Recife and Rio respectively incorporated zonal regulations by function to their building ordinances. In the forties and fifties zoning laws were increasingly adopted in a great number of Brazilian cities. In the cities, unlike newly planned towns where legislation was expected to preserve the principles established by the project, legislation aimed at changing the existing physical context by imposing a new rationality on the urban space. The new model was imposed in order to organise and distribute urban functions, review dimensions of lots and relocate the construction within lots.

Beginning in the thirties, these new regulating principles marked a change in urban practices, with mounting consequence for legislation as a planning instrument, offsetting to some extent the importance of plans. Comprehensive zoning gained ascendancy as a privileged strategy for the control of urban space. It was mainly based on the American urbanism of the twenties, and the Athens Charter constituted the second source that provided and consolidated its diffusion in Brasil.[4]

Decree # 7 of June 12, 1960 passing the Brasília legislation rendered in pure form the Athens Charter's principles on spatial organisation. Compared to the zoning laws at the time the Brasilia legislation was notably radical in its regulation and specificity of functional separation, construction and materials typologies, as well as the definition of formal attributes of the buildings.

Brasilia was governed by a functional zoning system which rigidly divided the city into seven monofunctional sectors: administrative sectors (the three-powers square, the pramenade of ministries, government agencies and the area reserved for the municipal centre); commercial sectors (local and central trade, south-and-north banking, south-and-north lodging and entertainment); mixed uses building sector (commercial and residential); industrial sectors (supplies and storage industries, supplies centre, publishing industries); special purposes building sector (large area sector, filling stations, wash and lubrication stations, fuelling stations, schools, cinemas, theatres, hospitals; embassies and legations sector; and three kinds of residential sectors, differentiated according to typology: detached, semi-detached and collective (superblocks). (Art. 2, chapter II)

For each housing typology definitions of standard measurements, clearance and land occupation were provided. For collective housing highly detailed recommendations were specificied, down to the materials to enclose laundry and service areas, and distances between axes for columns. The same level of detail existed in regulations for commercial and industrial construction.

A full chapter of the law was dedicated to the formal aspects of building, restricting repetition in the design of "public" or "sizeable" buildings, requiring that "their origin may be identifiable" (art. 54). Peculiar or special architectural designs were only permitted outside the urbanised zones, provided their land occupation does not exceed 1/4 of the plot. The planning sector of city administration was granted the right to "restrain exotic, disproportionate or ridiculous designs that may jeopardise the architectural quality of the capital city", as well as to have the final word on external finishing materials (art. 55). Buildings in the Supplies and Storage Sectors and Supply Centre were to conform to the architectural design and standards elaborated by the planning sector (art. 60).

If the Brasília legislation is analysed against the background of the CIAM principles, particularly those pointed out by Schmidt, it is clear that the law did not intend any redefinition of the relationship between the state and other actors involved in the construction of towns. In fact, it was a legislation formulated to render viable a single, monolithic project, and even more than that, a finished, fixed project. Its formulation did not allow for the urban dynamics and mutability of living circumstances, considerations which inspired the founding of the CIAM meetings and steered their discussions and propositions. Quite the contrary, the Brasilia legislation ossified Lucio Costa's project by not admitting changes or urban expansion. By conceiving the law as an instrument that congeals an urban situation, it subverted all of the postulates about legislation introduced at the CIAM meetings which aimed at radically changing the great urban centres.

In place of flexible legislation, granting housing programmes freedom to fulfill social and hygienic requirements, and to select constructive materials and systems, a whole set of rules restricted users, builders and architects like a straitjacket. For the architect, instead of innovating housing production, encouraging the co-operation of science, industry and users, and advancing the relationship between user and producer, all that was left was submission to the law. The state, formerly limited to product quality control, became an aesthetic censor and project formulator.

Concerning the question of economic housing, Costa (op.cit.) assigned to the Companhia Urbanizadora the responsibility "to provide within the proposed arrangement for decent and economic accommodation for the totality of the population", and recommended "preventing the encystation of shanty towns both in the urban and rural peripheries". Whereas Costa stated that the plan sought "a certain degree of social coexistence, thus preventing undue and undesirable stratification", in Decree n.7 a specific área for "economic housing" was established, distant and segregated from the main design. In contrast to the rigidity present in the recommendations for other typologies, the law did not provide in any way rules for the construction of this kind of housing.

In fact, altogether ignored both in the plan and the law was any discussion concerning the state's, producers' and particularly architects' technical and social responsibility, to ensure accessible and quality housing for the working population.

It is clear that the 1960 law on Brasilia was out of step with the political and social dimensions of the

legal system implicit in the CIAM theses. The same, however, is not true of Brasilia's legislation in relation to the urban practices at the time in Brazil: Brasília's legislation reaffirmed the existing legol system and did not break with two essential aspects of creation of urban legislation consolidated in the forties and fifties - a strictly technical product imposed by means of decrees.

NOTES

[1] Ernst May, Le Carbusier, and Victor Bourgeois also presented works at CIAM II.

[2] Other works were presented by Boehm and Kaufmann, Richard J. Neutra, and K. Teige.

[3] Prestes Maia's proposed zonal regime is part of the technical memorandum accompanying the city plan. His notes were not passed as town legislation.

[4] On American influence in the construction of zoning in Brazil and decline in the importance of plan, see Feldman (1997)

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Architectural and social modernity: The image of Brasília in two European movies

The last of the great successful Brazilian movies, *"Central do Brasil"* (English version Central Station, 1998) by Walter Salles, shows the Brazilian architectural image of the forties and the fifties in a way that somehow has not pleased admirers of modern architecture, as we here gathered. Narrating a story of two characters who leave the urban life, which is portrayed as savage and rotten, in order to find lost human values in a rural and pure space, the movie adopts an anti-modern and conservative perspective, as pointed out by Olavo de Carvalho (Carvalho, 1999:34-38). The journey from Rio de Janeiro to Brazil's Northeast interior starts in the Pedregulho housing project, designed by Affonso Eduardo Reidy. This building represents till nowadays the required social commitment of Brazilian modern architecture. This architectural scenery is just the headquarters of organ traffic dealers, who had bought the boy, the story's hero. The boy is kept captive just in this building, which is undoubtedly associated with an existential void and with the absence of a moral fiber in urban life. This sequence of the film could be interpreted as follow: the first step in finding again basic human values and national identity, which were both destroyed by the big contemporary metropolis, requires running away as fast as possible from this modern architecture, the evil dwelling. This escape annihilates all the aspirations of building a better social universe and a new national identity - aspirations between which modern architecture in Brazil has oscillated.

The extremely simple duality between good and the evil in the story, spatially represented by the Northeast hinterland and by the Rio de Janeiro city, shows a serious misunderstanding of the non-linearity of modernity, as Marshall Berman presents it in his work *"All That Is Solid Melts Into Air"*, when specifically analyzing the modernism af the periphery, beginning with the literature on Petersburg and its social history. He states that the meanings of modernity in Petersburg that come from the "shock and (...) interaction of experiments of modernization in both top and base" (Berman, 1986:269), "had to be more complex, paradoxical and indefinite" (Berman, 1986:169). Berman is trying to characterize what he defines as modernism of underdevelopment. In opposition to an experience of a modernized reality of the developed nations; the madernism of Petersburg "emerges from hardship and underdevelopment" and, for this reason,

> *"it is forced to be construed of fantasies and dreams of modernity, to be naurished af an intimacy and fighting against mirages and phantams. To be truthful in relation to the life fram which it emerges, it is forced to be strident, harsh and incipient. It folds on itself and tortures itself for its incapacity af alane building a history, ar it launches in extravagant tentativeness of absorbing all the burden af history. It beats itself in frenzies of self-aversian and preserves itself only through vast reserves of self-irony" (Berman, 1986:220).*

Berman himself suggests that the process of modernization in Petersburg "may offer cues ta some of the mysteries of the political and spiritual life of the third world cities – Lagos, Brasília, New Delhi, Mexico City – nowadoys" (Berman, 1986:269). Who definitely has not followed these clues indicated by Berman was James Holston, who, in his book *"A Madernist City A Criticism of Brasília and its Utapia"*, identifies all the paradoxes and distortions, which for Berman are foundational part of this sort of modernizing process, as problems and accidents that make the utapia not working. Believing in the possibility of a homogeneous and entire modernity that inflexibly establishes itself and based on a questionable unified vision of the Modern Movement in architecture, that, for example does not distinguishes between the modern architectural history of the twenties in Germany from the fifties in Brazil, Halston does not perceive nuances that put in question his polarized positian and ends linking the ideas of the Brazilian architects to the Russian Revolution communist ideals. Holston even says that for these architects the Brazilian modern architecture represented a rupture with the colonial past (Holston, 1993:81; 103-105;174). Summarizing, what for Berman is the maving farce of this mader-

nity, the confrontation between its phantasms and their appropriation, is for Holston its failure.

By trying to identify in narrotives about Brosília some of the themes oroused by Berman in his analysis on Petersburg, I sholl work with two European movies launched shortly after the inauguration of Brazilian capital. On one hand, using cinema, the most representative medium of 20th century communication, this object of study can be understood as an actualization of the use of literature to the study of the modernization of Petersburg in 19th century. On the other hand, even if the history of Brasília does not yet offer a dramatic importonce of the Russian revolution, which was the focal point of the literary course followed by Berman in his discussion of the city by the Neva, and even if the authors and film makers here studied do not have the some cultural standing as Dostoievski, Gogol, Chernyshevsky or Mandelstam, and as smaller as the universe represented by the two movies is, this paper might be understood as a small cose study in the construction of the city image; the comparison of the use of Brasília in these two films offers some starting points to a larger work that incorporates other cultural forms that deal with the Brazilian capital, such as lyrics of local pop and rock'n roll bands from the eighties (Legião Urbana, Plebe Rude, Capital Inicial, etc)[1].

The film *"L'Homme de Rio"*, a French-Italian coproduction of 1963, which was directed by Phillipe de Broca and featured by Jean-Paul Belmondo and Françoise Dorleac, is a typical film of adventure that, not without irony, follows the patterns of James Bond's films. Adrien, played by Jean-Paul Belmondo, is a simple soldier of the French air force; on his first day of vacation in Paris he sees his girlfriend, Agnes, played by Françoise Dorleac, being kidnapped and then he follows her to Rio de Janeiro. After Adrien manage to free Agnes in a hotel in Copacabana, where she was captive, the couple end out following the bandits to Brasília, where an old friend of Agnes' father lives, Mr. De Castro, who had in the past discovered with him three pre-Colombian little statues – the real desired object by the bandits. Mr. De Castro not only owns one of the sculptures, he is also one of the builders af the new capital. The couple, however, do not menage to prevent De Castro from be murdered by the bandits, who rob his statue. In the sequence Agnes is kidnapped again and taken to the Amazonas state. Adrien takes an airplane in the Paranoá lake and falls by parachute in the middle of the Amazonian forest, but he soon localizes the gang in Manaus[2]. Hidden inside the boat which took them to the place where the three sculptures would reveal a diamond treasure, Adrien rescues Agnes while consecutive shakes cause the collapse of the covern where the gang's leader had just discovered the treasure, killing him. The last scene in Brazil, showing the couple running away from the forest, shakes and explosions, reveals that the last ones were, in fact, occasioned by the construction of a road crossing the forest, whot is probably a reference to Belém-Brasília road.

The film's characters remain all the time foreigners passing rapidly through the country and in Brasília the mutual influence between the story and the social space is minimum, limited to a social gathering offered by De Castro. The architectural modernity of the Brazilian capital performs in the script the index function of exotic, just as Copacabana, slums and *rodas de samba* do in relation to Rio de Janeiro or os the Amazon forest, presented in aerial takes and showed off as a place of alligators, caves and hidden treasures, does in the later sequences. As a back drop for a chase in an odventure shot, the landscape formed by the Oscar Niemeyer buildings is there to amplify the effect of strangeness so important in this sort of movie. Thus, in the construction of this exoticism, compared to the referential city, Paris, if the Amazon is another environment of natural character, the place of ancient not-Western cultures, and Rio de Janeiro, the place of samba, the landscape of Brasília, a city that was unknown by the character played by Jean-Paul Belmondo, is a radically different urban space – one futuristic and indecipherable.

However more important to our analysis is trying to understand the function performed by the character De Castro: a powerful person, nice and of "Latin spirit", a macho in terms of the way he treats his wife and dressed with a light color suit that recalls a Northeast "coronel" – these aspects all make him a very traditional figure. It is however this same De Castro, the builder of the new capital, who, in his first words, makes the only reference, too radical, to the architectural modernity exhibited in the film. Talking to his subordinates at the building site, he says:

"Audácia, Pessoal! I want all these windows! I do want to see glass everywhere! There might be light, and a luminous light, transparent! Like a butterfly wing, these flats are the wings of a butterfly."

This discourse, typical of the modern architects of the twenties, was radical. Now it is easily repeated by this so conservative character. In this moment all the paradoxes of this "Modernity from top to bottom" are explained: its promoter is all but revolutionary or committed; he is a great entrepreneur from Rio de Joneiro, somebody who is really committed to the establishment and the hierarchy, who is a typical example of the country's older social order.

The film, a French-Itolian production directed to the international public, uses a last subtle point in

order to reinforce the specificity of the character De Castro, which is only clear to the spectator who knows Brasília or Rio de Janeiro. The shots of the building site as well as the ones of De Castro's private residence were filmed in the spaces of Rio de Janeiro Modern Art Museum, designed by Affonso Eduardo Reidy. So in the scenes shot in one of the balconies of the Museum, Adrien contemplates from there the Esplanade of the Brasília federal public administration buildings. This montage, which could seem surreal to those who know the two cities, serves to emphasize the function of the character De Castro by bringing to the space of the new capital the modernism which took place in Rio de Janeiro. The film shows the city in such way that turns relative any tentative of purist demands in asking the city its condition of utopia.

The second film, *"Weit ist der Weg"* (Long is the way) is a German production of the early sixties directed by Wolfgang Schleif and featuring Freddy Quinn and Ingeborg Schöner. It tells the story of a fisherman, who lives in Salvodor and befriends at the same time Jane, a homeless girl, who becomes attached to him calling him "daddy", and a medical doctor, Anita, who is working in Brasília as it's being constructed af and during the film enjoying vacation in her homeland, Salvador. Freddy lives in a slum over water; he is a fisherman and musician, a man without no material stability and because of that he decides to take Jane to an orphanage, where by coincidence Anita had worked before leaving to Brasília. However, Jane runs away from the orphanage but Freddy finds her. She is very ill, and he takes her back to the orphanage where she undergoes a surgery. By then he tells Anita his desire to take care of Jane as his inability to do since he does not have a proper employment. Anita suggests to Freddy that he go to Brasília, giving him a lead on where he might find work.

Arriving in the Brazilian central highland Freddy starts working in road construction, soon he is disillusioned with his wage and thinks of going back to Salvador. Then he re-meets Anita in the middle of the road, which makes him decide to remain at the building site of the new capital. Freddy maves to the *Cidade Livre*[3] and starts working in cargo transportation by lorry. Besides being robbed by the bandits, who get all the savings that Freddy gathered in Brasília, the hero is involved in weapon smuggling once weapons were in the lorry which he was driving. He is arrested by the police who soon after are convinced of his innocence and releasing him. He than heroically saves Anita, who is in danger inside a mobile X-rays vehicle which is in the middle of a fire caused by the gang in the savanna. Once he has saved Anita, he receives his savings back from the State and thinks about going back to Salvador and adopting the girl. However, Anita and Jane are already in front of the Federal Supreme Tribunal waiting for him. From there the three arrive in the Praça dos Três Poderes as a new family in the new city, this is the scene that ends the film.

The interpretation of the modernity of Brasília as social modernity is absolutely clear in the film. The opposition between Salvador and the new capital of the country not only provides a convincing contrast of the Brazilian historical urban environment of Salvador with the new and modern environment, but it also reveals clearly the difference between a traditional social structure where the citizen is destined to a poor existence due to the omission of the State as the promoter of welfare, and the new capital, the place where a new social order is established. Thus, in Salvador the hero is a dweller of a favela; there is no public health system except the orphanage headed by catholic sisters, there is no opportunity for getting jobs, and the city lacks police service and transportation system. Its inhabitants are all the time singing and dancing, while in Brasília, even in the *Cidade Livre*, the State is present through out. The police are always working both as preventive and repressive forces; the high technological health system is accessible to all and the justice supports the citizens - even if to have it one needs to realize a heroic act. The film gains a dimension of reality just by shoding the opposition above, which described by this way may seem reduced and simplistic. At the moment when Freddy is disillusioned regarding to his work of construction of new roads to Brasília, he doubts on the promises of changing life associated to the construction of the new capital. Talking to Mira, his colleague at work, who came with him to the central highland, Freddy discovers his hearth:

> *"Mira, I can not cope with life here anymore. The wage is only a tax to sweat. I am very serious, I am going to put an end in this dreadful work. I can find another job where I don't need to sweat so much. I could do thousands of other things and came to submit myself just to this."*

Also the scenes in the Cidade Livre, with its wooden buildings, a poor population of workmen, and the repetition of urban social practices associated with the not-modern universe of traditianal Brazilian cities – the informal commerce done in the streets and the organized crime – all clearly show that the dimension of life transformation of that group is diminished and that the chances of access to the spaces effectively modern of the new capital remain reduced, almost nonexistent.

It is possible to clearly identify easily with the Freddy character, the figure of the "common man" who fights for his rights to face the phantasm of modernity that imposes itself from top to button, a figure that Berman identifies as elementary in the modernity of Petersburg. Dreaming of going to the new capital in order to transform his life, Freddy first works constructing new roads, later in the Cidade *Livre*, having access to the *Plano Piloto* only when he is arrested by the police. Until this mament, the few images of the *Plano Pilato* buildings always appeared in the background, somehow blurred, almost mirages, to use a term borrowed from Berman. The final scene, showing the three main characters walking through the *Praça dos Três Poderes*, clearly indicates that the "common man" conquered his right to the modernity proclaimed by the buildings of that city, that finally he has tamed the phantasms. The architectural modernity here became a lived space, one that may eventually indicate a sacial modernity[4], even if in a very elitist mode because it is reserved only to a hero but not to the thousands of the *Cidade Livre* inhabitants, who due to the restrictions imposed on the Federal District population, were forced to live in the satellite-cities.

The depth of exploration about this theme of social emancipation in this movie is, however, clearly limited by its very condition of origin: it is a musical, adventure production joined to a love story, executed as entertainment for a German audience in which the main actor is a pop singer, a very popular media star in German speaking countries during the fifties and sixties. The determining role that this has in the shaping of the production is evident in the songs sang by Freddy Quinn during the film. One is written in Spanish, and other has a refrain in Italion for a German text; the use of two foreign languages give a Latin touch to the plot; the fact that the songs weren't in Portuguese didn't seem to disturb the audience.

On one hand, the discourse present in both movies examined here shows in several moments that the understanding of the construction of the Brazilian new capital probably will be mare distinctive the further removed the representation is from ideological demands of affiliation with the European Modern Movement before 1932. Instead of this, an analysis of Brasília should get closer of a deeper comprehension of what really was and the nature af the modernism of the periphery. The process of establishment of a military dictatorship in 1964 gives further evidence of the parallels to Berman's periphery – thinking in the repression histories regarding to the yearning of liberty of Petersburg's "common men" – and likely it might have inhibited for some years the production of texts like the ones of the German films here studied[5]. On the other hand, if one compares Freddy to the first "common man" of Petersburg, Evgeni from the "Chevalier of Bronze", poem by Alexander Puschkin, who became crazy as he faced one of the city's phantasms, the hero of the German production has a slightly more optimistic end.

If we try to further this question to a real discussion about the evaluation of Brasilia in the history of Modern architecture, it seems possible to say that Brasilia appropriated the image of modernism which was "available" when the city was built to itself. The difficulties of this appropriation are connected to two different aspects. First, the role which Brazilian modern architecture played within the Modern Movement in relation to the aesthetic "dead end" af the years following the Second World War: at this time, the production of architects like Niemeyer, Costa or Reidy was considered by some as something new which could overcome the architecture built in Europe and the United States between the two wars and by others as a force which could give a fresh impetus to the modern architecture af the "great masters". Second, due to its way of production, i. e. as an example of a modernism of underdevelopment, or "from the top to the bottom", the new Brazilian capital reveals the limits of a political and social emancipation ideology, which represents an essential part of the Modern Movement, in an astounding clear way. This is Brasilia's paradox which cannat be perceived by those who look upon the city from on orthodox perspective only: as it took shape within on aesthetic framework established during the twenties, its design not only illustrates the limits of Le Corbusier's maxim "architecture or revolutian" from within architecture itself (which nevertheless can be observed in the formal results of the buildings with all their mannerisms), but in the opposite way they olso contaminate the modernism "from the top to the bottom" with an emancipated, perhaps only visionary, potential which constitutes the city's image.

NOTES

[1] The references are the Album "O Concreto jó rachou" (The concrete has split) by Plebe Rude or the lyrics of the song "Faroeste Caboclo" (Caboclo's Western) by Legião Urbana.

[2] In the film montage, the forest is located next to Brasília, reediting a common image related to the city, that is, it was built in the middle af the farest – an image which is presented, for instance, in German language architectural magazines. These images are also applied to Rio de Janeiro and São Paulo in those magazines from the forties and fifties.

[3] The *Cidade Livre* is the name given to the settlement of commercial activities to support the construction of the *Plano Piloto*. Later on, it was named *Núcleo Bandeirante*

after being transformed in a satellite-city. It is interesting to point out that the scenes of the film were taken in the very *Cidade Livre*, showing, even only for few seconds, a little of the urban dynamic of this environment built provisionally, the only place whose process of formation the State left to the private initiative.

[4] In this scene even the hero's clothes are modified, for the first time he dresses a white shirt, clean and ironed.

[5] For instonce, two stories of the book "Primeiras Estórias" by Guimarães Rosa, that were onalyzed in Compos, Márcio. *A gande cidade em construção: Brasília em dois contos de Guimarães Rosa*, conference held in V Encuentros de Escritores Latinoomericanos: La Ciudad en la Literatura Latinoamericana, at Vienna, Austria.

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Weit ist der Weg (1960). Dir. Wolfgang Schleif. Perf. Freddy Quinn, Ingeborg Schöner, Ann Savo, and Leon Sovos.

KEYWORDS

Brasília, Movies, Modern Urbanism, Aesthetics of Reception

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Sunil Bald

Brasilia Reproduced as Backdrop

"Bays, bays come here will you. Look who's coming on the street, all dressed up in modernistic style. It ain't nobody but..." (Aunt Hagar's Blues, played by Ted Lewis and his band, w/ Jimmy Dorsey on the clarinet)."(Lispector, 1989: 138)

In 1964, Clarice Lispector wrote the short essay "Five Days in Brasilia", in which she ironically evoked a fashion runway to describe the monumentality of Brazil's new capital. It is unlikely that she suspected that this characterization would foretell Brasilia's rebirth as an ultra-hip fashion statement more than thirty years later in the international press.[1] For Lispector, Oscar Niemeyer, and Lucio Costa, indeed for the national and architectural imaginary of the 1960's, the sculptural forms of the monumental axis occupied center stage, perspectivally framed against an endless horizon. While Lispector's fashion reference may seem irreverent to the national aspirations that the architecture was meant to embody, her essay did place the architectural object squarely in the foreground, not unlike Niemeyer's sketches which feature numerous admiring eyes (figure 1). In recent fashion magazines, though, it is no longer the architecture that is the recipient of this adulation – Brasilia's monuments move to the background and became the landscape and horizon that frames the adorned subject in clothes that either contrast or compliment the shapes and shadows of the concrete (figure 2).

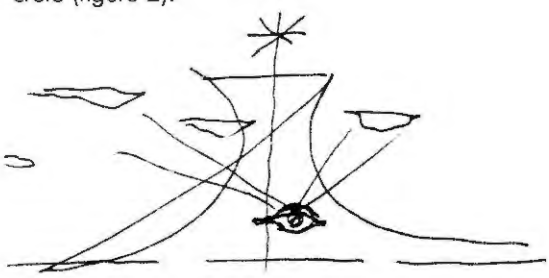


fig. 1

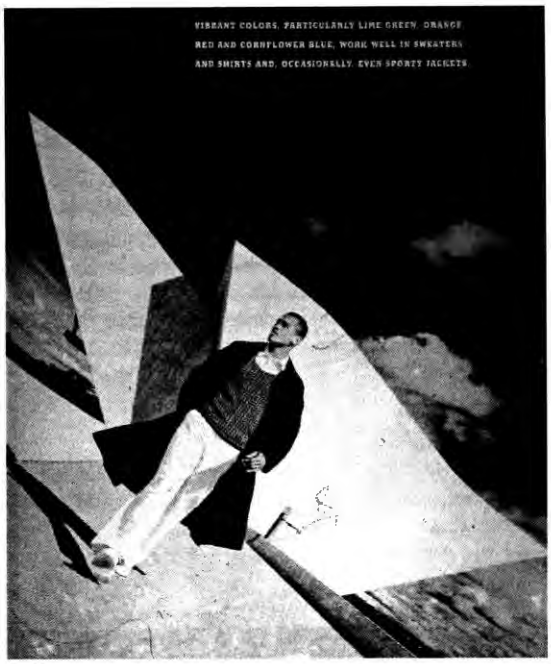


fig. 2

How can we account for this shift and why might it be at all important to explore? Indeed, one might easily dismiss these layouts as stemming from the stylistic revival of a mid-century aesthetic. However, Brasilia's polemical and historical role in the formation of Brazilian Nationhood suggests we examine this phenomenon as something more than the latest fad in menswear. I would like to suggest in this very short paper, that a positional shift in Brasilia's representation from foreground to background has occurred in these fashion shots. This reflects a perceptual shift where Brasilia's architecture moves beyond the realm of national *symbol* and becomes, a scape, or field, connected to interests of the global market. Consequently, the *cultural commodity* becomes subject to the *temporal* model of value on which fashion relies. From these shifts we might ask if this commercial appropriation of Brasilia's monuments results from something inherent in its architecture that reflects the conflicting desires of the post-colonial state to operate internationally while resisting internationalization, or if it is a natural consequnce of globalization that threatens all national cultural products.

From the symbolic to the scapic

The emergence of a capital from scratch in three years was a "promise" to Brazil and the world of impending national prosperity and economic power. This Utopian gesture was grounded less in ideology or a call for order, but in a *hope* for the future - a national promise. *Hope* was central to Oscar Niemeyer's Utopianism, which set aside the goal of reframing society and placed architecture in the realm of art.

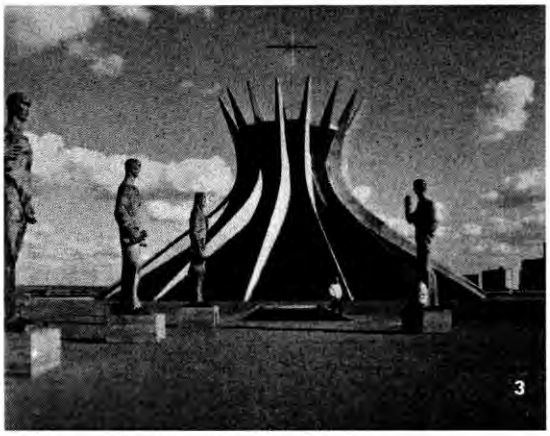
"I am in favor of an almost unlimited plastic freedom...things that are new and beautiful capable of arousing surprise and emotion by their very newness and creativeness...designed above all to withdraw the visitor, be it for a few brief instants, from the difficult problems, at times overwhelming, that life poses for all of us (Niemeyer, 1959: 8)."

Niemeyer's sketch of the National Cathedral in Brasilia, features the omnipresent viewer, represented by multitudinous eyes. Their focus is on the architecture which is emphasized as an object framed, viewed, and admired (figure 3). As seen in both the drawing and the quote, Niemeyer saw the architecture as an autonomous sculptural work that could consequently transport the "Brazilian" viewer from her/his daily struggles into an aesthetically-inspired ephemeral dreamworld. The artistic intention of the architect was complimented by the intention of the state where the capital buildings were associated with the aspirations and fortitude of the Nation. In Lucio Costa's competitian proposal for the city, there is a clear consideration of the physical and visual relation between the Brazilian subject and the architecture, and the consolidation of national solidarity this relationship establishes amongst a truly heterogeneous population:

"One-way traffic forces the buses to make a detour leaving the road under the platform; this gives the travelers their last view of the monumental radial artery before the bus enters the residential radial artery, and is a psychologically satisfactory way of saying farewell to the national Capital (Costa, 1957: 23)."

"Nation" as a constructed entity is something quite illusory, but an identifiable object/icon can begin to condense its multiple ethnicities, histories, and languages. George Bataille once stated that "the national monument silences us by imposing the majesty and authority to any confusion (Bataille, 1971: 171). The intentional foregrounding of Brasilia's architecture by Niemeyer and Costa empowered it with symbolic potential, as the State strove to unite its population on a shared physical, psychological, and experiential terrain.

In these fashion layouts forty years after the city's conception, it is Brasilia's architecture, not the Brazilian nation, that becomes the terrain. The example I use is from a 1996 issue of *The New York Times Magazine* entitled "Reviving the Look of the Future" (Bryan, 1996: 37-48). In this layout (figure 4), the monuments move to the background and become a landscape (figures 5,6). Building and ground surfaces merge together to form a continuous though changing topography (figure 7,8). The architecture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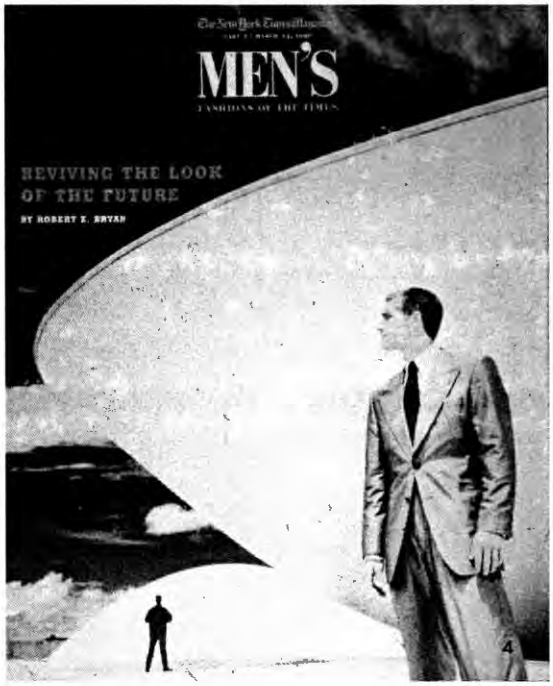

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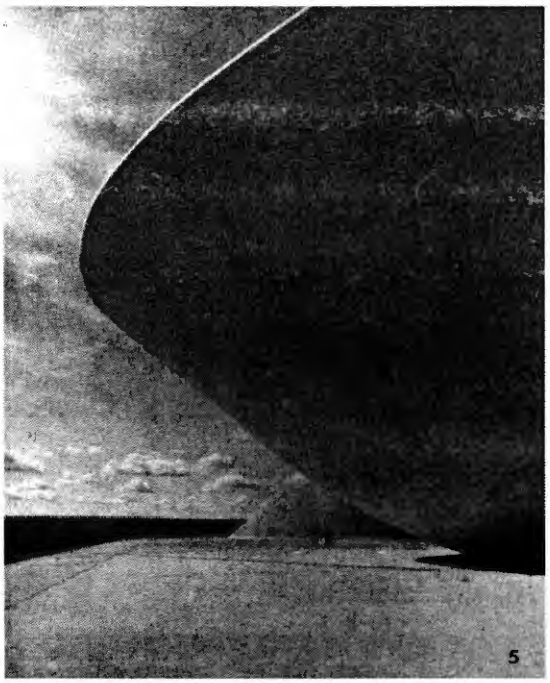
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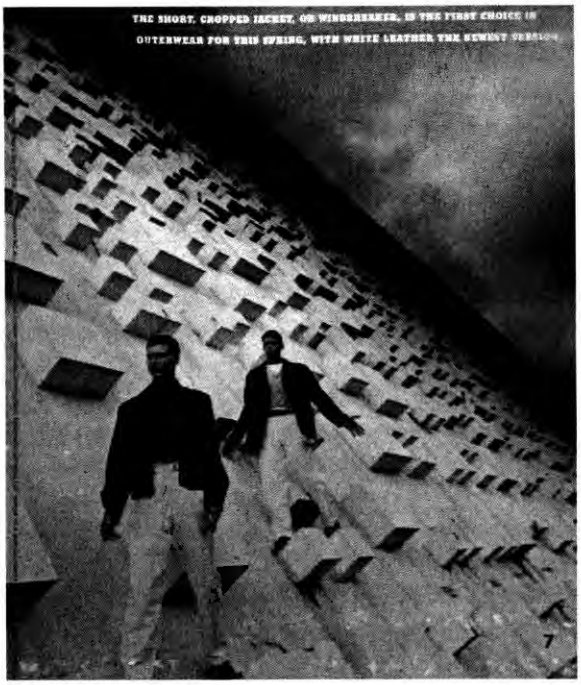

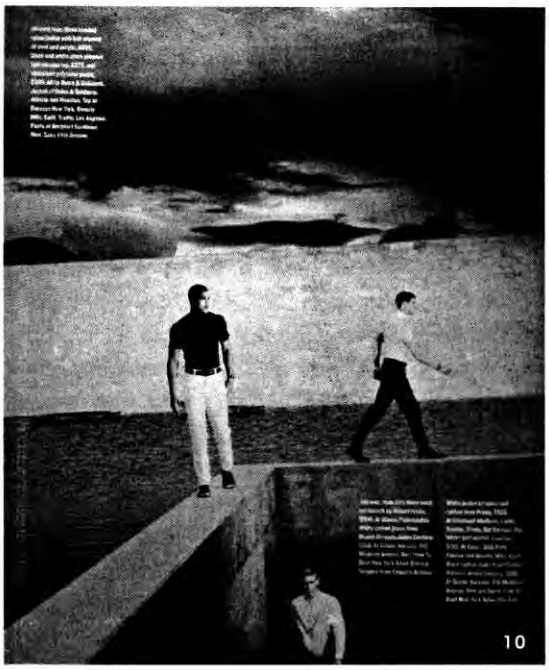

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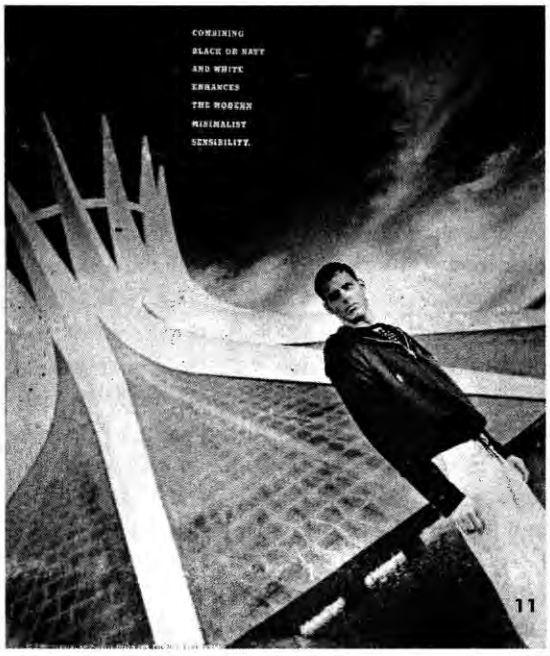

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flows outside the frome of the photo and is walked on rather than looked ot. In contrast, the architectural elements that are associated with circulation are emphasized as being disembodied from the body of the building and become random events in the landscape rather than emphasizing a formal architectural sequence (figures 9,10). Actually, the overexposed nature of the photos emphasizes the large swaths of shadows, and the defined edges of the building begin to dissolve. Finally, while Niemeyer and Costa relied on the horizon to frame the architectural object, that horizon is often slanted in these photos to confuse the horizontal and vertical, and the stability that architecture, bound by gravity implies (figure 11). Indeed, the symbolic building is no longer the framed object of focus. That position has been usurped by the mobile, accesorized male who is no longer identifiably Brazilian. Indeed, anything that is nationally identifiable, flags, symbols, etc. inhabits either shadow or the distant horizon. In its shift from the symbolically specific to the fluidly scapic, the Brasilia backdrop reads more as a futuristic frontier that only the most mobile, international, and cosmopolitan subject can occupy.

Arjun Appadurai has used the word *scapic* (Appadurai, 1997: 32-33) to characterize the multiple global cultural flows that are fed by the movement of global capital. These scapes, or flows, whether they are comprised of media, technology, finance, or ethnicity, are fluid in shape, continually overlapping, and troubling to any notion of boundary. Naturally, the flows of global capital present a distinct challenge to the integrity of the Nation and its desire to consolidate its own fluid diversity into a definable, stable entity. Brasilia's monuments were valued by the state for their ability to project to a national social body. Therefore, these buildings become importont cultural commodities both as innovative pieces of architecture and as national symbols. The integrity of this architectural symbolism that embodied a Brazilian Utopianism was important in legitimizing the strength of the Nation.

With the increased pressures of globalization disrupting discreet nationhood, comes a challenge to the integrity and value of national cultural commodities like Brasilia's architecture. Indeed, the manner in which value is focused on objects, whether that value is couched in consumer demand or cultural importance, can be rethought. If we return to the fashion ads, it is the backdrop that contextualizes and gives value to the clothes of the subject. However, the models are not associated with Brazil, and the buildings are not exalted for their architectural ingenuity, or the ingenuity of the Nation that produced them. Rather, the capital is represented as a global frontier -a futuristic landscape that requires both time and mobility to reach. It is this association with remoteness suggested by the backdrop that frames and values the advertised products. Consequently, the commodity is no longer the culturally specific object, but the time and mobility required to temporarily inhabit this frontier. The elevation of the temporal and the mobile, - or the leisure time and resources required for such a lifestyle - presents an alternative system of commodification to the notion of permanence and cultural depth that both the built architectural object and the State strive to project.

Global pressures and the vulnerability of the architectural object

The disintegration of Brasilia's architectural objects into the background as fashionably futuristic maments on a broader global stage raises another question. Is there something about Brasilia's architecture that makes it vulnerable, or ideal for, a fashion backdrop, or are all cultural products susceptible to appropriation and decontextualization on the global market? I would argue that there is an inherent quality to Brasilia's monuments that allow them to be appropriated for purposes other than their original intention. Since we began with Clarice Lispector's processional description, and since we are talking about clothes, I will continue this line of thought with Roberto DaMatta's problematic, though useful, comparison of the costumes and rituals of the Brazilian Independence Day Parade with those of the Brazilian Carnival (DaMatta: 1990, 39-68). On one hand, DaMatta describes the military parade as a spectacle that one observes, that reinforces ideas of hierarchy, that unifies and orders a group for a common nationalistic purpose, and that occurs on a date of historical significance - memorializing a moment that contributed to the development of the modern state. The parade strives to consolidate a population into a singular cohesive sociol and national body. Carnival, on the other hand, is a spectacle of interaction, moving bodies, hierarchical inversion, that projects stories, qualities, and aspirations unassociated with national historical time. Carnival's spatial flow extends the limits of the individual body, blending it into a heterogeneous social topography.

If, like Lispector, we examine Brasilia's buildings as a type of spatial event, we can see that Brasilia can project qualities of both the national specificity and fortitude of the military parade, and the "hope" and fluidity that is provided by the Carnival parade. It is in the negotiation of these desires that rests the vulnerability of the national cultural praduct ta aesthetic and commercial appropriation beyond national borders. On one hand, the buildings' monumentality and their position on the Cartesion axis assert the authority of the state and the power of the nation. As seen in Niemeyer's sketches, they were designed with an intention of formal frontality, reinforcing shored civic plazas. At the scale of the monumental axis the buildings compose an organized field, assertive and rigid hierarchically and spatially. However, the scole of this gesture undermines its own authority through the gaps between the architectural objects. These gaps provide a station point from which these buildings to be redefined through the lens of the fashion camera. The images emphasize the buildings' fluid character as a series of surfaces and "un-frames" it from the logic of it urban position, its monumental purpose, and the support af a clear harizon line. Furthermore, Brasilia is not legitimated in a referentially constructed history, as is Washington DC (Tafuri, 1979: 30-40), but in a mare illusory promise as a nation of the future. Its formal association with the future situates the architecture in o more a universal, or cosmic, notion af time, and not the historical chronology of the Brazilion Nation. Dislodged fram a national association, the architecture's representational shift shows how this potential can be mined, and re-positioned, to augment global mechanisms of culture. The capital can easily shift from symbolically representative of the Brazilian nation, to more universal architectural associations with the Future, even if these formal and aesthetic associations are, at heart, historical – ie. the title of the article "*Reviving* the Look of the Future."

To build his capital, Juscelino Kubitschek not only had to convince his people, but also, the world. Therefore, the city had to navigate the pressures of being both internationally modern with a nationally specific.[2] The international scrutiny of a national capital, especially of a country with the expectations of Brazil creates such a condition. The changing nature of Brasilia's representation within Brazil is an equally interesting concern, that likely reflects cultural shifts specific independent from the topic discussed in this paper. Indeed, with the Ministry of Education and the Brazil Pavilion in the 1939 World's Fair architectural projections of Brazil that differed depending on their context, national or international, existed almost simultaneously (Bald, 2000: 63-64). However, as the national and international become more intertwined, and, as capital flows more freely, objects that were meant to project the permanence and majesty of a nation, can become topographic embellishments for products with a seasanal life span. While we have looked at Brasilia's architecture as an aesthetic backdrop, this phenomenon is symptamatic of the global flows af culture, technology, people, and capital that use nations as temporal ports. While, one might argue that these flows are overwhelmingly powerful, the use of Brasilia to stage the lotest in Western couture also reveals the illusory nature of both the Nation, and the architecture that foregrounds itself as the focal point for the national imaginary.

NOTES

[1] While I concentrate on a layout from a 1996 issue of *The New York Times Magazine*, similar uses of Brasilia can be found in recent issues of *Wallpaper*, the April 2000 issue of the French magazine *BIG*, and the 2000 od campaign for the Italian shoe designer Sergio Rossi.

[2] Lucio Costa was acutely aware of this need for both national capital and international city in his continual referencing of great European capitals in his competition proposal of 1957. See, Lucio Costa, "Plano Piloto do Brasilia," *Modulo*, no. 18, 18-31.

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KEYWORDS

Fashion Nation Brasília Backdrop

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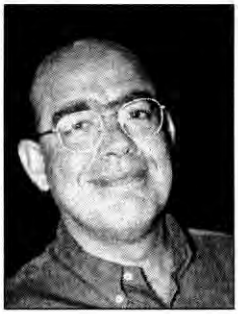
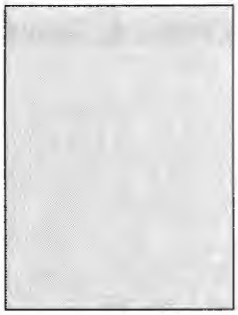
HISTORY & THEORY SESSION

Carlos Martins



Panayotis Tournikiotis



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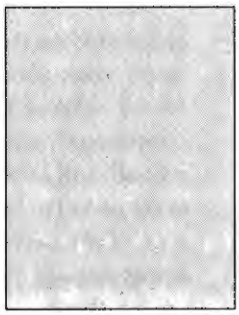

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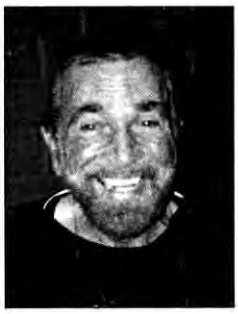

Pasqualina Magnavita

Carlos A. Ferreira Martins

Buildings building the city: São Paulo in the Fifties

Abstract

This work is based on the integrated research "Architecture and City: São Paulo 1950s" under development, with financial aid from CNPq, alongside the Department of Architecture and Urbanism at the University of São Paulo (Campus at São Carlos). From the analyses of some paradigmatic buildings, this work intends to establish the relationships between the construction of project and urban concepts.

Thus it is proposed, as a fundamental thesis, that without ignoring the precept features or origin between architecture

I and urbanism, every architectural project is a bearer of a concept of the city. The Paulista capital, in the period between the final Vargas stage and the second half of the 1950s represents a particularly rich concept for the discussion of this relation. The period of consolidation as the main Brazilian me Carlos A. Ferreira Martins teaches at the Architecture and Urbanism Department of the EESC-USP-São Carlos. He graduated in Architecture at the FAU-USP. He obtained his MsC degree in History at the Faculty of Philosophy,

Literature and Human Sciences of the USP and PhD at the Polithecnic University of Madrid. tropolis corresponds temporality to the modem language stabilization in the country, in its hegemonic formulation. But even so, this language, with its defined repertoire and origin, had to elaborate new programs and new variety geared towards servicing new demands, public and private, which are specifically metropolitan.

Vertical housing, apart-hotels, shopping strips, multi-use buildings (residential, commercial, and work-related) the new scale placed on buildings destined for mass cultural consume (cinemas, theaters, concert halls), spaces destined to house new museums and galleries in the so called "internationalized artistic information" represent a set of new problems to the Brazilian architecture. Already one is not about the basic equation between modernity and traditional, between architectonic masterpiece and natural landscape which centralized reflection the 1930s and 40s, but to ponder on the relation between the building and the abstract space of the metropalis as an experimental area of new propositions of urban sociability.

Another dimension of relevant interest not only to understanding the period but also to reflect on the construction condition of the contemporary city is on the relation between modem architecture and "patronage": while the heroic period of the "carioca school" had in the State its institutionalizing agent in the period of accelerated metropolization this role was, at the very least, divided among the private entrepreneurs, given to the nature of the new programs. This change does not mean that the State is no longer a privileged client, but that the demands are now geared toward urban equipment (transportation, health, education) rather than symbolic-representative constructions.

The identification and analyses of these fulfillment allows to aggregate a new dimension to the history of modern architecture more aware of author's monographs than to themes. It also allows at a moment characterized by social conscience, for the need of re evaluating for due worth of urban centers, to recuperate and to debate on the dimension of citizenship present in those structures, that responded to needs of their times, but which pointed out to the perspective of construction of a new urban socializing.

KEYWORDS

Brazillian architecture; Architecture: SliD Paulo: XXth Centltry Architecture: Mltltiple ltSe bltildings

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Panayotis Tournikiotis

Ancient and modern cities in the work of Constantinos Doxiadis

For a long period, from the Thirties to the Seventies, Constantinos Doxiadis (1913-1975) played a significant role - on a global level, what is more - in the theoretical approach to, and implementation of, the modern city. His *oeuvre* is certainly enormous, and in its day it achieved striking recognition, though it was also called into question, particularly in Greece, where Doxiadis undertook numerous initiatives and public responsibilities at difficult times. In this short paper, allow me to state from the outset that I shall be selective. I shall deal only with the manner in which his view of the architectural and urbon past of ancient Greece - a view which was analytical and only partly historical - converged on the urbon thinking of the great Moderns of the inter-War period and the first post-War decades. That encounter revolved around the prospect of formulating the principles of contemporary urbanism as they were applied in theory and practice and as they were projected on to the city of the future. Where theory is concerned, I shall be focusing my attention on Doxiadis' doctoral thesis, published in German in 1937 under the title *Raumordung im griechische Städtebau*[1] ('Spatial organisation in the building of the Greek cities'), and on an article published first in Greek and, in a longer form, in English in 1964 under the title 'The ancient Greek city and the city of the present'.[2] The article heralded the publication of a major series of studies of the Ancient Greek Cities, prepared, under Doxiadis' guidance, in the late Sixties and early Seventies by the Athens Centre of Ekistics.[3] Following on closely from the large gap between 1937 and 1964 (during which Doxiadis had clearly come an equally long way), I shall refer to his constructed oeuvre using as examples two projects which appear at first sight to be alien to one another in terms both of location and scale but which, I believe, are very similar: Islamabad, the new capital of Pakistan (1960), which sums up Doxiadis' critique of Chandigarh and Brasilia while at the same time elaborating a direct analogy to ancient Athens and ancient Priene, and the much smaller industrial town of Aspra Spitia (1961), Doxiadis' most important project in Greece in terms of planning and architecture, constructed at Antikyra, not far from ancient Delphi.[4]

Doxiadis' doctoral thesis is a book full of plans, photographs and perspective drawings of ancient Greek cities - dating from the seventh to the first century BC - on which the commentary is a comparatively scanty text. Although Doxiadis was closely associated with archaeologists when the thesis was being written in Berlin, it is neither an archaeological treatise nor a history book. Its author's interests were wholly contemporary, focusing on the seach for principles by which space, in its entirety, could be regulated by means of the comparative and experimental testing of hypotheses for which no real documentation was available. His starting-point was the problematic present, for the treatment of which the ancient Greek city was called upon to provide the means. The line of orgument is perfectly clear, and is stated at the beginning of the foreword to the thesis: over the post three decades (that is, the three first decades of the twentieth century), a radical change had come about in the conditions prevailing in cities during the previous three millennia. To Doxiadis' mind, there were two reasons for this: the new building materials which had radically altered the scale and form of buildings, and the mechanisation of travel, which had radically altered the scale and form of cities.[5] These two issues - new materials and the new construction methods that followed from them, and the predominance of the machine - also happened to be arguments of central importance for Modern architecture, and to form the foundations on which the theoretical principles of modern urbanism were stated. Those principles were formulated at the 4th CIAM, a Congrès which reached its climax in Athens in 1933, on the premises of the School of Architecture when Doxiadis was still a student there,[6] and provided Le Corbusier with the platform for his *Charter of Athens*.[7]

The 4th CIAM concept of the contemporary functional city never faded from Doxiadis' mind. Indeed, we could hypothesise that it lay behind his obvious interest in the organisation of the ideal ancient Greek city, an interest which led him, immediately afterwards, to the subject of his doctoral thesis. As he makes clear in the foreword to that thesis, the change in the

conditians af construction and travel (which Doxiadis often appeared to associated less with the optimistic resolution af problems than with their pessimistic accumulation) directed him towards a search for, on the one hand, human scale and, on the other, the secret behind the way in which the ancient Greeks had organised space so as both to gratify human beings and uplift their souls. Using comparative typologies and mathematics - both highly topical at the time in any attempt to interpret good architectural solutions - he studied the sanctuaries and markets of cities in order to discover the principles of a system for arranging buildings in space based on the principles of human knowledge. Doxiadis was convinced that such a system existed and, furthermore, that it was a general theory of organising space, a *theory of urbanism*,[8] whose rules were of direct significance for the present since «the ancient Greeks designed not isolated objects, as we see being done today, but the parts of a dynamic urban environment».[9] He went further in explaining his views, saying that as entities the ancient Greek cities were subject to the conditions of development and change current at the time and were not designed to comply with the oesthetic views of an isolated individual about an ideal city which bore no relation to its actual place and time. Indirectly, this was criticism of some af the more messianic approaches af Modernism, and particularly of Le Corbusier (the *ville contemporaine*). For Doxiadis, the decisive factor in planning was the human viewpoint: more specifically, the angle of vision of a human being walking through a city and sensing or perceiving it through the sequence of the organised revelation of its urban entities - of a person turning a street corner, passing through a gateway, or entering a square: the key paints on the progression. The aesthetics of the city is not a static matter, but is connected with motion.

Doxiadis' studies of the plans of the ancient Greek cities are generally well enough known, and that af the Acropolis of Athens is particularly familiar. I am not concerned here with the archaeological or architectural precision of that study. I am interested, rather, in seeing it as part of a wider and absolutely contemporary approach which, allusively, contrasts itself to the thinking of Le Corbusier, redefining the artistic terms of the urbanism of someone like Camillo Sitte[10] - the man, indeed, who Le Corbusier had mockingly accused of having got no further than the road of the donkeys.[11] Doxiadis, however, was apposed to the mechanical road, to the mator road, and persevered with the perceptive power of the eye of a human being moving acrass the ground no faster than his two feet could carry him.

The foundations of Doxiadis' thought are only very faintly visible on the surface of the pages of his thesis. He can be assumed to have been aware of the geometrical interpretations of the visual organisation of the Acropolis, as stated by Auguste Choisy,[12] which were taught in Athens, but what is of particular interest in his case is the fact that he articulates the organisation of space in the city around the revolving eye of a moving person, which resembles a revolving camera located at different points in the space and describing full circles of 360° with ten or twelve present stops in each instance.[13] The succession of these points, as a sequence af angles of vision during the continuous movement of the human being in space, converges on the rationale of the cinematic way of seeing and organising the same space. It is indeed no coincidence that, at about the same period, Sergei Eisenstein was also addressing himself to the same sources - Choisy and the Acropolis - in order to construct an aesthetic theory of cinema montage, with direct references to human movement and the revolving angle of vision in architectural and urban space.[14]

Almost thirty years later, the situation was very different. The modern city had changed radically, and contemporary urbanism had moved from conquest to a position in which it was being subjected to a first wave of harsh criticism. In international thinking, even so, the two large capitals - Brasilia and Chandigarh - had prevailed as original and ideal applications of the principles of Modernism. By this time, the Doxiadis Associates had developed, an the global scene, a type of urban design suitable for human facilities of all kinds on a scale which reminds us of the breadth and ease of the urban design of Le Corbusier as a model which could be repeated. It was the same spirit as that which we encounter later - and my reference is far from caincidental - in the successive 'counterprojects' of Léon Krier.

The arguments of 'The Ancient Greek City and the City of the Present' sum up all the progress which Doxiadis had made from 1937 to 1964 in a direction which, on the one hand, presaged the harsh urban questioning of the 'Moderns' by the 'post-Moderns' (to take its final form ten to fifteen years later) and, an the other, prefigured the rationale of the global village. However self-evident or at any rate inevitable that rationale may seem to us today, then, with the development of the media of communication in an embryonic state, it was still primarily a critique of the metropolitan urbanism of Modernism. The conclusion is stated clearly on the very first page of the text:

> *"The time has come to turn back to the things of the past so as to see what we can learn from them, as a parallel to aur turn to the future which will allaw us to see the course we aught to be following. This is a blend of the old things which deserve to survive with the new things which have to be*

secured. Such a comparative study leads to the following conclusions:
a) The ancient Greek city was built on human dimensions which gave it a human scale and unity.
b) The city of the present has lost its humon dimensions.
c) There is an imperative need for human dimensions in the city of the present.
d) The city of to-day also needs other dimensions suitable for the machine and, accordingly, a synthesis of two scales is required: the human scale and the scale of the machine.
e) It is therefore absolutely necessary that we give back to the city its human dimensions, even though we have imposed on it the dimensions of the machine. It was a mistake to let the historic continuity of the human dimensions in the city be lost. We must establish it again, in harmony with the evolution imposed on us by the new factors."[15]

The conclusion is documented by means of comparative and typological analysis, on the same scale, of the fabric of cities selected from all the periods of history, with Brasilia and Chandigarh as the culminating examples. Emphasis is placed on the correct - that is, human - scale of the city, whose centre can be reached on foot from its periphery in ten minutes, which has streets, squares, blocks and a central public space analogous to the ancient agora.[16] Ancient Athens was without doubt Doxiadis' starting-paint, but Priene played an almost equivalent part in his comparative approach, serving as a model for the contemporary urban situation.[17] Of course, Doxiadis was unable to ignore the motor car and rapid travel, but he dealt with it by proposing that human movement be split between that taking place on foot and that involving vehicles. Comparing ancient Priene with the contemporary megalopolis, he put forward the idea of an articulated and perpetually evolving city, one which would overcome all the defects of modern urbanism. In other words, his proposal was for a network of small cities, on the scale of Priene and in accordance with its rationale, to be located in the interstices of a network for the circulation of mechanical media - that is, motor vehicles. Islamabad is the ideal example of the model: small communities of the Priene type, with populations of 1,000 families or 5,000 people, are juxtaposed as the members of a potentially global network each of whose units is in the simultaneous service of the part and the whole.[18] Doxiadis summed up the ideo in his comparison of the ancient Greek city and Islamabad:

"We cannot build new cities under the influence only of the model of the ancient Greek city, since in that way we will never solve the problems of the modern era. However, we have to create cities which consist of elements based on the human scale. Human communities of the first to the fifth degree are such elements: we can combine them correctly and repeat them as many times as is necessary to make the contemporary city. The modern city should be a synthesis of the human scale and the mechanical scale. Smaller units, which can be planned on human dimensions, should be based on the human scale, while larger areas are based on the mechanical one. Only in this way will we be serving humankind while at the same time improving the performance of the machine, exhausting its potential.""[19]

The idea is even better expressed ot the end of the English version of the same article, where the poth towards the terminology of the *ecumenopolis* - or to use the current phrose, the global villoge - is opened up:

"When man succeeds in mastering theses large dimensions, the whole world will be one city. When space satellites ollow him to survey the entire globe and television enables him to hear the news from every corner of the warld, the mechanical dimensians of the city will shrink to those af an ancient Greek city. Man will not only live in a small human community and dominate it by human dimensions, he will also live in a warld-wide cammunity, which he will dominate by means of the mechanical dimensions which he has created. We are undaubtedly moving towards ecumenopalis, a world city. (...) Our environment will become less and less human, and in arder to functian, the city will have to rely, to an increasing extent, on machines. (...) When this materializes, unless we have token steps to make this city a human one, the end af our civilization will be near. (...) In the interests of man, we should return to aur ancient heritage and see how the ancient Greek city can be af special help to us."[20]

One might stop there, at the formulation of this overall urban model, addressed to Islamabad and thus to every other city in the world and so to Greece, proposing the continuous proliferation of the ideal model of Priene projected on to the global communications network. However, there are reasons why the centripetal and holistic organisation of urban space, the rejectian of Brasilia and Chandigarh as evolutionary results of the Charter of Athens, is of particular interest to us in Greece; those reasons are bound up with the new town for 5,000 people which the Doxiadis Associates designed to house

the staff of the Pechiney aluminium plant and is known by the name of Aspra Spitia (literally, 'white houses').[21]

At first sight, the town is a simple and isolated community, a unit based on a more general model, a contemporary Priene. It has every amenity imaginable,[22] and it could have been a self-contained node on the global network of ecumenopolis. The interest here, however, lies in the fact that the general urban scale descends an entire step in the direction of architecture, conveying an idea, from a different angle, of the mild questioning of Modernism. Let us examine the basic arguments which conscientiously differentiate Aspra Spitia from the Modern idea, from the aesthetics and internationalism of the industrial city, in the direction of a Greek community equipped with all the characteristics of local societies.

"It didn't take (...) long to reject the idea of a typical industrial settlement with uniform apartment buildings where the people would feel like expatriates and refugees and where living would be but a continuation of working in the mechanized environment of the new factory. On the contrary, they decided that they should create a 'Greek city' in which people could easily identify all the cultural traditions they were brought up with and could preserve them as a most valuable inheritance."[23]
"The conclusion drawn (...) was that they needed a simple, clear and forceful plan that could provide room for these qualities with its 'invisible geometry' holding the varied parts together; that they needed a simple, strong and 'primitive' architecture composed of natural, local materials, which the people could improve upon by adding their flower pots and pergolas, rather than a modern architecture in which visual equilibrium can be upset by the addition of a dot."[24]

"Exterior finish materials of the houses are stone, concrete and wood joinery. The great majority of the stone walls of the houses are whitewashed except for a small number, in special locations, where a special accent was sought by leaving the stone unpainted or by the use of color. By eliminating the 'accident' of color, the whitewashing of the walls gives the houses greater sculptural clarity and simplicity, accentuates their texture and gives a marvelously 'Greek' effect combined with the color and shape of the olive trees."[25]
"This small settlement possesses the special urban feeling characteristic of Greek cities of the past - a feeling induced by a town in which cohesion does not abolish individuality, privacy in interior yards does not conflict with social togetherness in the street or square and the physical scale and treatment express the hierarchy of values in city living."[26]

Aspra Spitia is not simply a town for workers living in better or worse conditions and experiencing better or worse social relations at work: that would certainly be quite a different debate. Aspra Spitia is the paradigmatic implementation of the unit of the contemporary city which Doxiadis had been seeking from the Thirties to the Sixties and Seventies. It is the Priene of contemporary Greece, and a kind of synopsis of the primacy of Doxiadis' Greek model in global urbanism and architecture. At the same time, it is the built implementation of a critical development of the principles of the functional city laid down by the 4th CIAM and the Charter of Athens, which Doxiadis had been promoting at precisely the same period.

What else could have been the meaning of a floating *Symposium* - not simply a *Congrès* - held in July 1963, exactly thirty years on from July 1933, on a vessel now named *Neo Hellas* ('New Greece') voyaging among the Greek islands, with Sigfried Giedion, secretary to the CIAMs of former times, as keynote speaker, ending, symbolically, at the ancient Greek city of Delos, now uninhabited, in a clear reference to the Delian Festival, and culminating in the ambitious *Declaration of Delos*, symbolically named from the island and intended to become a *Charter*?[27] The failure of the existing cities was once more the starting-point, although now that included the implementation of the functional city envisaged by the 4th CIAM. The redemptive city of the future was to be a modernised projection of the ideal ancient Greek city of Doxiadis' vision, in which the human and the mechanical scales were combined. To this end, and in order to lay claim simultaneously to the global quality of a contemporary rationale and the singularity of the local community and aesthetics, Doxiadis had quite appropriately turned to collaboration with 'regional' architects such as Hassan Fathy (1956-1961)[28] and had equally appropriately invited Marshall McLuhan, whose *Understanding Media* had appeared the year before,[29] to attend the Delos Symposium.

As a reply to Chandigarh and Brasilia, Islamabad is in architectural and urban terms the general application of an overall rule whose sole European implementation was Aspra Spitia. The comparison is inevitable between these two projects and the original Unité d'Habitation in Marseilles, the vertically-arranged autonomous community whose repetitions were to add up to the radiant new city of Le Corbusier. The most essential difference was that Doxiadis' equally autonomous community developed horizontally, as if the multi-storey city had become recumbent and as a rejection of any advanced

constructional technology or mechanical equipment. It is a notional aesthetic continuity of the human being still walking through the local tradition, though capable simultaneously of being omnipresent.

Dimitris Philippides, one of the very few scholars to have written of the almost unknown Aspra Spitia project, was thus quite right to note, from his own quite different angle of vision, that "here, the references to 'Greekness' are deliberate". In a footnote, he added that "although Aspra Spitia is rather indistinctly reminiscent of a village, it is much more reminiscent of the ekistic projects of the Doxiadis Associates for other countries".[30] However, "international urban practice" was once more not the "ancestor" of the project, as Philippides goes on to note, but simply a fellow-traveller, or the other side of the same coin. Indeed, the essence of the architecture of Islamabad is just as *Greek*, just as regional, just as human and at the same time just as *ecumenical* as that of Aspra Spitia. In other words, the gap between Chandigarh and Islamabad is just as small (in geographical, cultural, chronological, urban and perhaps architectural terms) as the gap between Le Corbusier and Doxiadis - though the gap between both of them and the capitals they envisaged may remain for ever unbridgable.

NOTES

[1] K.A. Doxiadis, *Raumordnung im griechischen Städtebau*, Heidelberg, Kurt Vowinckel Verlag, 1937; *Architectural Space in Ancient Greece*, trans. Jacqueline Tyrwhitt, Cambridge Mass., MIT Press, 1972. This translation was preceded by an abridged but concise publication in English to which Doxiadis often referred: 'The Greek City Plan', *Landscape* 6, no 1, Autumn 1956, pp. 19-26. The basic principles of the thesis had already been published in Greek by Dimitris Pikionis ('Η Θεωρία του αρχιτέκτονος Κ.Α. Δοξιάδη για την διαμόρφωση του χώρου εις την αρχαία αρχιτεκτονική', *To Trito Mati*, nos. 7-12, 1937, pp. 234-246), and this publication had signalled the beginning of a seminal controversy between Pikionis and Panayotis Michelis. This is a fascinating topic, since Pikionis had helped Doxiadis in the early period of his studies and later applied the spirit of his proportions to projects such as the landscaping of Athens Acropolis and the Xenia Hotel at Delphi. I hope to return to the subject in another poper.

[2] K.A. Doxiadis, 'Η αρχαία ελληνική και η σημερινή πόλη', *Architektoniki*, 46, July-August 1964, pp. 46-59; K.A. Doxiadis, 'The ancient Greek city and the city of the present', *Ekistics*, 18, no 108, November 1964, pp. 346-364. Both articles were variotions on an address delivered by Doxiadis to the 6th International Congress of the European Cultural Foundation, held in Athens in May 1964 and accompanied by an exhibition of his drawings organised by the Athens Institute of Technology. Only a few copies were made of the duplicated Greek text of the speech (pp. 18), and it is now in the Doxiadis Archive. Doxiadis himself later referred to a third and final version, 'The Ancient Greek City and the City of the Present', in *The Living Heritage of Greek Antiquity*, European Cultural Foundation, The Hague, Mouton, 1967, pp. 192-211.

[3] The series of studies began in 1968 and involved the collaboration of many eminent researchers - in the majority, Greek archaeologists - but in Doxiadis' mind these researchers were clearly a continuation of those he had already conducted. The first volume was written by Arnold Toynbee (*An Ekistical Study of the Ancient Greek City-State*, Athens, Athens Centre of Ekistics, 1971), but the true introduction to the series was the second volume: C.A. Doxiadis, *The Method for the Study of the Ancient Greek Settlements*, Athens, Athens Centre of Ekistics, 1972. (For the connections drawn by Doxiadis himself to the publications listed above, cf. pp.x, 1 and p. 39, notes 1 and 2.) A further 22 volumes followed, and 17 studies still remain to be published. A broader review of the project was provided by three annual reports: 'Ancient Greek Settlements', *Ekistics*, January 1971, pp. 4-19; 'Ancient Greek Settlements: Second Annual Report', *Ekistics*, February 1972, pp. 76-89, and 'Ancient Greek Settlements: Third Report', *Ekistics*, January 1973, pp. 7-16.

[4] This selective approach obviously passes over entire decades and wide aspects of the oeuvre which would certainly be of interest for o different interpretation: one of a more historical or more political nature. I am aware of the leaps, and I take them in the belief that in focusing on a few crucial action plans I will help to restore one of the most important and long-lasting threads running through Doxiadis' thinking - and, needless to say, the thread in which my own researches are most interested.

[5] Cf. Doxiadis, *Architectural Space in Ancient Greece*, p. ix. I refer to the English version, which is a partial revision of the original book, not only because it is more generally familiar but also because it is more in keeping with the thinking and the projects of the Sixties. Furthermore, the fact that o quasi-archoeological thesis of the lote pre-War period should have been translated into English after 35 years - and by Jacqueline Tyrwhitt, at that - is far from irrelevant to the expansion of the second port of Doxiadis' intemotional activities and researches.

[6] Doxiadis possed the entrance examinations to the School of Architecture of the National Technical University in 1930, and received his degree in 1935.

[8] *La Charte d'Athènes* (Poris, Plon, 1943), drawn up by Le Corbusier, and the corresponding book by José Luis Sert, *Can Our Cities Survive? An ABC of Urban Problems, Their Analysis, Their Solutions* (1942), are personal versions of the conclusions reached by the 4th CIAM, although to the public mind Le Corbusier's Charter and the Congress conclusions have become more or less synonymous. For the main papers and the conclusions of the Congress, see 'Le IV[e] Congrès International d'Architecture Moderne, "La ville fonctionelle"', *Annales Techniques, Organe Officiel de la Chambre Technique de Grèce*, no. 44-46, 15 October - 15 November 1933, pp. 995-1093 and 1128-1192.

[8] Cf. Doxiadis, *Architectural Space in Ancient Greece*, p. 3.

[9] Ibid., p. 4.

[10] Cf. Camillo Sitte, *Der Städtebau nach seinen Künstlerischen Grundsätzen*, Vienna, Verlag von Carl Graeser, 1889. Although Doxiadis does not refer directly to Sitte, who is not cited in the thesis, the more generol aesthetic approach to urban space in the German-speaking world was along similar lines (cf. Albert Erich Brinckmann, *Platz und Monument. Undersuchungen zur*

Geschichte und Aesthetik der Stadtbaukunst in neurer Zeit, Berlin, E. Wasmuth, 1912, and idem, *Stadtbaukunst. Geschichtliche Querschnitte und neuzeiliche Ziele*, Berlin-Neubabelsberg, Athenaion, 1920).

[11] Cf. Le Corbuser, *Urbanisme*, Paris, G. Crès, 1925, chap. 1: «Le chemin des ânes. Le chemin des hommes».

[12] Cf. Auguste Choisy, *Histoire de l'architecture*, Paris, Gauthier-Villars, 1899, vol. 1, chap. XI, 'Architecture Greque', section entitled 'Le pittoresque et la symétrie perspective', pp. 409-422, and Pikionis, *op. cit.*, pp. 235-236.

[13] "Rodii from the vontoge point -[the first and most important position from which the whole site could be observed]- determined the position of three corners of each important building, so that a three-quarter view of each was visible. (...) The rodii that determined the corners of the importont buildings formed certain specific angles from the viewpoint, equol in size on each site. These fell into two categories: angles of 30°, 60°, 90°, 120°, and 150°, corresponding to a division of the total field of 360° into twelve parts; and angles of 36°, 72°, 108°, and 144°, which resulted from division of the totol field of vision into ten parts." (Doxiadis, *Architectural Space in Ancient Greece*, p. 5)

[14] Cf. Sergei M. Eisenstein, 'Montage and Architecture', with an introduction by Yves-Alain Bois, *Assemblage*, 10, December 1989, pp. 110-131.

15. Doxiadis, 'Η αρχαία ελληνική και η σημερινή πόλη', p. 46.

[16] The whole process contains elements reminiscent of the rather later analysis of Léon Krier, even on the level of the presentation or the horizontal linear scale of 10 minutes' walking. There are further similarities later on, in the articulated city of the communities on the human scale.

[17] We are not unoware of the studies conducted, on Doxiadis' responsibility and probably his initiative, of the organisation of the Greek village at the time when he was Minister of Reconstruction, or the large-scale reseorch project into the organisation of the neighbourhoods of Athens conducted in the early Sixties by the Athens Centre of Ekistics with a multidisciplinary and international team (cf. Suzanne Keller: 'Planning at Two Scales: The Work of C.A. Doxiadis', *Ekistics*, 282, May/June 1982, pp. 172-174). However important these studies may have been for defining the communities of the human scale, Doxiadis never hints at their existence in the texts to which we are referring, obviously because he had chosen to find ideological support for his model in ancient Greece and not the modern country.

[18] The Master Plan for Islomabad was prepared in 1960 and put into effect at once. Cf. K.A. Doxiadis, 'Islamabad, The Creation of a New Capital', *Town Planning Review* 36, no 1, April 1965, pp. 1-28. For a wider bibliography and evaluation of the project, cf. Dusan Botka, 'Islamabad after 33 years', *Ekistics* 373, July/August 1995, pp. 209-235.

[19] Doxiadis, 'Η αρχαία ελληνική και η σημερινή πόλη', p. 47.

[20] Doxiadis, 'The ancient Greek city and the city of the present', pp. 363-364.

[21] The project was commissioned in 1961 and the last house in the original programme was completed in 1965 (cf. *Aspra Spitia: A new 'Greek' city*, a four-page information leaflet produced by Doxiadis Associotes, International Consultants on Development and Ekistics, s.a., most of which was also published as an article: Doxiadis Associates, 'Άσπρα Σπίτια', *Architektoniki*, 53, September-October 1965, pp. 54-57).

[22] In 1979, the Athens newspapers were flooded with an advertisement in which a panoramic view of the town was accompanied by the following text:

«Aspra Spitia is a 'village' of 4,500 people, 500 cars, six tennis courts, modern boutiques and an annual festival.

«Aspra Spitia: the standard of living and opportunities of the big city without the crowds, the pollution, the noise and the stress. Imagine a 'villoge' with its own shopping centre, bank, newspaper, theatre, two cinemas, café, ballet school, foreign language school, ond a complete range of educational facilities, all the way from nursery school to tutorial college.

«Imogine a 'village' in which the sports facilities include a football ground with a grass pitch, volleyball, basketball and tennis courts, sailing, a winter sports centre ond a modern shooting range.

«Imagine a 'village' designed by Constantinos Doxiadis, by the sea and amid verdant greenery, all of whose residents - scientists, labourers, housewives, parents, sports enthusiasts, chess-players, Scouts, art-lovers - have a chance to play a creative part in social life though their clubs and associations.

«When the people who were going to be working in the aluminium plant first arrived here, from all over Greece, they dreamed of the day they would be going home.

«Today, the first pensioners in the town wont to stay on in Aspra Spitia.»

[23] Doxiadis Associates, "Άσπρα Σπίτια," p. 54.

[24] Ibid., p. 54.

[25] Ibid., p. 57.

[26] Ibid.

[27] For the Symposium, organised by the Athens Institute of Technology from 6 to 13 July, with the participation of 34 eminent speakers from all over the world, ond for the *Declaration of Delos*, cf. 'The Delos Symposium', *Ekistics* 16, no 95, October 1963, pp. 203-267. Over the years which followed, a totol of twelve Delos Symposia were held.

[28] Cf. James Steele, *An Architecture for People: The Complete Works of Hassan Fathy*, London, Thames & Hudson, 1997, pp. 109-123. On the first page of the much later 'Red Book' of C.A. Doxiadis and J.G. Papaioannou, *Ecumenopolis: The Inevitable City of the Future*, Athens, Athens Centre of Ekistics, 1974, Hassan Fathy was acknowledged as a member of the small team of experts who elaborated the central ideal of ecumenopolis - "the team of experts that participated in the intensive early discussions on the project (mainly in 1961 ond 1962), that clorified many of its basic issues." (p. ix).

[29] Marshall McLuhan, *Understanding Media: The Extensions of Man*, New York, McGraw-Hill, 164.

[30] Dimitris Philippides, *Νεοελληνική Αρχιτεκτονική*, Athens, Melissa, 1984, p. 334.

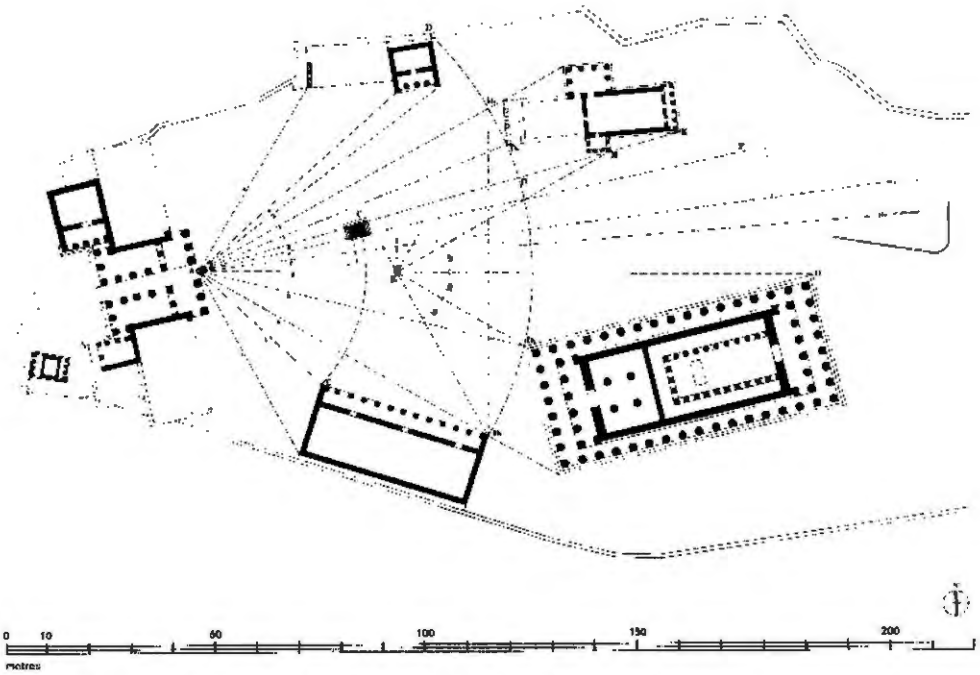


Fig. 1 – Athens, Acropolis III, after 450 B.C. Plan. Use of the Twelve- and Ten-Part System. Source: Doxiadis, *Architectural Space in Ancient Greece*, p.37.

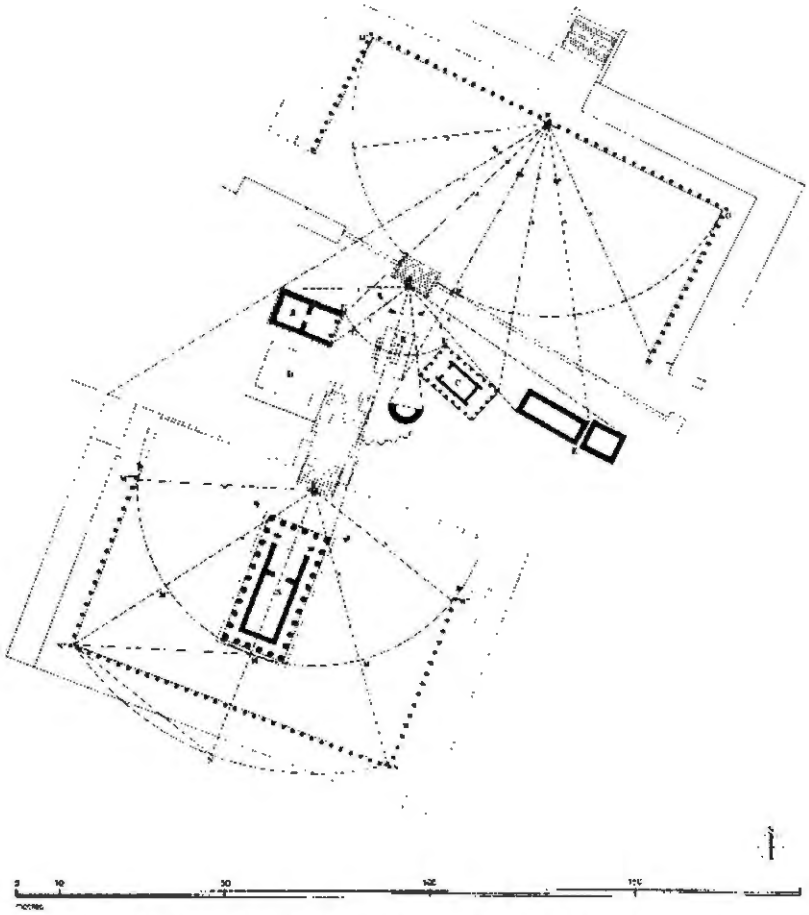


Fig. 2 – The Asclepeion at Cos. Plan. Use of the Ten-Part System. Source: Doxiadis, *Architectural Space in Ancient Greece*, p.130.

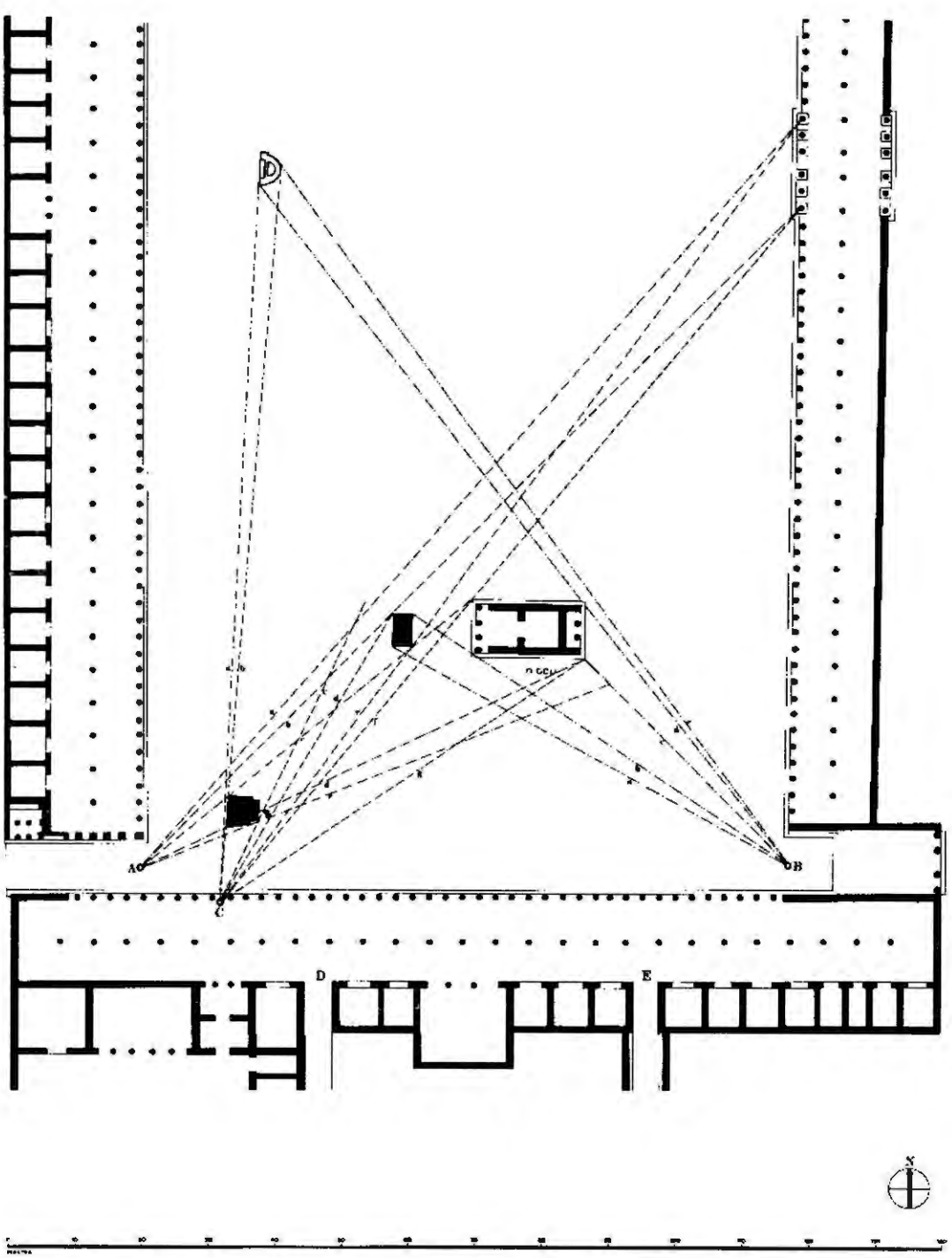
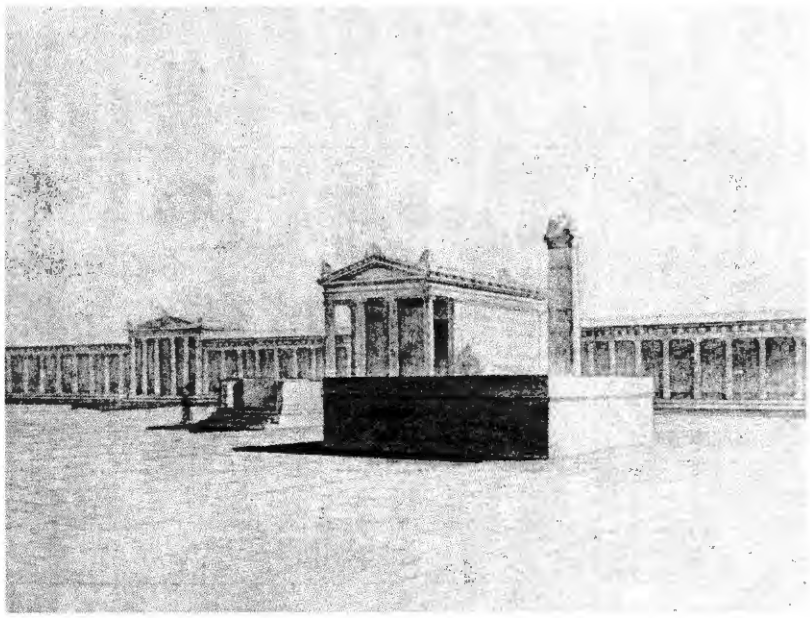
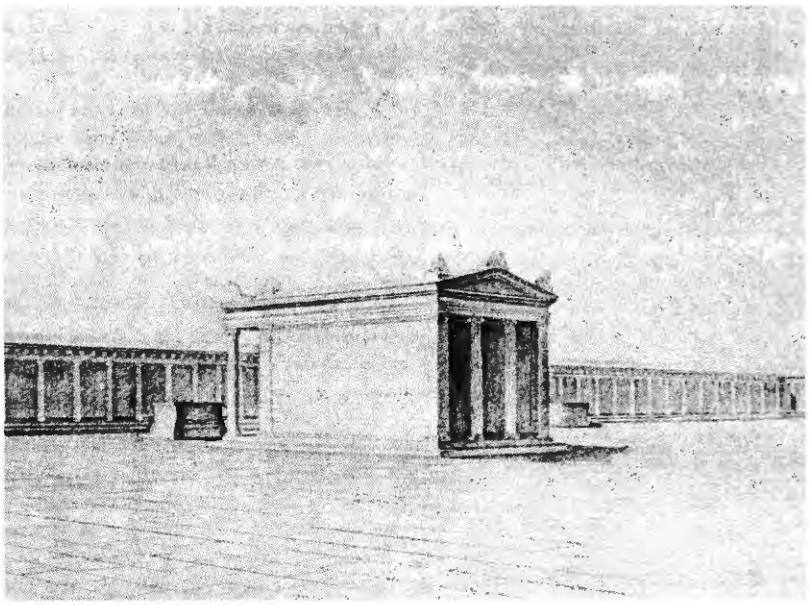


Fig. 3 – The Agora and the Temple of Zeus at Magnesia, Second Century B.C. Plan. Use of the Ten-Part System. Source: Doxiadis, *Architectural Space in Ancient Greece*, p.157.





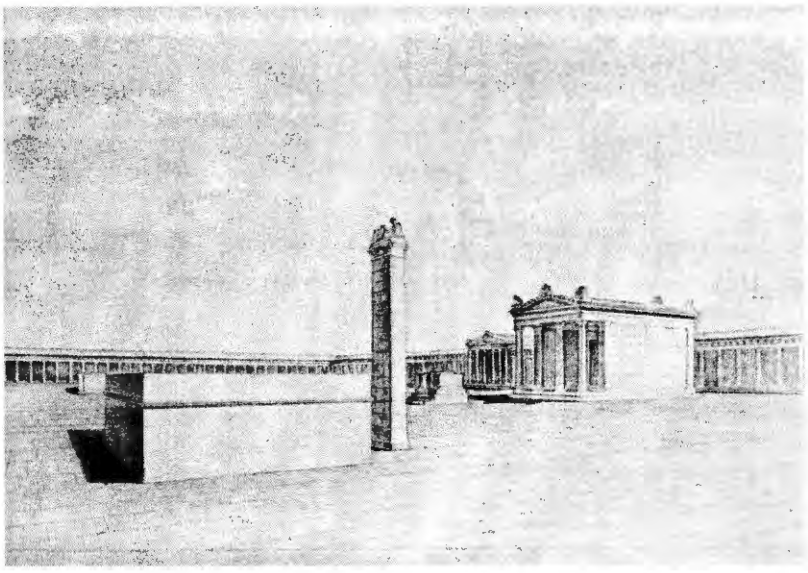
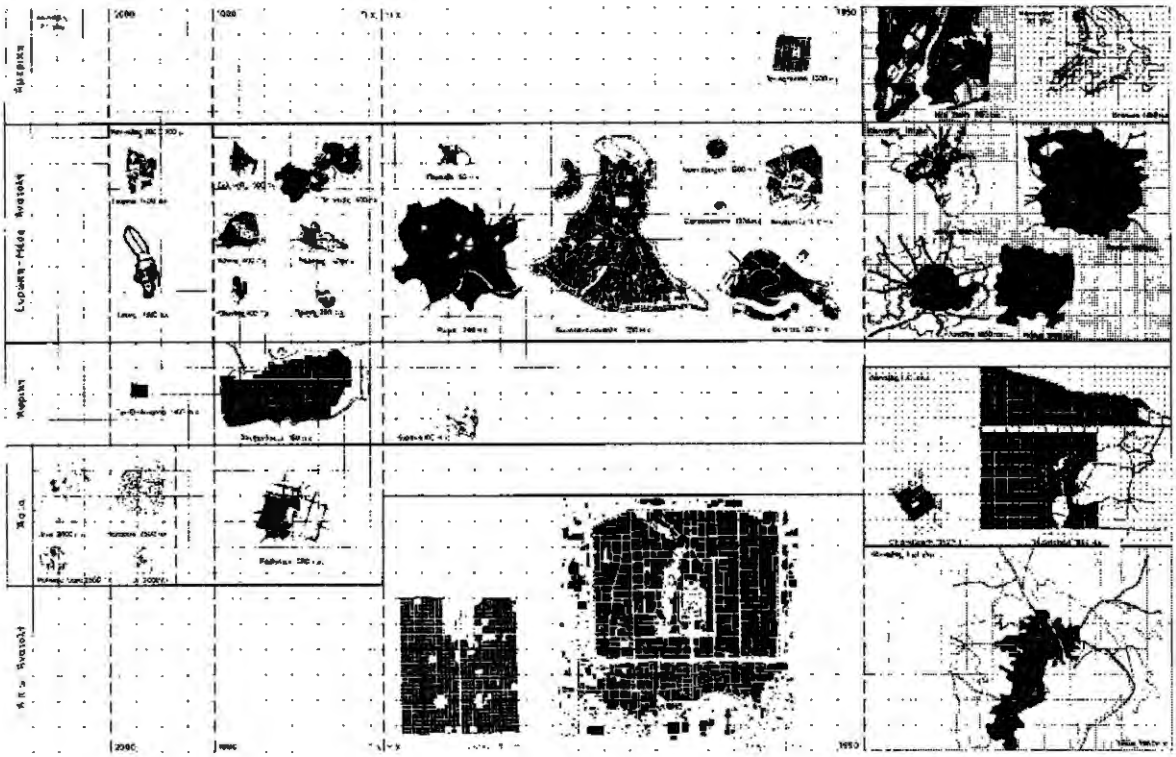
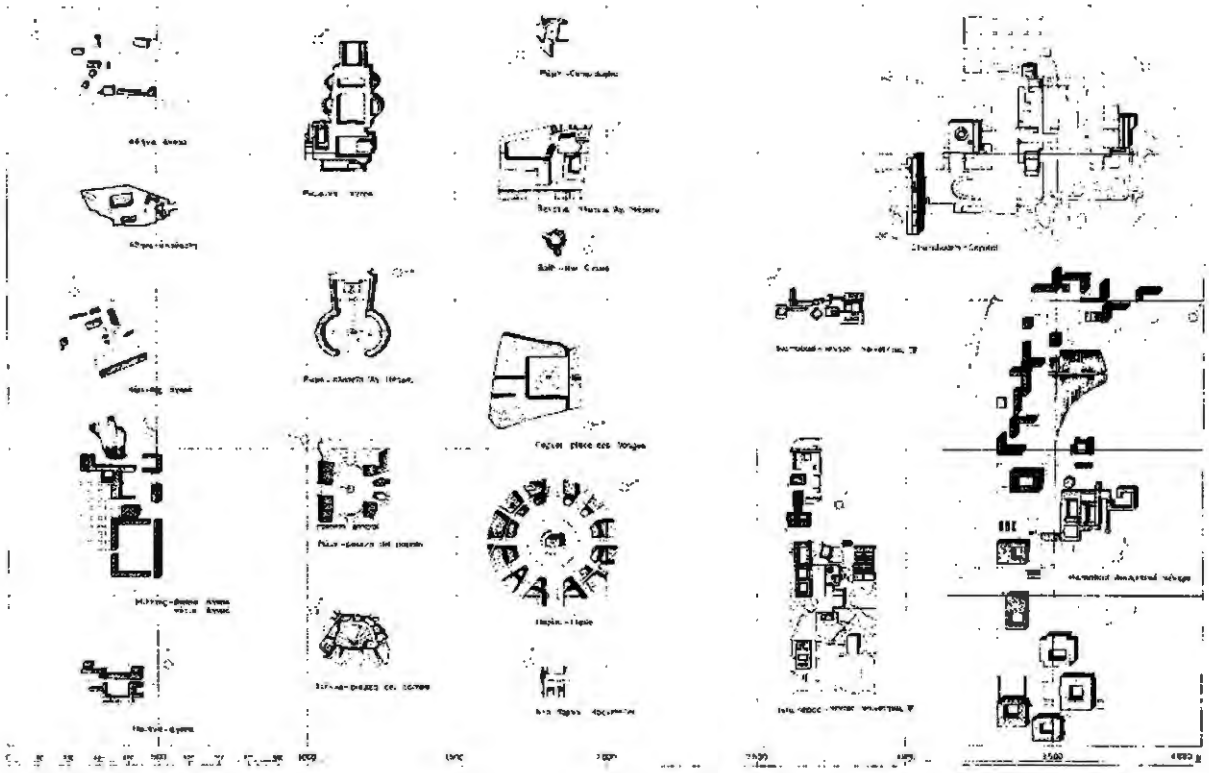


Fig. 4-6 – Magnesia, Agoro. Perspectives from points A, B and C. Source: Doxiadis, *Architectural Space in Ancient Greece*, p.158-160.



19. Πόλεις διαφόρων εποχών ταξινομημένες χρονικά και γεωγραφικά.
Cities of various periods classified chronologically and geographically.



20. Πλατείες διαφόρων εποχών.
Squares of various periods.

Fig. 7 – Cities and squares of various periods classified chronologically and geographically. Πηγή: Δοξιάδης, "Η αρχαία ελληνική και η σημερινή πόλη", p.52.

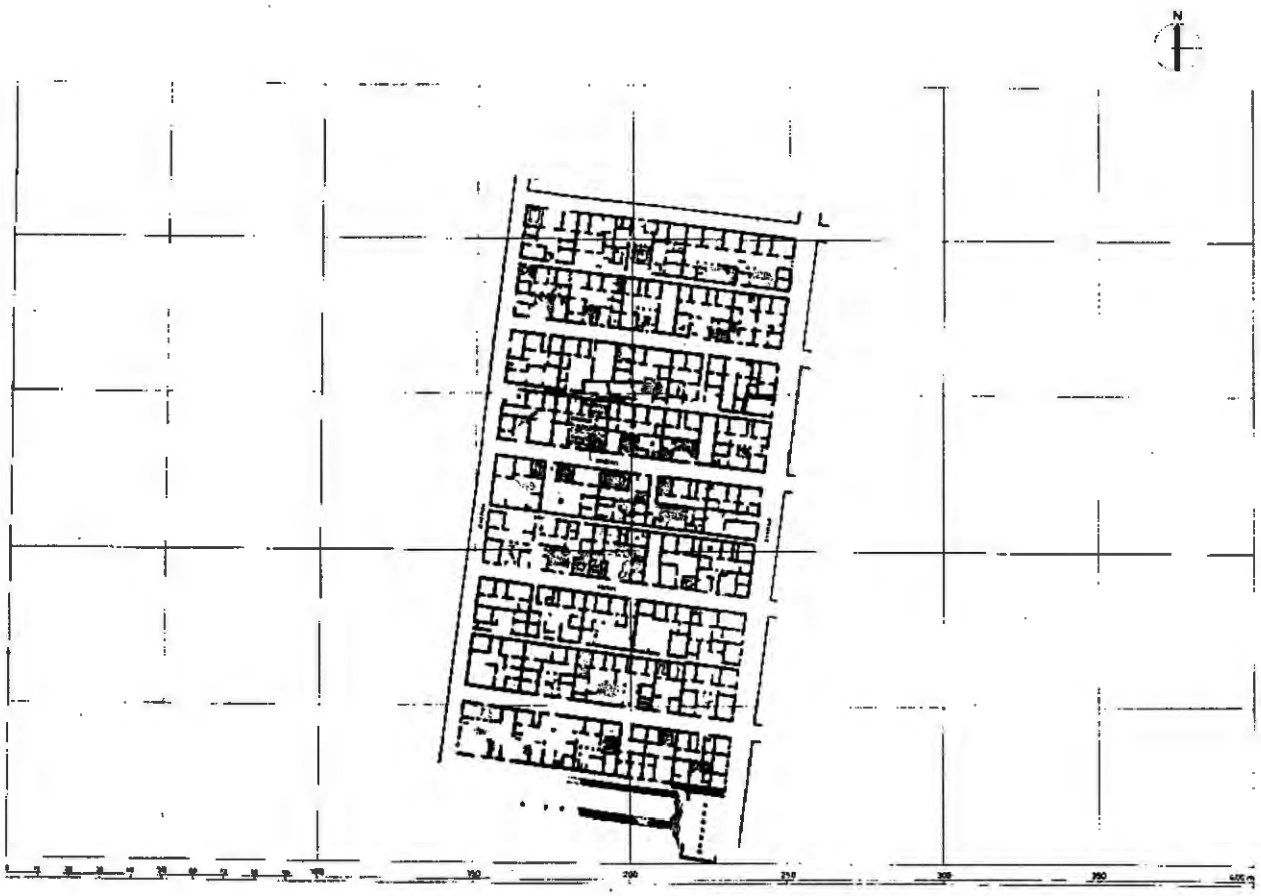


Fig. 8. – Olynthos. Residential Quarters. Source: Doxiadis, "The Ancient Greek City and the City of the Present", p.356.

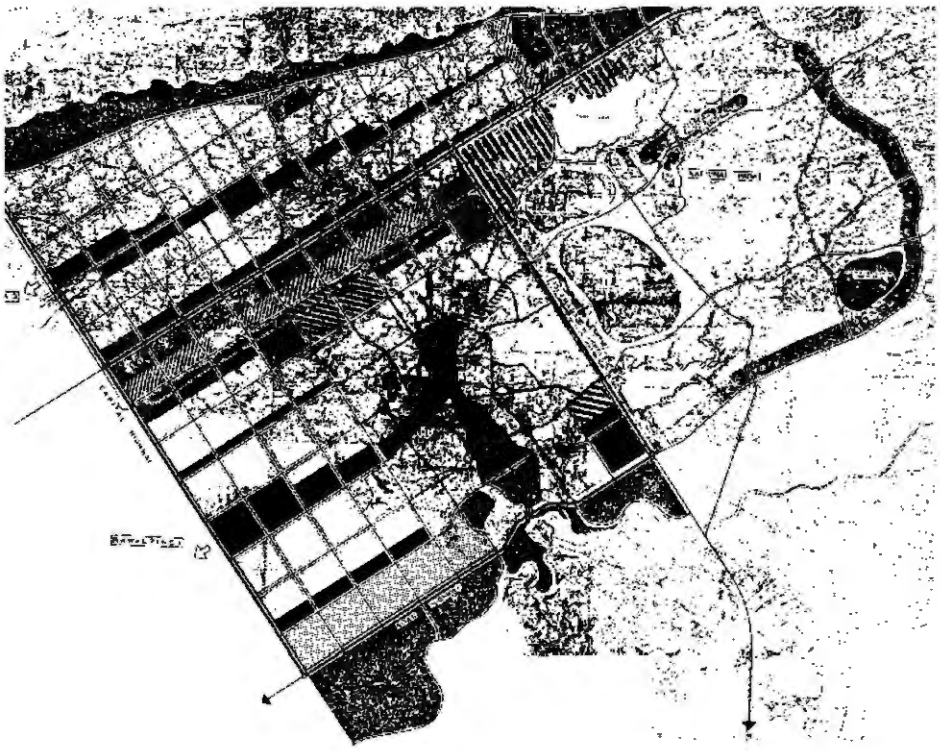


Fig. 9 – "Islamabad, an example of synthesis in two scales. Human communities are linked together and are effectively served by the machine."
Source: Δοξιάδης, "Η αρχαία ελληνική και η σημερινή πόλη", p.57.

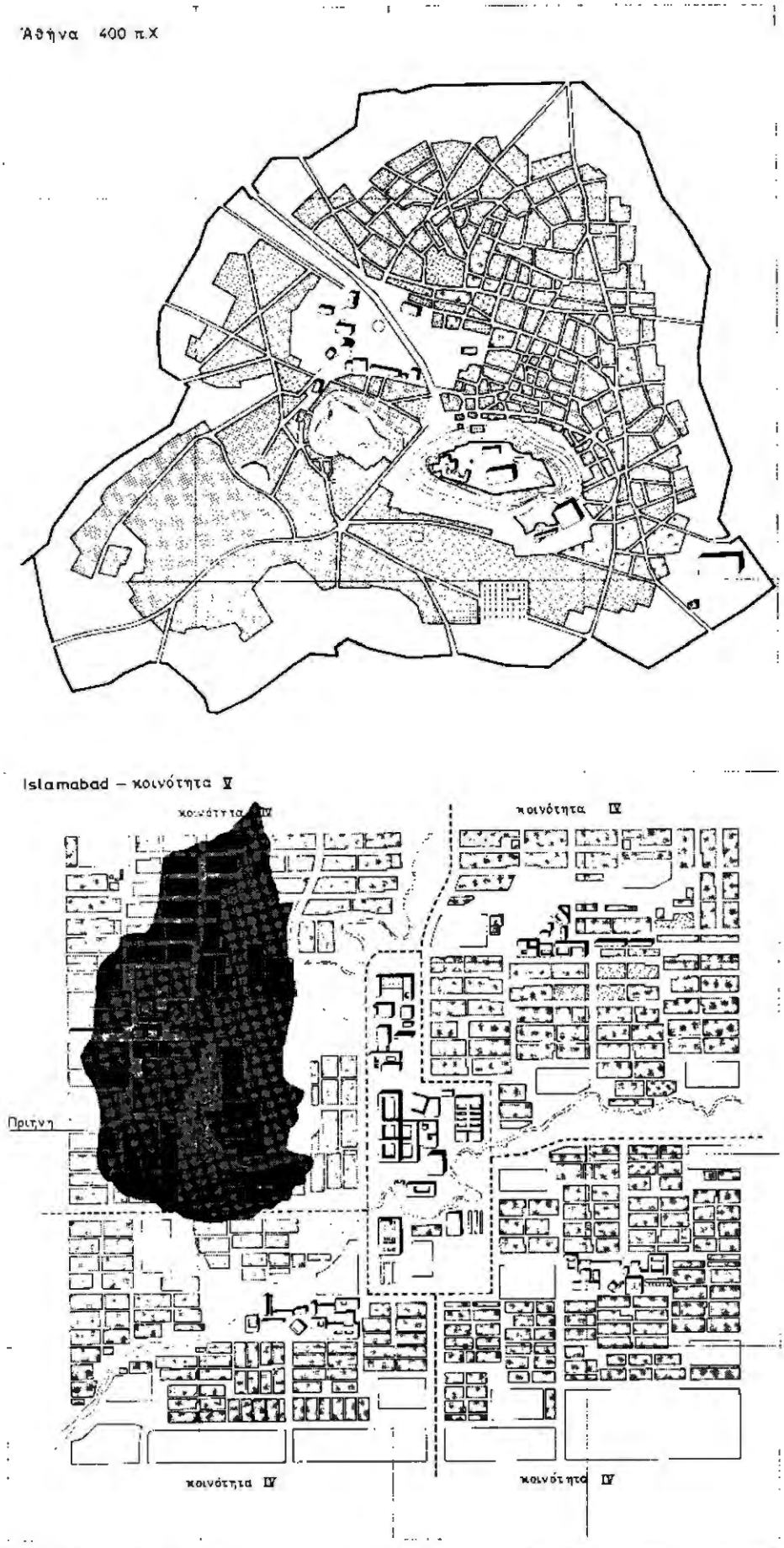


Fig. 10 – "Ancient Athens and Priene on the same scale as a 4th and 5th degree community of Islamabad." Source: Δαξιάδης, "Η αρχαία ελληνική και η σημερινή πόλη", p.55.

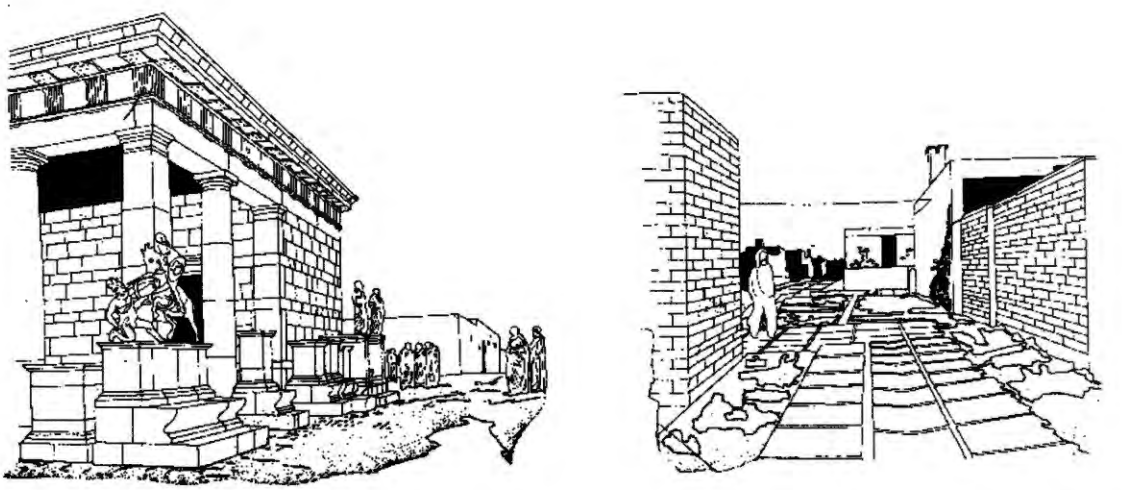


Fig. 11 – "Views of oncient Priene and of the new capital of Pakistan, Islamobad. A common characteristic, the human scale." Source: Δοξιάδης, "Η αρχαία ελληνική και η σημερινή πόλη", p.54.

Fig. 12 – A street and houses in o 5th degree community in Islamabad. Source: Doxiadis archive.

Fig. 13 – Aspra Spitia. General view. Source: Doxiadis Associates, *Aspra Spitia: A new 'Greek' city* [p. 1].

Fig. 14 – Aspra Spitia. Master plan. Source: Doxiadis Associates, *Aspra Spitia: A new 'Greek' city* [p. 2].

Fig. 15 – Aspra Spitia. Typical row of two-storey houses. Elevation. Source: Γραφείο Δοξιάδη, "Άσπρα Σπίτια", p.55.

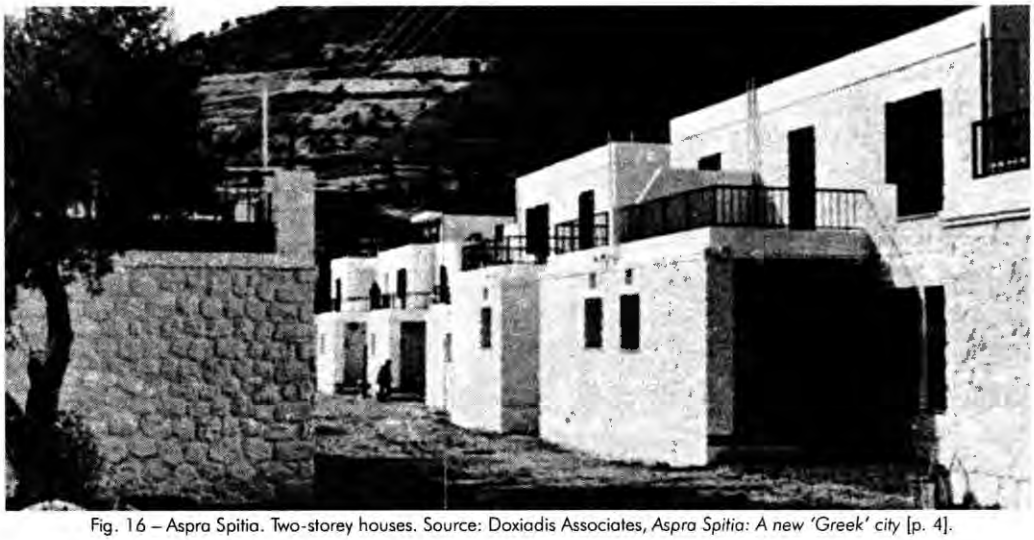


Fig. 16 – Aspra Spitia. Two-storey houses. Source: Doxiadis Associates, *Aspra Spitia: A new 'Greek' city* [p. 4].

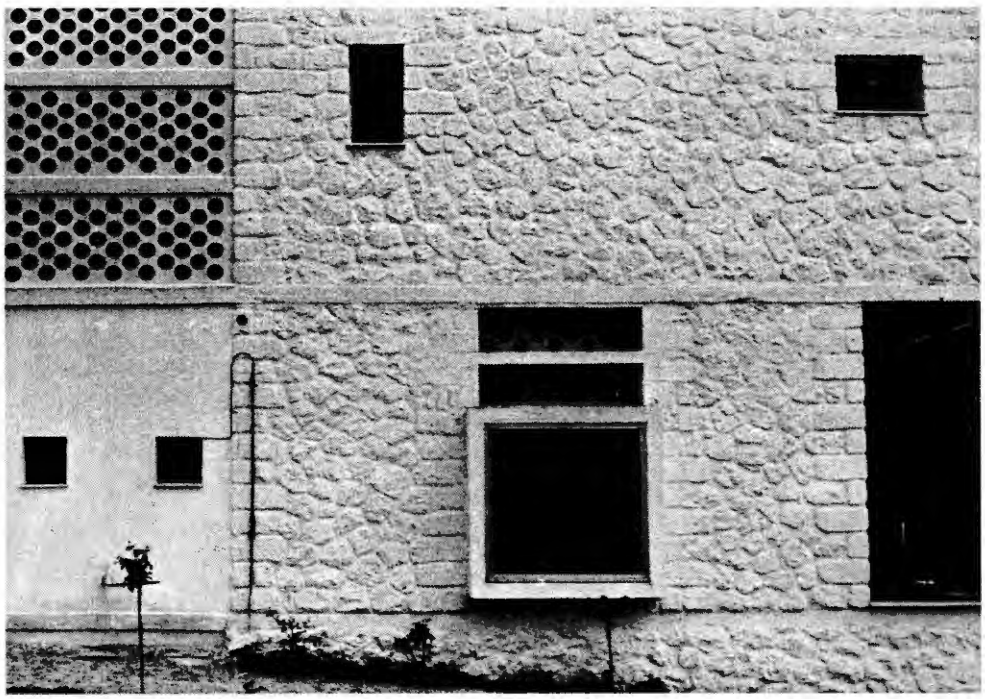


Fig. 17 – Aspra Spitia. Front (detail) of two storey house for upper incomes." Source: Γραφεία Δοξιάδη, "Άσπρα Σπίτια", p. 57.

KEYWORDS

Doxiadis, Constantinos, Greece (ancient), Islamabad,

Panayotis Tournikiotis, born 1955, Athens, Greece. Architect. Assistant professor of Theory at the National Technical University of Athens, School of Architecture. Publications: Adolf Loos (New York. 1994); The Parthenon and its Impact in Modern Times editor (New York, 1996); The Historiography of Modern Architecture (Cambridge. Mass., 1999). Coordinator of the Greek DOCOMOMO Working Party.

Nelci Tinem & Lúcia Borges

Brazil in Modern architectural handbooks

«The chain links are reciprocally sent back to each other and the whole chain is sustained in emptiness. (...) The dog believes to bite a bone, when, in reality, it is biting its own tail».
Ginzburg, Apud Tafuri (1984)

Introduction

The inclusion of modern Brazilian architecture in the so-called *architectural handbooks* both indicates the recognition and consolidation of this movement and conforms to the internotionally disseminated historiographycal image on the theme. The first references to Brazilian architecture can be found in Bruno Zevi's first edition of *Storia dell'Architettura Moderna* (1950), Gillo Dorfles' first edition of *L'Architettura Moderna* (1956), and Pevsner's sixth edition of *An Outline of European Architecture* (1957). Although brief, references to Warchavchik's work can also be found in Sartoris' 1931 handbook, *Gli elementi dell'Architettura Funcionale*.

Brasilia, in spite of the profuse criticism it provoked, is the fact that offirms the success of this productian, and exactly after its construction, most modern architecture history handbooks –except for Sartoris' (1931), Zevi's (1950), Dorfles' (1956) and Pevsner's (1957)– start referring to this peripheral movement.

Besides being included in the above mentioned works, Brazil appears in the first editions of both Hitchcock's *Architecture, nineteenth and twentieth centuries* (1958) as well as Benévalo's *Storia dell'Architettura Moderna* (1960), and, indirectly, in the foreword to the 1963 edition of Giedion's *Space, Time and Architecture* (1941). Later on, it also appears in Tafuri's (*Architettura Contemparanea*, 1976) and Frampton's (*Modern Architecture*: a critical history, 1980) handbooks. The trajectory of modern architectural production presented by Giedion in *A Decade of Contemporary Architecture* (1951) and the articles, «Architettura Moderna in Brasile», published by Argan in the magazine *Comunità* (1954), and «Modern architecture and the historian or the return of historicism», written by Pevsner for *RIBA Journal* (1961), also deserve attention.

Making use of the historiographycal interpretation model proposed by Scalvini (1984) in *L'Immagine Stariografica dell'Architettura Contemparanea da Platz a Giedion* –an adaptation to historical texts of the interpretative model of architectural work formulated by Bonta (1977) in *Sistemas de Significación en arquitectura: un estudio de la arquitectura y su interpretación*–, we can identify, in the handbooks, from a retrospective view, three moments of the process of construction of a canonical version of modern Brazilian architecture history: pre-canonical answers, emergency of a canonical interpretation and reinterpretations.

Zevi (1950), Giedian (1951), Dorfles (1956) and Pevsner (1957) represent *pre-cananical answers* — still little developed visions that constitute the first attempts at classifying this architecture, when its paradigmatic examples had not been chosen yet.

Hitchcock (1958) and Benévolo (1960) as well as Pevsner (1961) and Giedian (1963) represent the emergence of a canonical version, based on which the participation of Brazilian architectural production in the madern movement is spread out and recognised. As such, they set what appears to be essential to them –that is, three or four protagonists as well as a restricted and punctual image of the country's production– and discard all nuances.

The fully revised edition of Zevi's handbook (1973), which dedicates more room to Brazilian architecture –classified as neoexpressionist– and ought to represent a reinterpretation, repeats the ideas formulated in some articles written for *Cronache di Architettura*, in the fifties. Tafuri (1976) adds little to Zevi's analysis and, following another line, Frampton (1980) presents no novelty, except for his emphasis on critical regionalism and the argument on the relationship between architecture and place, a reference to works previous to the sixties.

By getting away from the prevalent narrative model and by presenting new analytical methods, Argan (1971) actually proposes a reinterpretation of modern architecture. In 1954, however, the historian who recognised, in *Architettura Maderna in Brasile*, Brazilian architecture as a mavement and not a mere exception, does not mention the theme in his handbook, *L'Arte Moderna*, published in 1971.

Based on these presuppositions, the objective of this investigation is to understand how –that is, with

which shades, from which angles and with which instruments– historians' handbooks on modern architecture contribute to the constitution and consolidation of an image of modern Brazilian architecture.

The pre-canonical answers

In the process of constitution of a canonical version, the modern architecture handbooks written at the beginning of the fifties –based mainly on international architecture magazines (1, 2, 3) (*L'Architecture d'Aujourd'hui, Architectural Review* and *Architectural Forum*, among others) and characterised as pre-canonical answers– treat Brazilian production as something new as well as remarkable, and generally include a small sample of it, chosen with certain investigative curiosity. As a result, their evaluations turn out to be temporary and full of questions.

The authors of the first handbooks, among other statements, constantly relate Brazilian architecture to the *lecorbusieran* production: by classifying it as part of the so called *third generation,* that coincides with the «crisis of rationalism» formulated by Zevi (1950); by identifying it with the «insurrection against reason» pointed out by Pevsner (1961); or by relating it to the «regionalisms» detected by Dorfles (1956).

Similarly, Zevi (1950) refers to the theme of simplicity, which is directly linked to Le Corbusier, although, in this case, he understands that Brazilian architecture gets away from «abstraction» and comes close to «mechanical, cryptographic» simplicity and «inventive poverty».

The question of formalism is also linked to the official character of such architecture, expressed in the «search for monumentality», according to Zevi (1954); in the «structural acrobatics», as stated by Pevsner (1957); and in the «stylistic excess», for Dorfles (1956). Although recognised as a distinct architectural approach, which shows to have some quality and some formal inventiveness, there is relative distrust as to the future of that production, which, in their eyes, privileges the project's plastic qualities — something almost inadmissible for the spirit of the time.

The examples of Brazilian modern architecture that the first handbooks point out are still few, but varied, while the repertoires presented by Argan, in *Architettura Moderna in Brasile* (1954), and by Giedion, in *A Decade of Contemporary Architecture* (1951) are more comprehensive, mainly for the differentiated character of these texts. The building of the Ministério da Educação is the only work both authors mention, and as to Reidy, Niemeyer and the brothers Roberto, distinct works of each appear. Giedion also mentions other architects, whose works, though equally known, are not considered as references in the paradigmatic image that identifies Brazilian architecture: Levi, Moreira, Warchavchik, Vital Brazil, Mindlin and Atílio Correia Lima (4). Less recognised yet are the architects who appear in Argan's article: Lina Bo (5, 6), Bologna, Kneese de Melo and Jorge Ferreira.

The emergence of a canonical version

In subsequent handbooks published at the end of the fifties, whose texts point out to the emergence of a canonical version, Brazilian architecture is no longer seen as a novelty and begins to become a paradigm. The samples included are more comprehensive, though the examples are more specific and relate to the official production of Rio de Janeiro's architects, frequently limited to and confused with Oscar Niemeyer's work.

Benévolo and Hitchcock, two of the authors who mention Brazil in that period, are the ones who offer a more varied sample of the country's production. Of course, as compared to the subsequent reduction of examples detected in the handbooks published after the sixties, that initial variety was determined not just by the fact that no position in regard to Brazilian architecture had yet been established: what was then regarded as a handbook — i.e., a work with the largest possible number of information as well as a position close to *neutrality* — and the prestige Brazilian modern architecture enjoyed also had influence on that kind of record.

Nice, tolerant or depreciative, most opinions converge to a single protagonist — Oscar Niemeyer (7) — and, sometimes, to his intellectual mentor, Lúcio Costa. Nearly always, there are references to Reidy's architecture (8), mainly to his correct ethical position, and to Burle-Marx's new vision of landscape, too. The emergent historical version on Brazilian architecture basically privileges three or four architects and half a dozen images, unlike the vast material offered in the period's magazines.

The brothers Roberto and Rino Levi (9), quite well known in international architecture magazines, are practically forgotten. Some handbooks, on tracing a historical panorama, mention them, but go no further. Warchavchik (10) is eventually included, too, but always as a historical reference, not as a paradigm.

Also in obscurity remain those who are in the periphery, as, for example: Luís Nunes (11, 12), who works in Pernambuco; the architects from São Paulo, such as Flávio de Carvalho and Artigas (13, 14); the foreign resident architects in São Paulo; and the authors of social housing projects, so very much called for, but rarely the object of historians' attention.

The Ministério da Educação (15) building, Pampulha's chapel (16) and Pedregulho social housing complex (17) are the images, which are spread out in handbooks as examples of the architecture produced in the first half of the century. The Ministério

da Educação is that history's fundamental landmark, and there, the lecorbusieran influence can only be compared to the Portuguese colonial constructive tradition. Pampulha is the work that definitively reveals Niemeyer's inventiveness, for the Ministéria da Educação and the New York's Brazilian Pavilion (18) were a result of teamwork. As to Pedregulho, it is the kind of popular housing complex so very much called for by the foreign critics of Brazilian architecture.

The lecorbusieran influence on the country's architecture continues to be identified in the handbooks written after 1960, which consolidate a historiographycal version, but now view Brazilian productian as something more than a mere climatic adaptation (19, 20, 21) of the French master's fundaments.

The solar control mechanisms are its more outstanding characteristics and send back both to Le Corbusier and to the Moorish architecture filtered by the Portuguese constructive colonial tradition. These mechanisms are to be developed by Brazilians until they transcend their immediate function and turn into elements of the building's formal definition (22, 23, 24). Historians will see this characteristic either as a virtue or as a defect, a fact that can be observed in the debate about the formalism of that production.

At that moment of diffusion, when the forms of expression proliferate, Hitchcock (1958) — who is interested in researching the manifestations that «move the centre of events away from Europe» — calls attention to individual houses that reveal an eminently American open architecture (25, 26, 27) and also identifies distinctive architectural manifestations in Reidy, Niemeyer, Moreira and the brathers Roberto; similarly, Giedion (1963) sees in the diversity of what he called «polyphonic architecture» a promising future.

The theme of simplicity still persists. For Benévolo (1960) and Giedion (1963), differently from Zevi (1950), it transforms complex programs into simple design, it comes close to sculpture and sends back to an elementary architecture, whose works allow easy reading and can be perceived as a whole; what surprises there is the relationship between the freedom of formal invention and the space in which it is applied.

Negatively evaluated in the first texts, the formalism is recovered by Benévolo (1960), who justifies it as a need for a young country attempting to display a modern character in its architecture. In that search, functional resources turn into aesthetic elements (Hitchcock, 1958), in which there is plenty of plastic boldness, and the generasity of the drawing stands out (Giedion, 1963).

Brasilia is obviously the recurrent theme in the handbooks written after the sixties. It constitutes the plan that integrally accomplishes the fundaments of modern urbanism (28, 29, 30, 31), spread by Le Corbusier, mainly after the 1933 CIAM, with the Athens Charter. It is also there that Casta appears as the outhor of the plan, and Niemeyer, as the author of the government palaces, built with the freedom and independence that the country's president, Juscelino Kubitschek, had granted him.

Kubitschek, together with Capanema, embodies the government's support that gives an official character to Brazil's modern architecture. Both represent the authority that Le Corbusier asked for and that allows its development. In the handbooks, that official character would explain some characteristics of that architecture, as, for instance, its formalism, which stands out mainly in Bill and Rogers' argument in *Architectural Review* and *Casabella* (32, 33).

What actually seems to bother historians, however, is the supposed lack of social housing proposals — the program that best characterised the concerns of the Modern Movement. The implicit question was: how can an underdeveloped country of such dimensions, with a high index of grawth and such significant architectural production, be so paar in terms of experiences of that kind? The questian alsa applied to the lack of urban experiences: haw can a country whose architecture shaws to be modern not be so in terms of urban planning? These equally complex correlate subjects are superficially discussed and, to a certain extent, taken into consideration apart from the country's specific economical and political conditions, according to the current concept of autonomous planning of the forties and fifties.

Reinterpretations

After the construction of Brasilia and the military coup, the handbooks — that should constitute revisions of that histary — repeat previously affirmed plots, restrict examples and are radically critical in relation to Brazil, but cannat be seen as reinterpretations.

In the last group af historians considered here, just Frampton (1980) seems to be actually interested in Brazilian architecture. Tafuri (1976), following Zevi, refers to Niemeyer's architecture as «pure scenery», a fastidious repetition of an architectural formula. Reidy — whose work, Tafuri admits, stands off that formalist model — does not get the histarian's attentian either, for he has no interest in what he calls the «architecture of bureaucracy». Argan (1971), who had presented one of the soundest evaluations of Brazilian production in 1954, does not include it in *L'Arte Moderna*.

Frampton (1980), frankly interested in the theme, once again reaffirms the impartance of Le Corbusier in the renewal of Brazilian architecture; he is one af the few historians who unconditionally sanctions the idea concerning the Brazilian authorship of the

Ministério da Educação; there, he believes to find «a highly sensitive native expression, whose exuberant plasticity recalls to mind the Brazilian Baroque of the XVIII century», and thus retakes the theme Dorfles (1956) had set forth. Frampton also goes back to Max Bill and Zevi's ideas related to the «decadent formalism, useless and characteristically ornamental», that they believe to have seen in Niemeyer's Industry Palace. However, the formulation that gets closer to the reinterpretations of the seventies is the one that identifies, to a certain extent, the Museum of Modern Art of Caracas' inverted pyramid (34) and Brasília's public buildings with the neoclassical tradition.

Concluding

The historians' criticism on Brazilian architecture in the handbooks is coincidental in some points: the texts refer to the same period, the same characters and the same works. This would be understandable if Brazil's modern architectural production were seen as restricted, episodic and punctual, an opinion that neither historians themselves nor the several authors who discussed the theme in specialised magazines have.

If the first manuals significantly contributed to include Brazilian production in the history of modern architecture, the last ones did not add much to this knowledge. The ignorance regarding the country's architecture and geography, which is evident in description mistakes and interpretation misunderstandings, reveal little interest of historians in facing a cultural and intellectual distance, difficult but not impossible to overcome.

As far as this theme is concerned, Rogers (1954), optimistic, believing it possible to understand or, at least, try to understand the artistic manifestations of cultures different from his, thinks it is also possible to make an evaluation of the Brazilian experience, independently from his personal preferences –«surely different from Brazil's architecture and often violently in contrast to it».

Petrina (1991), more radical, criticises the historians who do not move forward in the analysis of Brazilian architecture; in his opinion, this so happens because they have no experience as regards the American space — something considered to be necessary for the development of the subject —, a theme Hitchcock (1958) has dealt with, but dropped:

> *«... the theme has not been sufficiently analysed, but perhaps, there lie the hidden reasons for the visceral repulsion that such architecture produces in those who, like Bruno Zevi and Max Bill, stuck to the only modernity model they tolerate –the European Rationalism–, attributing, implicit or explicitly, to the modern monumental an academic, if not frankly reactionary or authoritarian, character». (Petrina, 1991)*

Independently from their individual opinion, historians bear witness to the impact Brazilian architecture provoked in the international panorama, between the middle thirties and the beginning of the sixties.

One of the greatest problems detected in international criticism is the fact that their object is always the work of the same architect — Niemeyer — instead of a wider and representative assemblage of Brazilian architectural works. However, in spite of severe criticism, it is exactly Niemeyer's spectacular architecture that calls attention to Brazil. Reidy and Burle Marx, so very much praised, only win projection after Niemeyer's success.

But, why does São Paulo's architecture is practically ignored in the handbooks? Probably it happens because of its distinct and more sober character, perhaps more similar to the European model that constitutes Zevi, Max Bill and most historians' reference. Probably because neither is it spectacular nor does it cause great impact.

Another question, which is also difficult to understand, is why that architecture, which causes so much sensation after World War II, mysteriously disappears after the end of the sixties.

It probably emerges after World War II because replies to the Modern Movement begin to come out and, under the direction of the CIAMs, there is a search, in different places, for distinct types of production whose proposals can offer new facts, but keep faithful to the fundaments of the modern canon, and thus make it possible for the movement to survive.

Why it disappears after sixties is difficult to answer. Perhaps — as Lúcio Costa (1979) wants, or rather, as he would like it to be –«because Brazilian architecture no longer exists. There exists the international architecture of English and American magazines». But most probably, after Brasilia, the hegemony of an internationally successful kind of architecture – that leaves room for no variations, not even those that do not constitute opposition– is consolidated.

Costa somehow contributed to that. Soon he recognised Niemeyer's capacity to shape plastically, in an innovative and creative way, the specific attributes of a Brazilian culture in perfect consonance with the principles of the modern canon. Full of enthusiasm, he began to build the myth. Following this trail, the real or potential diversity of the movement disappears. Costa (1982) literally states: «The so called Brazilian contemporary architecture movement is, fundamentally, Oscar Niemeyer. The other architects more or less followed what he did».

Costa starts building up a history in which

Niemeyer is the most important, or perhaps, the only protagonist, and almost all historians use it as a source. However, in modern architecture handbooks, they always make laudatory references to Reidy, even if very brief sometimes.

This statement reflects the environment in which there appears a feeling of opposition from the part of the following generation of professionals, who, besides adverse political conditions, will come to face a context in which there is no place for a different type of architecture other than Niemeyer' successful one.

In any way, the Brazilian modern architecture movement seems to come to an end after the construction of Brasilia, or, according to Benévolo, after the 1964 military coup. The only subsequent image is presented by one of the most ferocious critics of Brazilian architecture: Tafuri includes an image of the 1975 Mondadori Editions building in his handbook, probably because it is an Italian example.

As to cultural differences, although canonical texts do not directly mention them, they appear by means of criticism, interpretations and comments, even when they refer to the relationships between produced works and the environment in which they are inserted. The very reference to Brazilian architecture as a manifestation either of a «distant country» or of the «periphery of civilisation» seems to mean something other than geographical distance: the physical distance from the old continent is not as big as the intellectual, theoretical and cultural distances.

In scenery dominated by Europe and the United States, a highly exotic architectural production is labelled according to known theoretical landmarks –neo-classicism, neoexpressionism, surrealism etc. Such classifications tame the production of a wild country, translate it into *civilised* languages, but, in the process, its original sense, its defects and qualities, its context and references end up getting lost.

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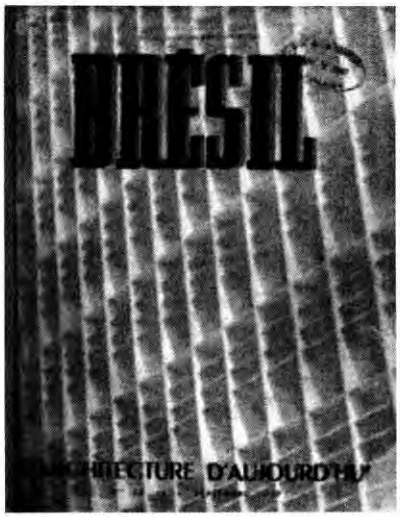
number	subjet	assunto	From
1, 2, 3	The covers of three architecture magazines special issues dedicated to modern Brazilian architecture where the theme is the *brise-soleil* and the climate control mechanisms	Capas de três números especiais de revistas de arquitetura dedicadas à arquitetura moderna brasileira, onde o tema é o brise-soleil e os mecanismos de controle climático.	AA 13/14 sep 1947 AA 42/43 aug 1952 AF nov 1947
4, 5, 6	The Hydro airplane Station by Attilio Correia Lima is an example of Brazilian projects spread out by the pre-canonical documents, which don't appear in the modern architecture handbooks. The Crystol House and the São Paulo Art Museum by Lina Bo Bordi are other examples forgotten by the handbooks.	A Estação de Hidroaviões de Attilio Correia Lima é um exemplo dos projetos brasileiros bastante divulgadas nos documentos pré-canônicos que não aparecem nos manuais de arquitetura A Casa de Vidro e o Museu de Arte de São Paulo de Lina Bo Bardi são outros exemplos igualmente esquecidas pelos manuais	Goodwin 1943 Mindlin, 1956 Ferraz, 1933
7, 8	The Pampulha Casino by Oscar Niemeyer and the Modern Art Museum of Rio de Janeiro by Affonso Eduardo Reidy are examples of these two Brazilian modern architecture important personalities work.	O Cassino de Pampulha de Oscar Niemeyer, assim como o Museu de Arte Moderna do Rio de Janeiro são exemplos da obra dessas duas figuros importantes na arquitetura moderna brasileira.	Goodwin 1943 AA 54 may/jun 1954
9, 10	The Maternity Hospital by Rino Levi and the Itápolis House by Gregori Warchavchik are others examples of orchitecture initially spread out by architecture magazines and later forgotten by modern architecture handbooks.	O Hospital Maternidade de Rino Levi e a Casa Itápolis de Gregori Warchavchik são outros exemplos de arquiteturas inicialmente difundidas e posteriormente esquecidas pelos manuais de arquitetura moderna	AF nov 1947 Sartoris 1931
11, 12, 13, 14	In the same way, the Olinda Water Tower and the Rural School by Luiz Nunes, as the architect house and Londrina Station by João Batista Vilanova Artigas were forgotten too.	Da mesma farma a Caixa d'Água de Olinda e a Escola Rural de Luiz Nunes, assim coma a Casa do Arquiteto e a Rodoviária de Londrina de João Batista Vilanova Artigas foram igualmente esquecidas.	AR 567, mar 1944 Mindlin, 1956
15, 16, 17	Three images are spread out in all of modern architecture handbooks: The Education Ministry by Costa, Niemeyer, Reidy, Moreira, Leão, Vasconcelos, the Pampulha Chapel by Niemeyer and the Pedregulha Social Housing Complex.	Três imagens aparecem em todos os manuais de arquitetura moderna: o Ministério do Educação de Costa, Niemeyer, Reidy, Mareira, Leão, Vascancelos; a Capela de Pampulha de Niemeyer e o Conjunto Pedregulho de Reidy.	AF feb 1943 AA 06 dec 1946 AA 42/43 aug 1952
18	The Brazilian Pavilion at the New York World's fair by Costa and Niemeyer is the first Brazilian project build out of the country.	O Pavilhão de Nova York de Costa e Niemeyer é o primeiro projeto brasileiro construído fora do país.	AA 13/14 sep 1947
19, 20, 21	Three examples of an architectural element which became a characteristic of Brazilian modern architecture, the *brise-soleil*: The Education Ministry, The Brazilian Association Press and the Brazilian Pavilion at New York World's fair.	Três exemplos de um elemento que se consolidou como característica da arquitetura moderna brasileira: o brise-soleil: Ministério da Educação, Associação Brasileira de Imprenso e o Pavilhão do Brasil na Exposição Interbacional de Nova York	Goodwin 1943
22, 23, 24	Le Corbusier verifies, in an article for L'Architecture d'Aujourd'hui (1947), a new kind of office building created by Brazilian architects (he refers to the high buildings where the climate control mechonisms transcend their function and turn into elements of formal definition) and signs three examples: Education Ministry, Brazilian Association Press and Railroad Station office by Reidy	Le Corbusier constata em um artigo para a revista L'Architecture d'Aujourd'hui de 1947 a existência de um novo tipo de edifício de escritórios criado pelos arquitetos brasileiros (referindo-se obviamente aos edifícios em altura onde os mecanismos de controle solar se convertem em elementos de definição formol) e aponto três exemplos: o Ministério da Educação, a Associação Brasileira de Imprensa e o edifício da Estação Ferroviária de Reidy.	AA 13/14 sep 1947
25, 26, 27	Goodwin insinuates and Hitchcock reaffirms the existence, in the modern Brazilian architecture, of an open architecture, which would characterise the (south and north) American work in the pure wrightian tradition. Rino Levi's houses are good examples of that production.	Goodwin insinua e Hitchcock reafirma a existência na arquitetura moderna brasileira de uma arquitetura aberta que caracterizaria os trabalhos realizados no novo mundo na mais pura tradição wrightiana. As casas de Rino Levi são dois bons exemplos dessa produção.	Mindlin, 1956
28, 29, 30, 31	Brasilia is the recurrent theme in the handbooks written after the sixties. Benévola, Tafuri and Frampton are three of the historians that include this theme in their handbooks. In the examples: The Three Power Square and the Bus Terminal published by Benévola, the Pilot Plan by Tafuri and the Esplanade of Ministries by Frampton.	Brasília é o tema mais recarrente nos manuais de arquitetura moderna publicados após os anos sessenta: Benévolo, Tafuri e Frompton são três dos historiadores que incluem esse temo em seus manuais. Nos exemplos: o Praça dos Três Poderes e o Rodoviária publicados por Benévolo, o Plono Piloto por Tafuri e o Esplanada dos Ministérios por Frampton.	Benévola, 1960. Tafuri, 1976. Fromptan, 1980
32, 33	As examples of a exaggerated formalism, Max Bill quotes the Canoas House in Rio de Janeiro and the São Paulo Bienal de Plastic Arts building in Ibirapuera	Como exemplos de um formalismo maneirista, Max Bill cita a Casa de Canoas no Rio de Janeiro e o edifício da Bienal de Artes Plásticos de São Paulo no Ibiropuero.	Mindlin, 1956
34	The Modern Art of Caracas' inverted pyramid is an example quoted by Frampton where he identifies the revival of a neoclassical trodition.	A pirâmide invertida do Museu de Arte Moderna de Caracos e é um dos exemplos citado par Frampton onde ele identifica o retornada da tradição neoclássica	Mindlin, 1956



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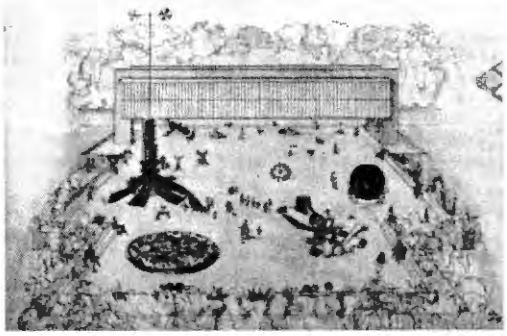
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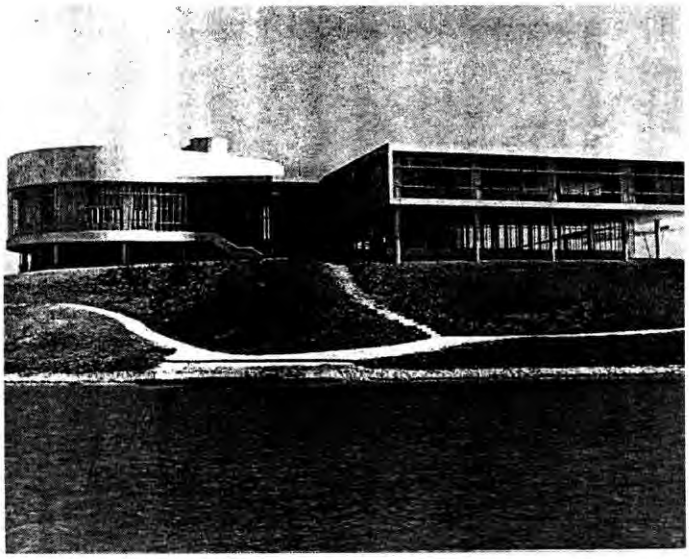
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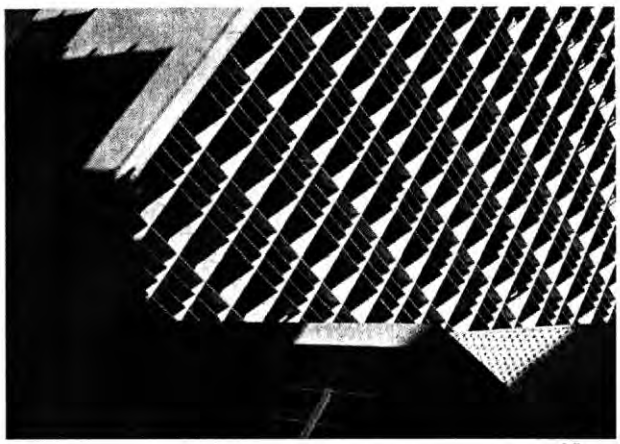

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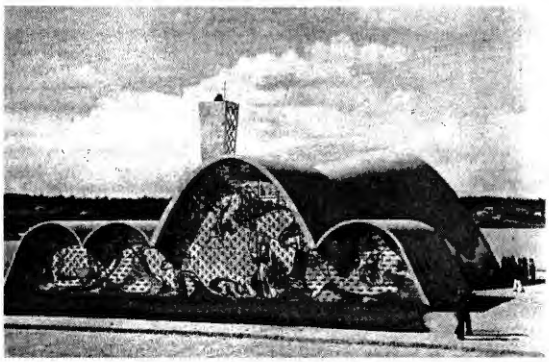

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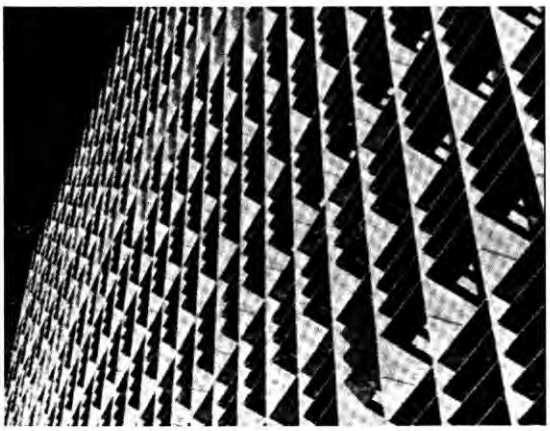

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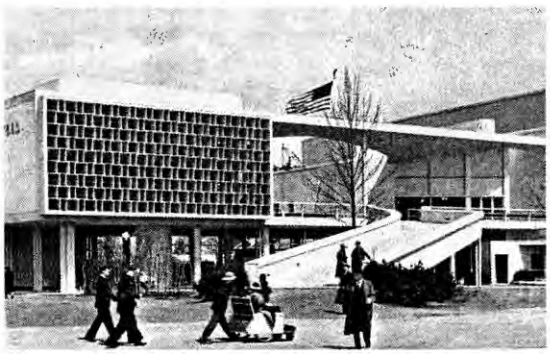

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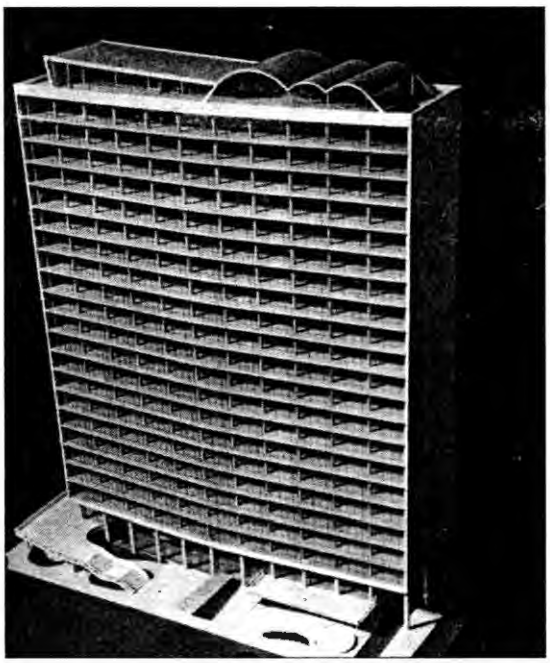

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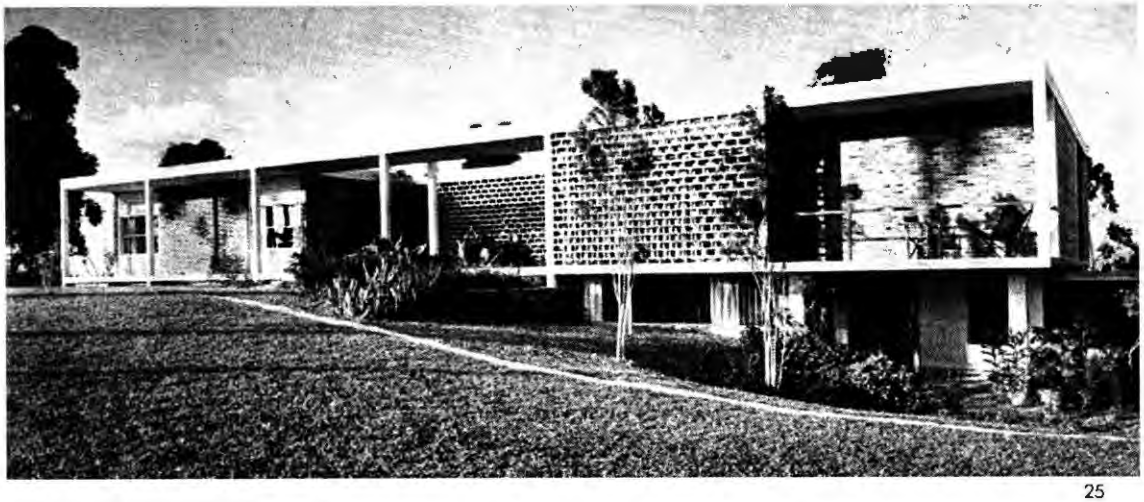

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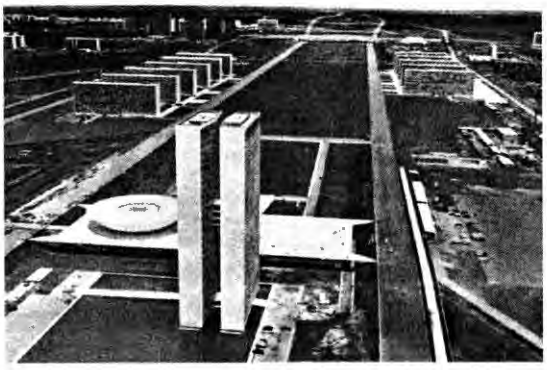

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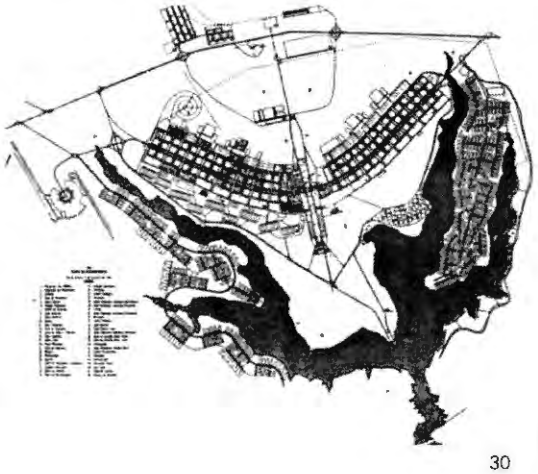

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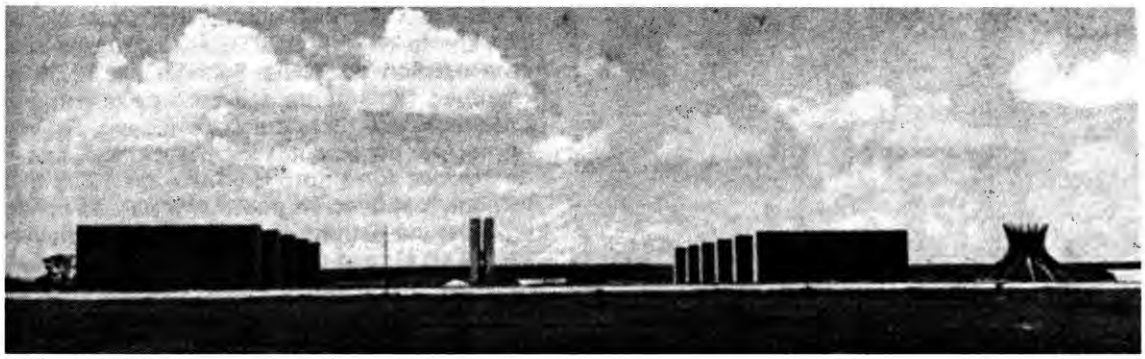

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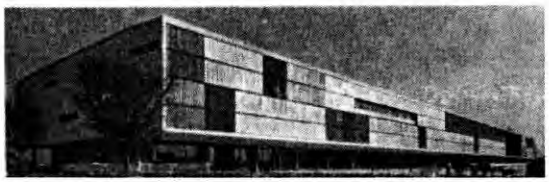

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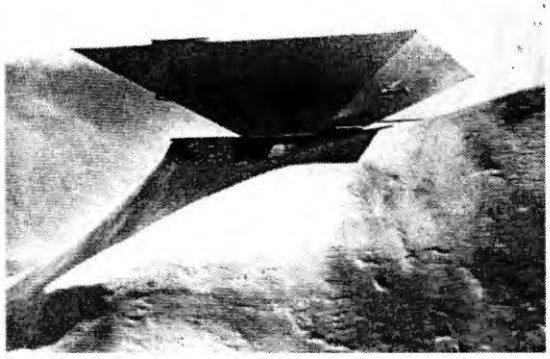

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KEYWORDS

Brazilian modern architecture, modern architectural handbooks, modern architecture historiography

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Hilde Heynen

Matrix of Man

When Sibyl Moholy-Nagy published *Matrix of Man* in 1968, it was in a way the result of a life-long love affair with the great city. Her biography is punctuated by the names of great cities where she lived and worked: Berlin, Frankfurt, London, Chicago, New York. Especially this last city captured her imagination, as she dedicated *Matrix of Man* "To Manhattan, my inspiration ond my love".

She expressed her love for the city already much earlier on, in 1954, when she wrote a statement for *Architectural Record*, entitled "Where the great city stands". "STADTLUFT MACHT FREI", she declared in this text ("the air of the city makes one free"), taking up the defense of all those who wished to live in a densely packed but dynamic and exciting city. She denounces those who have declared the city evil "from Ebenezer Howard to Frank Lloyd Wright, and from William Morris to Lewis Mumford." Whereas the "solution for man's happiness has been sought in green-belt towns and progressive suburbs, with man and community living in foolproof salubrity", she states that men nevertheless have continued to flock "to the airless, sunless, stone piles, suffering each other's proximity rather than that of the bird and the bee". She thinks that all those who want to solve the city's problems by planning satellites or garden cities have no real sense for what the city is all about. For the great city results from the fact that man does not live by sanitation alone: "There are and forever will be congenital city dwellers and congenital country dwellers, and no amount of sanitation in the broades meaning of the word – sanitation of the soul and the body, so to speak – will make a country dweller out of a city dweller. There are millions of Americans, who (...) are bored by bridge and group television, and who do not want to bake cookies for the benefit of Girl Scouts. They hide behind the cold impersonality of a numbered appartment door not sinister tendencies, but the cherished right to be anonymous, to assciate not at all, or with unwanted minorities, to remain unquestioned about the time schedule of their waking hours, (...)"

At the time she is writing this article (1954) she is making her way as a professor of architecture at Pratt Institute in New York. Sibyl Moholy-Nagy was the second wife and biographer of Laszlo Moholy-Nagy, the famous artist and Bauhausprofessor. Born as the daughter of an architect in Dresden, Germany, she was active as an actress and scriptwriter before her marriage to Moholy in 1934. Throughout their marriage, she was involved in her husband's pedagogical undertakings in directing the New Bauhaus and later the Institute for Design in Chicago. After his death in 1946, she decided to become a professional teacher, establishing herself as an architectural historian in her own right. She managed to publish a huge amount of articles and a couple of books that made her very much present on the architectural scene, from the late fifties throughout the sixties (she died in 1971). Her first non-fiction book, which opened the gates to her career as a professor, was the biography of her late husband, *Moholy-Nagy. Experiment in Totality*. This book was published in 1950, four years after his death. Her next book, *Native Genius in Anonymous Architecture* (1957), was written after very demanding fieldwork which brought her across the American continent. In this publication she develops a series of arguments which some years later would make others famous: it anticipates indeed Rudofsky's *Architecture without Architects* (1964) and Rapaport's *House Form and Culture* (1969). The book presents vernacular architecture in America, which, she claims, has been ignored by architectural culture out of a misplaced disdain for local traditions. It discusses the factors of site and climate, of form and function, and of materials and skills. Its final chapter assesses "a sense of quality" which is present in this vernacular, but absent from the real estate developments that she sees booming all over the country. Her basic argument is: "To provide *the home as an ideal standard* is still the architect's first cause, no matter how great and rewarding are his other contributions to monumental and technological building. (...) As those builders of old, the architect of today has to create *an anonymous architecture for the anonymous men* of the Industrial Age." (Moholy-Nagy 1957, 23)

Unfortunately this book has never had the same impact as the later ones by Rudofsky and Rapoport. I would argue that this cannot possibly be for reasons of content. The book is well researched, well written, well illustrated. It wouldn't live up to scholarly standards of today, but the same can be said of Rudofsky and Rapoport. That it was almost ignored

might have to do with the fact that the book went very soon out of print, due to a reorganization of its publishing house, Horizon Press. It remains to be seen, however, in how far its author's rather ambivalent relationship with the old-boys-network that made up the architectural scene, has been an important factor in the process.

I do not exaggerate when I call her relationship with modern architects and modern architecture ambivalent. On the one hand she had lived very decisive years of her life – from 20 to 30 let's say – among avant-garde artists and filmmakers in Weimar Germany. Being married to Laszlo Moholy-Nagy meant she had the direct acquaintance of such men as Walter Gropius, Marcel Breuer or Sigfried Giedion. When she published the book on Moholy, it was with a very sympathetic and supporting foreword by Walter Gropius. She certainly shared a lot of ideas and ideals with her husband, whose intellectual legacy she continued to defend. On the other hand, however, it is gradually becoming clear from her writings that she shaw this legacy as one in the field of the visual arts, and that she did not extend her loyalty to the architecture that grew out of the Bauhaus. During the sixties she often criticizes modern architects, for celebrating technology and science at the detriment of human and urban values. In the article "Hitler's revenge", e.g., published at the eve of the coming out of *Matrix of Man*, she starts her argument in a most outspoken polemical tone:

> *"In 1933 Hitler shook the tree and America picked up the fruit of German genius. In the best of Satanic tradition some of this fruit was poisoned, although it looked at first sight as pure and wholesome as a newborn concept. The lethal harvest was functionalism, and the Johnnies who spread the appleseed were the Bauhaus masters Walter Gropius, Mies van der Rohe and Marcel Breuer."*

This criticism culminates – though in a less polemical tone - in *Matrix of Man*. The book was published in 1968, from a manuscript she developed throughout the 60s during her teaching at Pratt, where she had a very successful course on the history of urban settlements. It was meant to be the first volume of a larger whole called *Canon of Architecture*, but her early death in 1971 prohibited the finishing of this largger project. We have MoM though and I must admit that I am particularly fond of the title. Matrix, my Webster's tells me means several things, a.o. "something that constitutes the place or point from which something else originates", "a formative tissue", "a mold for casting type faces". From other sources I have it to mean also womb or parent stem. By using the term *matrix* Sibyl Moholy-Nagy clearly genders the city, qualifying it as a maternal body, giving life and nurturing man, while at the same time molding his form. As you might know the word has since been used often by feminists. Matrix was e.g. the name of an architectural feminist co-operative, working in London from 1980 onwards. Matrix is also a key-term for Brachta Lichtenberg Ettinger, the artist and psychiatrist. She relies upon this term to describe her specifically female approach to art and to the psyche, trying to get hold of this special relationship between I and non! which is getting form through the womb.

These feminist overtones might not yet have been obvious when Moholy-Nagy chose *Matrix of Man* as the title for her book, but I am convinced that she was very conscious about the feminine connotations of the word. The title is well-chosen indeed, for it is her prime argument that the city is source and origin of civilization, and while it contains everything that is worthful in human culture it nurtures and gives form to the intellectual and emotional lifes of the individuals that live in it.

The book is constructed according to thematic categories. She discerns five basic concepts of human settlements, five patterns which form the *Gestalt* of cities: geomorphic, concentric, orthogonal-connective, orthogonal-modular and clusters. Geomorphic patterns are determined by the shape and the climatic conditions of the earth, they have an organic structure and are based upon an interaction with the landscape. They are the oldest ones found by archeologists, under the form of villages, rural towns or citadels. As the most impressive example of geomorphic planning she names Machu Picchu, which "achieves a total accord with the given environment because the sun worshipers conceived the city as a crown of nature, and nature as the crown of the city" (p. 28). But it is clear to her that geomorphic patterns continue to be of consequence throughout the history of human settlements, as e.g. in the military fortifications of Vauban. Moholy-Nagy indeed is convinced that these different patterns, although they may originate from different eras and places, are archetypes which continue to be of consequence in urban planning.

The second type she distinguishes are concentric settlements. They come forth from a commitment to a suprahumane ideal, from a tradition that conceives of the urban form as the superimage of the ideal self. This type was predominant in medieval cities, where the cathedral and other public buildings acted as the core of the concentric pattern. The concentric city offers an image of power, from which the influence of its ruler radiates over a vaster area. Its urban qualities derive from the interaction between public buildings and the more humble con-

structions that form their background. Moholy-Nagy discusses widely different exomples, in which the configuration of public buildings is the most important urban feature: from the temple of Apollo ot Delphi, the temple district of Jerusalem and the emperor's halls in Peking to the Maya city of Uxmal in Yucatàn, Mexico. According to her, the concentric strategy continues to play a role, just like the geomorphic approach. She recognizes it as well in the renoissonce schemes of ideal cities as in the utopian images of the 19th and early 20th centuries, such as those by Ebenezer Howard.

Her treatment of the third and fourth type – orthogonal-connective and orthogonal-modular patterns - is less stroightforward, for now she intermingle the thematic structure of the chopters of the book even more with a chronological narrative. This narrative starts with a discussion of proto-orthogonal concepts as found in Ancient Egypt or Babylon, and proceeds to deal with "the Greek wave" (a discussion of the influence of Alexander the Great and the Hellenistic urban tradition) in order to continue with "the Roman orbit" (the urban revalution brought about by imperial Rome in which "no longer did city make the ruler but the ruler made the city" (p. 101). Nevertheless two main ideas can be distilled from her account. First that the orthogonal-connective type is based on a desire for communication and very much linked to the impact of merchants who see the city as a place for commerce and connecting. The linear-connective pattern favours the linear sstreet, the rectangular block, and public squares as urban determinants. Second that the orthogonal-modular type is based on the military logic of Roman camps. It is a grid based on uniform modules which add up in an endless continuation. In this type, Moholy-Nagy argues, streets are less lines of communication than dividers of lots, and public spaces are not designed enviranments but voids between housing modules. "In contrast to the other types of urban foundations," she states, "the modular grid plan is not generated from within the communicty but is predetermined from without. To the genesis of urban intentions from rural (geomorphic) to cosmological (concentric) to ecumenical (orthogonal-connective), the modular grid adds a coercive concept, whether political or religiously motivated, imposing on plan, building and inhabitant the same predetermined dimensions." (p. 158)

It is this orhtogonal-modular type that according to her prevailed in the New World, because "To the faunding fathers, land was a commodity to be sliced, weighed, and sold to the highest bidder. (...) It would take 200 years for the fugitives of millennia of urban tradition to acquire 'city sense' and by that time – our own – the damage had been done." (p. 192) She also detects a suspicious similority between many examples of modernist urban plans and the Roman camp. She denounces a.o. José-Luis Sert's plan for Barcelona, Ludwig Hilberseimer's superblocks for the replanning of Chicago and Kiyonori Kikutake's City of the Future, which she blames for its fascist character.

She states that the orthogonal archetype also has a very successful derivative: the orthogonal-linear plan of the merchant cities. This plan is, like the orthogonal-connective plan, based on the idea of communication. Moholy-Nagy clearly distinguishes between traffic and communication:

> *"Traffic is a system of transferring people and goods through a given area by the shortest distance between origin and destination. Its planning is indifferent to the character of the area traversed or to the effect traffic has upon it. (...) Communication, on the other hand, refers to the interconnection of human activities by means of streets and plazas. Their layout, connectedness, and delimiting architecture influence the life of people by providing a designed framework, qualified by tradition and aesthetics. In modern cities both traffic and communication exist side by side, but it is the communcation plan that makes a particular city specific and memorable."*

She mentions as examples the Ramblas of Barcelona, Piccadilly in London, the Champs Elysées in Paris and the Copacabana in Rio. She moreover stresses the fact that "the orthogonal-linear merchant city gained ascendance over all other planning concepts becouse it offered participation in the drive for power to the majority." This type of city is not the power symbol for a monarch, nor does it soleley derive from the most profitable alotment of the land. It rather fuses architecture, communication and real estate values into a self-conscious expression of an open, outside-oriented community.

In the next chapter, Moholy-Nagy discusses "Clusters and the end of origins". According to her the whole idea of clusters, and by extension the idea of satellite development, is anti-urban and tends ta isolate certain social graups. Between the urban mobility of the city and the land attachment characteristic for the village, the cluster makes up for a third area of human settlement, "where the sharp artificial city lights and the diffused rural moon mix in a twilight zone". "City satellites", according to her, "are clusters of buildings that belong neither to the city nor to the village, partaking of the open land and vestiges of nature, but dependent on an imitation of city life for survival." (p. 241) Although such exurban clusters have existed since the beginning of cities, it is mainly since the beginning of the 20th

century and the environmental ideals of Howord and Unwin that the cluster has been invested with architectural pedigree and thus began to threat the healthy continuation of a sincere city sense. Weimar Germany elaborated in the Weissenhofsiedlung of Mies van der Rohe and in the Frankfurt Siedlungen of Ernst May the cluster idea, and it thus became the prototype for numerous New Towns and suburbs. But most disastrous, she thinks, was the influence of Le Corbusier's work as a city planner. This work has a peculiar logic and continuity that encompasses in one lifetime the genesis of the cluster concept. His first city plan – the "City for Three Million People"- was concentric in approach. Later he experimented with linearity in the plans for Hellocourt and Rio de Janeiro – reolly the beginning of his dispersion of the historical city. His third and final step in the philosophy of urbanism was his conception of the Unité d'Habitation. For Sibyl Moholy-Nagy it is clear that there were "two driving motivations, which one might call obsessions, behind the step-by-step genesis of Le Corbusier's urbanism". These were "The Ideal Social Norm" and "The Destructian of the City". The Ideal Social Norm refers to the families that would inhabit Le Corbusier's "Vertical Villages": "According to his highly poetic description, the family would assemble fifty or sixty stories above ground around the hearth as in olden times: the mother would prepare the meal, and the father would survey the unspoiled landscape from a 6-feet-wide loggia, which 'Socrates would have envied.'" (p. 273) The other mativation is his rejection of the city as an essential historical factor. "The target of Le Corbusier was the liquidation of the city as a compound social and architectural entity. Throughout his professional life, he worked tirelessly on the elimination of the ligaments that held the urban body together."

The point for her is that these targets are more than private and harmless obsessions, for "the influence of Le Corbusier was world-wide and decided the fate of city planning in the twentieth century" (p. 275) "Le Corbusier's fluctuating experimental exploration became universal prototypes, losing in the process of popularization those features that had counterbalanced their urban destructiveness: relationship of building to open ground, designed elevation, coloristic and textural variations in open loggias, and –to him most important- the roof terrace with the greatest possible freedom of sculptural form and recreational variety." (p. 279)

Throughout the book, Moholy-Nagy stresses the importance of factors such as landscape, regional climate, tradition, culture and form. She repeatedly refers to the city as a symbol, a symbol not only of power, but also of human aspiration and participation. The city for her is a generative force, capable of molding people and civilizations, bringing forth creative energies and interconnectedness. Hence her criticism of the modern urbanism of CIAM develops along several lines. First she claims that the idea of clusters, which this urbanism favours, is dissolving the city as such. Second she thinks that many of the master plans of visionary architects come forth from their appropriating to themselves a suprahuman power as matrix makers of common man, denying any claim of participation from the latter. By relying upon the rigidity and uniformity of the orthogonal-modular plan they often excert a coercive power which annihilates the possibilities of partcipation from the citizens. Third she argues that there is a distinction between traffic and communication, and that the CIAM-doctrine takes traffic into account without paying attention to communication. A most interesting feature in this respect is what she calls 'architectural urbanity'. The term refers to the idea that urbanity is not a matter of a two-dimensional lay-out of streets and axes, but rather results from the interplay of three dimensions – the buildings along the streets and squares being a decisive element.

Architectural urbanity indeed is what according to her is lacking in a city like Brasilia. For the urban spaces in this city are so overdimensioned that they ore not apt for communication: the buildings that surround them can barely give form and meaning to these vast spaces (an argument which James Holston will repeat later in a more elaborate way in his book on Brasilia). She blames moreaver Costa and Niemeyer far their disregard of ordinary people. In a letter drafted to André Wogenscky (March 3, 1963), she sums up her indignation:

> *"My vialent abjection is directed against (...) the attitude taken by Costa and Niemeyer towards the main papulation of this new city. (...) Ever since Le Corbusier assumed for himself and the city planner the right to design a town in the most rigid framework, people have been deprived of their right to shape their environment by the age-old process of trial and errar. Costa is a devaut Le Corbusier disciple, and what Le Corbusier said about Bogota could have been said by him: "48 hours after I had arrived in Bogota, the whole life of future generatians had been laid down in all detail."*

In the lovely little book on Mme. Marta's sculpture occurs the sentence:"Dans la vie, equilibre rompu égale mort." Costa and Niemeyer have deliberately destroyed the equilibrium between the citizen and the city presentation, between the citizen and his urban environment, between the city itself and noture around it. A prisoner cannot find solace

in his prison by the thought that some future group of inmates will be desperate enough to break down the walls."

This argument is remarkably similar to the one that Marshall Berman makes a quarter of a century later, in the preface to the second edition of his book *All That Is Solid Melts Into Air. The Experience of Modernity*. In this book he defines modernism in a very broad way as "any attempt by modern men and women to become subjects as well as objects of modernization, to get a grip on the modern world and make themselves at home in it." (p.5) In the 1988 preface he reflects upon the clash of modernisms he experienced when visiting Brasilia and commenting on the city. He was very critical of the city, pointing out that "Brasilia's design might have made perfect sense for the capital of a military dictatorship, ruled by generals who wanted the people kept at a distance, kept apart and kept down." (p. 7) As the capital of a democracy, however, he considered it a scandal, for it provided no democratic public spaces where people can come and assemble freely from all over the country, to talk to each other and address their government. His criticism was not taken lightly, and Niemeyer responded, Berman recalls, with indignation, indicating that Berman seemed to forget that Brasilia was conceived and planned as the embodiment of the democratic hopes of the Brazilian people and of their desire for modernity. Here you had a clash of modernisms: Berman's one stressing the ideas of openness, communicaton and flexibility, versus Niemeyer's one who saw the desire for modernity embodied in buildings and spaces that were prime examples of a very specific modernist aesthetics without living up, however, to what Berman expected from modernism in the broader sense.

In Sibyl Moholy-Nagy's work, one might say, a similar clash of modernisms is being acted out. The whole set-up of her intellectual convictions is immersed by her being part of the avant-garde in Weimar Germany and by the legacy of Laszla Moholy-Nagy's teachings. She subscribes to the ideal of a universal, cosmopolitan humanity that would be liberated by the forces of intellectual freedom, democratic openness and aesthetic experimentations, stressing at the same time – like Berman does – the importance of not loosing the connection with the past, with tradition, with culture, with landscape and climate. On the other hand she thinks that certain tendencies within modernist architecture and urbanism go against the grain of this ideal, because they embody a will to power from the part of their architects which is not compatible with the democratic desire of citizens to collectively give form to their cities and which does not take into account the values of traditian, landscape and climate. The bottomline of her discourse on the city seems to be that really great cities do come forth from a collective desire for the city, a desire that is recognizoble as well in a series of of specific and well-considered design decisions as in the long-term historical process in which the inhabitants themselves can take part in the making of their city, without being coerced in a pre-conceived model that wouldn't allow for any variation or new input. For her clearly New York was such a city, Brasilia sadly was not.

KEYWORDS

Sibyl Moholy-Nagy; modern city; urban history; utopia

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Pasqualino Romano Magnavita

About the teaching of the Theory and History of Modern Architecture and Urbanism: for the dissemination of new notions and concepts

"The principles in philosophy are cries around which concepts develop real short stories"
Deleuze/Guattari

Introduction

In the 60s, the balance of the exhaustive cultural debate between those who made statements on cultural paradigmatic changes in the sense of showing ruptures, and the ones who presupposed it was part of the dynamics and continuity of the incomplete process of modernity, was a set of new presuppositions, nations and concepts especially incorporated in the repertoire of discourse in different areas of knowledge, and in the disciplines of the theory and history of architecture and urbanism, even though in an incipient way.

In the specific case of modern architecture produced in Brazil and especially in terms of urbanistic experiences, there was a proliferation of recent theoretical studies, especially the historical ones. However, most of them did not incorporate the emerging discourse transformations into the present cultural context, although the discourse production of the texts written by Lucio Costa, Paulo Santos, Yves Bruan, Carlos Lemas, Mario Barata, among others (Puppi, 1998:) was criticized.

The present text proposes to contribute in some way to the rereading of modern architecture produced in Brazil, based on some notions and concepts of the new discipline discourse, with the objective of disseminating a new discourse repertoire, implementing new notions and concepts.

For this purpose, the "formation of discourse" concept developed by Foucault was used as a starting point. It was transposed to the disciplinary area of architecture and urbanism, and in this case to the discourse about theory and history of the "modern movement" and modern architecture and urbanism. The notions and/or concepts of space and time inherited fram modernity are being questioned todoy, owing to the advent of technological/space/time and consequently to their limited applicability when compared to the leading edge technology and presuppositions that at the beginning were questioned by the quantum physics under the protection of the indetermination principle. Some initial considerations were made in terms of new notions, concepts, pairs of concepts and several experiences, bearing in mind their repercussion in the architecture discourse. Heterotopia, rhizome, deconstruction, hyperspace, time/space/technology, amongst others were selected as examples, used only as references not to lengthen the text.

In the new cultural/technological context, having in mind the inexhaustible informational file and envisaging Internet and other communications modalities, it is expected that the recycled "virtual communities and the academia" undertake the responsibility for establishing a new "modern movement" discourse.

Formation of discourse

There seems to be a consensus regarding the galloping advent of the New World economy, configured in the globalization process, under the protection of a new way of "flexible capital" production. Consonant with this project, a new formation of discourse arises, not only in the strictly economic sense but also affecting the cultural context. The referred event is characterized by the emergence of a new set of notions and concepts with higher visibility in the epistemological and technological universe.

The formation of discourse concept adopted here refers to Foucault"s seminal text "The Archaeology of Knowledge". The author begins with a series of hypothesis based on an enunciation different in form and disperse in time, and which refer to the same and sole object, analyzing types of chain of thoughts, identity and persistence, having in mind the establishment of a new strategic possibility.

For example, taking architecture and urbanism into consideration, which set of enunciation emanates from our practices, using nations and concepts to organize discourse in our area of knowledge? Paraphrasing Foucault, we would ask: where

can we base the identification of the object on which we will develop a discourse? We will certainly face a series of lacunas and entangling of events, games of differences, offsets, substitutions and transformations, formulations of highly different levels and too heterogeneous functions. In reality we are:

"in the presence of concepts that are different in terms of structure and utilization rules, ignoring or excluding each other and unable to enter the unit of a logic architecture.... In the case described above, we would by convection say that this is the "formation of discourse" amidst a series of enunciations, such a dispersion system, in which the objects, the kinds of enunciations, the concepts, the themes, can define a regularity (an order, correlation, positions and functionality, transformations. (Foucault, 1987: 42-43). In this quotation, according to our perception, Focaults's reference to a "new order" must be interpreted as a new order that will have a connotation, concern, nonsense of chaotic disturbance for those who resist to maintain the formation of discourse, archeologically based and opposing to changes.

It is worth reminding that at the same time the discourse for an integral architecture was being established in the Bauhaus scope, taking Gropius' renowned text as an example, there was a conceptual revolution in physics, which would directly or indirectly affect the most diverse disciplinary fields: the indetermination principle (or principle of uncertainty). On one hand, the explanation of the paradigm of modernity in architecture and urbanism, clinging to the principle of pure rationality, the functional aspect af the design, the notion of unity, totality and insertion into a world of capitalism production, industry, namely a set of ideas impregnated with an ideology focusing on a social nature utopia. The CIAM discourses reinforced and expanded these presuppositians for the understanding of the cities, under the protection af the time/space equation originating from the concepts of Euclidean nature (the space) and the ones of classical mechanics (the chronological time).

On the ather hand, the quantum physics and its enunciotion affected the time/space relationship elaborated by modernity; a relationship that had already been highly affected by the Theory of Relativity. However, six decades later, the principle of indetermination obtained little repercussion on the applied social sciences, precisely in the case of architecture and urbanism. It is nat an easy task to encourage the subversion af given notians such as unity, totality, order and mainly the notions inherited from space and time favoring, for example, the ones of pluralism, difference, chaos, heteropopia and technological/ time/space. The author of the mentioned principle, the physicist Werner Heisenberg, after being aware of the natural reactions to these new conceptions observed: "pluralism exerts no fascination on those who prefer to think about fundamental principals. But, after all, this is a reasonable commitment, for on one hand it avoids the difficulties of monism and on the other it enables the introduction of a given type of order". (Heisenberg, 1995: 53).This notion of order is equivalent to the one Foucault mentioned some decades later, or in other words the conditions to which the objects, modality of enunciation, concept and thematic choices are submitted. Rules that express conditions af existence, but also of coexistence, maintenance, modification and also disappearance in a given moment of the formation of discourse, which must be understood as a non linear process and whose series of events present configurations with lacunas and uncertain, indeterminable, unpredictable sequences. Rules and conditions that are established amongst institutions, economic and social processes; ways of behavior, system of standards, techniques, types of classification, ways of characterization. (Foucault, 1987: 51). Basically these relationships define discourse as a "practice". The discourses transmitted, especially in the academic media, should not be confused with a set of signs (signifying elements that indicate contents or representations), but as practices that form notions, concepts and objects they talk about in a systematic way, shaping the development af professions.

The Theory and History of Architecture and Urbanism

The historiography of architecture and urbanism is based on the notions of space and time. The text "Space, Time and Architecture", written by Giedion and published in 1941 is one example of the Theory and History of modern architecture that had a huge repercussion in the farmation of generations of architects. It was written at a time of political and cultural canflicts, and the author dedicated the text:

> *"to thase concerned with the present conditions of our culture and anxiaus to find refuge in the apparent chaos of their contradictory trends. I tried to establish, both with arguments and data, a secret synthesis of our apparent civilization, despite this seemingly confusian and all the rest, an authentic, however, veiled unit (Giedian, 1954: IX).* (Our emphasis).

Before Giedian, Platz (1930), Pevsner(1936) and Behrent (1937) wrote about modern architecture. Later, Zevi (1951) and many other modern architecture and urbanism theorists and historians published essays that extended up to Frampton's text

(1981) the "Critical History of the Modern Architecture" Therefore, half o century of theoretical and historiographical formulations, in which notions and concepts of space, time, shape, function, unit, integrity, continuity, homogeneity, balance, summary, order, organism, evolution, construtivism, among others, related to other notions and concepts, coming from economy and sociology (way of production, social classes etc), structured the new discourses of the architecture of the city.

With the advent of the new cultural era some authors decided to call post-modernity (or contemporaneity according to others), the theoretical and historiographical presuppositions of architecture and urbanism started to change. The emergence of o new set of notions started assuming a hegemonic position in several and diverse disciplinary discourses. Notions and concepts such as: plurality, complexity, difference, heterogeneity, hetereotopia, discontinuity, transformation (instead of evolution), deconstruction, disjunction, rhizome, ond technologic/space/time amongst others.

The arrival of the new technologies and the repercussion thot these technologies had and have on architecture and urbanism contributed highly to the formation of the new conceptual repertoire. The loss of hegemony of the time/space equation in the theory and history of urban and architecture seems to be the most outstanding event in the new discourse level. The technologic/time/space concept (Virilio, 1995:) means the deconstruction of the Euclidean space, a process observed in some manifestations of the own modernity. According to Tafuri, Piranesi's spatial conceptions (18th century), expressing his architectonic propasals through illustrations, where the indefinite opening of spaces, one inside the other as well as their multiplication by several observation paints, result in a kind of literal dismantling of the Euclidean space (Tafuri, 1980: 35). The text "Architettura in nuce" by Zevi stands out amidst the theory of architecture texts that document the crisis of the concept of space applied to the historiography of the city architecture, in a symptomatic way, in an attempt to redefine it. The concept of space was further reinterpreted by Norberg-Schulz, giving it an existential connotation (meaningful form experienced) at the same time trying to supersede both the Euclidean static conception and the dynamics formulated by Einstein. Thus, it was trying to establish a general theory of the architectonic symbolism, based on the "genius loci" notion, a theory of "place" in architecture, which will later find the "hyperspace "anti-notion in Jameson and the one of "no-place" in Augé.

As far as the Theory and History of the Architecture of the city are concerned, two authors, whose trends still persist in the contemporaneous formation of discourse, formuloted contemporaneously different architecture viewpoints: Roberto Venturi and Aldo Rossi. The former, inserted in the hegemonic universe of the American economic and cultural production, did not hesitate to announce that the advertisement, the publicity devices overlaid on the facades of the buildings were more important than architecture itself. (Venturi, 1977:). The latter, inserted in the heritage of the Italian historicism, searched the meaning of permanence as well as of the monuments in the message of the urban events, conceiving the city as architecture, history ond collective memory. Despite the meaningful rupture with " modern architecture movement", each one in own way, one associating architecture with the universe of merchandise, the other renewing the ties with history and memory, both authors could not disassociate themselves from the Euclidean concept of physical space, incorporating to it contradictory and complex elements of existential and symbolic noture.

Similar to what happened to the Quantum Physics, in architecture the starting point of a new enunciation faces a paradox: any present architectonic and urbanistic experience has to be described using the Euclidean geometry repertoire, a language through which the arrangements and results are announced. Referring to the classic physics concepts (especially those of space and time) Heisenberg stated (1959):

> *"We cannot and we do not have the means to replace them for others". Despite that, the application of these concepts suffers limitations imposed by the indeterminatian principle. We must bear in mind the limited scope of applicability of these concepts, we cannot improve them, and thus we cannot try". (Heisenberg, 1995:39).*

Today the question formulated by Heisenberg can be asked in a different way, thanks to the quick development of leading edge technology, which tests the concepts of space and time, up to that hegemonic point in the modernity discourse. The referred loss in the discursive domain does not necessarily mean the inapplicability of the concepts developed throughout the century, but their limitations, namely the limited discourse efficiency that they demonstrate. Concerning these limitations, relating architecture to state-of-the-art technologies, Virilo states a mortal sentence:

> *"Deprived of objective limitations, the architectonic element is drifting, floating on the electronic ether, without spatial dimensions, but inscribed in the sole temporality of an instantaneous diffusion.*

From this point on, the built space participates in an electronic topology where the fitting of the stand point and the weave of the digital image renovate the notion of the urban sector.... from now own urban architecture must relate to the opening of a technological time-space. Owing to the imperceptible material of the catodic tube, the space dimensions became inseparable from its transmission speed " (Virilio, 1995: 9-11) (Our emphasis).

Discourse that means the instontaneousness of ubiquity, a form of atopia of the sole interface. This also means that the notion of physical dimension (distonce, in space, and intervol of time, is being abolished by the velocity of distance). The "primitive magnitude", inferior to all measurement, both of time and place becomes the speed of light. About this, Virilio said

" In reality, day and night ceased to organize life, from the moment that space and time lost their practical importance to give place to a major transparency, to a major cinemometric deepness, in which light all of a sudden acquires the status of raw material". (idem, 45).

We have thus witnessed a morphologic fracture that has been provoking an enormous ambiguity, carefully sustained between space and its shape, image, between time and its technical unrealization; real time (the instantaneity, the permanent present), a notion incorporated into the contemporoneous discourse.

Notions and emerging concepts – For a new formation of discourse

It seems contradictory to state that history is always a construction of the present, a radical and disturbing enunciation for those concerned with the theory and history of architecture, even though this statement must be here understood as the construction of discourse, in a attempt to relate some notions and emerging concepts, having in mind the rereading of the urban architecture production in the period of study; modern architecture and urbanism.

For example, it would seem contradictory to introduce the heterotopia concept (Foucalt) in analytical and critical formulations related to the production of urban architecture during the period being mentioned, taking into account the vital principle of modern formation of discourse: the unity of work of architecture and urbanism. The spatial coexistence of different formal, technological and symbolic expressions would seem strange.

Well, much more contradictory would be to associate, at a conceptual and projective level, manifestations of the urban architecture with the Theory of Fractals, trying to identify in it a set of expressions that resulted from chaotic dynamic processes with visible occurrences of formal, functional and structural self-similarities, of typological repetitions in different contexts and scales. (Mandelbrot, 1983). In the same direction the set of concepts and notions developed by Gille Deleuze, which contributes to the reading of the "movement", is considered of difficult assimilation, for example the different/repetitive, possible/real, virtual/real conceptual pairs, and especially the concept of rhizome elaborated together with Felix Guattari.

Other thinkers elaborated notions and concepts that can contribute to the referred rereading, in a very variable form, as in the case of Jacques Derrida who tried to subdue the classical logical form adopting the deconstruction concept, or the concept of hyperspace elaborated by Frederic Jameson, equivalent to Marc Augé's non-places, fostered by disorientation and non spatial identification of determined typological organizations of urban architecture. We could still refer to the transaesthetic notion elaborated by Baudrillard, taking into account the viral proliferation of elements and architectonic typologies, and consequently, an informational explosion, a trivial process that endows no references to the aesthetic evaluation, apart from any connotation of value. Moreover, the use of the literary image, the labyrinth, recreated by Borges can contribute to the proposed rereading, as well as the concept of technological/space/time mentioned earlier.

During the 1st DOCOMOMO "(Re)-discussing the modern" we presented a brief text "The heterotopia of the modern"(Cardoso, Oliveira, 1997: pp. 214-220), making some considerations on a building in Salvador, which was the pioneer of modern architecture in Bahia/Salvador/Brasil, using as its rereading Foucault's notion of heterotopia.

Considering the limitations imposed by the organizers of the event in terms of the length of the text, we will try to further develop one of the concepts we consider vital for the Theory and History of Urban Architecture in the new formation of discourse. We chose the concept of rhizome developed by Deleuze Guatarri, in one of the most significant texts of the contemporaneous reading: *"A Thousand Plateaus"*. It is an "ontology" of physics, logic, psychology, moral, politics".

According to the mentioned authors:

A rhizome has neither beginning nor end but always a middle (milieu), between things, inter-being, intermezzo. The tree is an affiliation, but the rhizome is the alliance, a sole alliance. The tree imposes the verb "to be" but the cloth of the rhizome

is the conjunction 'and... and.. and...!. This conjunction is strong enough to shake up and uproot the verb to be. It does not designate a correlation that can be located, going from one to another and vice-versa, but a perpendicular direction, a transversal movement that carries one and the other, a stream that has neither beginning nor end, eroding both banks and acquiring speed in the middle" (Deleuze, Guattari, 1996:37).

To the authors, this concept means that multiplicity form the own reality, they do not suppose a unit, do not go into totality or send to a subject. And they add: "the characteristic principles of multiplicity relate to the elements that are singularities: their relationships becomings; the events haecceities (individuation without subject) their spaces-time free spaces and times; the model of realization that is the rhizome (in opposition to the model of the tree); and its composition plan, forming plateaus, (zones of continuous intensity) vectors that cross them and form territories and grades of deterritorialization (idem: 8) (Our emphasis).

With the emergence of this new concept, Foucault's heterotopia concept acquires a new dimension, because at this moment we are facing "all kinds of coexistent formations". Quoting the authors mentioned above, it is possible to announce that in an urban architecture "as in anything else, there are lines of articulation or segmentariety, strata, territories, but also lines of escape, deterritorialization and desestratification movements. According to these lines, the compared velocities of drainage create the relative phenomenon of delay, of viscosity or on the contrary, of precipitation and rupture".

This set of attributians, transferred to urban architecture as lines and velocity of production and expression is a "negotiation". Multiplicity is not easy to be understood and adopted. The binary logic, the biunique relationships and the idea of unity still dominate the ways of thinking inherited from modernity. The attempts to break the linear unit of knowledge, as they send to the cyclic unit of the "everlasting return", or even the admission of multifaceted systems, present no true rupture with dualism, with the complementariety of a subject and an object, of a natural and spiritual reality. The unity, although denied and hindered in the object, makes it triumph, using a new kind of unit. In the subject. In a rhizome, affirm the referred authors: "on the contrary, each trace does not necessarily send to a new linguistic troce; all sorts of semiotic chains are connected to a very diverse way of condifying: biologic chains, policies, economies, bringing into play not only different systems of signs, but also statutes of states of things".

The conclusion reached is that a rhizome would not stop connecting the semiotic choins, the organizations of power, events related to the arts and social fights. In the cities, the repertoire of semiotic chains at different levels (formal, functional and structural) comprise diversified nature occurrences: of linguistics, perspectives, mimics, gestures; cogitative ones. This is equivalent to saying that there is no isolated language, nor universality of language, but a coexistence of dialects, patois, slang, and special languages. This is a very heterogeneous reality (hetereotopic coexistence). There is no matrix of language, but the uptake of power for a hegemanic language inserted into a political multiplicity.

In sum, the concept of rhizome presupposes principles of connection, heterogeneity ad rupture. It cannot be understood by any structural or gerative model (system, organism). It is strange to any idea of the genetic axis or profound structure. It does not present the logic of the tree (of transference and reproduction). The rhizome can be considered an antigeology. "It is a short memory or an antimemory".

Different from Virilio, Delueze and Guattari end up privileging the space instead of time. Everything is coextensive to everything and they conceive ontology as geology: instead of the being, the earth with its physical-chemical, organic, anthropomorphic strata. There is no opposition between man and nature, but symbiosis and alliance. "There is only becoming, no negation or deprivation. Becoming is always positive and amidst the positive ones, some are lost, blocked, dead. It is a very difficult task for a theorist and historian of the city to adopt the concept of rhizome in its integrity, considering that a rhizome has neither a beginning nor end but always a middle, a milieu. It is and inter-being, intermezzo. Therefore, the authors go on commenting that:

> *"The tree imposes the verb "to be", but the cloth of the rhizome is the conjunction 'and... and... and..! This conjunction is strong enough to shake and uproot the verb to be. To do* tabula rasa, *start or restart from zero, searching a new beginning, or a fundament imply on a false conception of the trip and of the movement (methodic, pedagogic, iniciatic, symbolic). Kleist, Lenz or Buchner have another way of traveling and also of moving, from the middle, by the middle, getting in ond out, without beginning or ending". (idem: 37 (Our emphasis).*

The repertoire of notions and concepts applied to the theory and history of urban architecture is very vast. Regarding the modern period, there is a set of key words that form the basis for the formation of discourse. Besides the notions and concepts mentioned earlier (unity, continuity, etc) it is worth

reminding those emerging constantly in discourse: rationalism, form, function, structure, organism (organic architecture), expressionism, construtivism, beside a set of aesthetics/gestalt attributions, balance, order, movement, rhythm, transparency, lightness, pregnancy, amongst others, expressing some indicators of process projects. However little do they tell us about semiotic and cultural chains, etc., connected to very different ways of codification, bringing into play not only different regimes of sign in the domain of heterogeneity and ruptures.

Finally, it is worth emphasizing that the adoption of the concept of rhizome must be understood in the sense of overcoming the binary and dialectic way of thinking. However, it is obvious that this form will not disappear, but it will gradually lose its hegemonic feature in discourse and in the modalities of conception of the world. It then assumes an instrumental role, especially regarding the performance of discourse, in the connections and articulations called by Virilio "the aesthetics of apparition", of perception, opposing to the "aesthetics of disappearance, of the "a-perception", of the "trans-appearance" promoted by the new technologies.

We would like to approach other emerging notions and concepts in the new contemporaneous formation of discourse, however, we will only make brief references to them, leaving their details for another opportunity. However, we acknowledge their pertinence in the new modern architecture discourse. Amongst them, there is the notion of "deconstruction" in architecture, inspired in Jacques Derrida's critical texts to the classical ontology and implemented by the architect Peter Eisenman. The latter developed this notion, giving it a practical/theoretical support, in the sense of reinforcing the negativity of composition classical notions, centrality and continuity thought an incursion in the topological geometry, in an attempt to overcome the Euclidean geometry. Regardless of the theoretical tone of Eisenman's discourse, it is a question of contradictory nihilist positivism, in showing the presence of the absence, or in other words, "the pleasures of the absence". However, in our understanding, the attempt of deconstructing the Euclidean geometry did not take place. It is an ontological radicalization (not being) in the time/space context inherited from tradition, even though this new rational enabled the forging of a contemporaneous trend in architecture called "deconstructivism".

Theorists and disseminators of this new trend recognize that this posture of rupture with the classical paradigms of physical space organization found also repercussion in the pioneer proposals of the "Russian constructivism", considering this modern architecture movement a precursor of the present trend (Papadakis, 1989: 11). It is very true that regarding the Russian constructivism the terminology is still confusing, thus creating difficulties for the scholars to have a bibliographic systematization on the subject. This results from the own notion that oscillates between the ideal of attending and satisfying the needs of a future society without classes (socialism construction), together with the intention of dominating the technology available at that time (of steel, of the engine) and in the strict sense, of Western inspiration, attributed to the revolution in Fine Arts, that took place before the Russian revolution, with objectives totally disassociated from utilitarian content or social commitment (Lodder, 1988: 5).

If we compare Boccioni's "development of a bottle" (1912) and Tatlin's model of "Monument to the Third International" (1920) it is then possible to establish between the two proposals a profound intention of subverting conventional references of the time/space relationship. Still very elementary deconstruction regarding the logical rigor of someone like Einsenman. The analogies established between "The City of El Lissitzky" (1921) and Tschumi's "La Vilette" (19984) or Lissitzky's "Proun SA" (1921) and Hadid's "Trafalgar Square" (1985); Stemberg's and Chernikhov's metal constructions (1921) with "La Vilette", present in the Catherine's Cooke accurate study, induce us to suppose that amidst ideological and Utopian presuppositions and of the socialism construction, there are strong indications of deconstructivism pastures of the usual Euclidean's matrix of physical space (item: 21 to 64). The referred author expands her perception, including in this deconstruction intention the Russian theorists' ideas the about the city: the "de-urbanization" (1929). Cooke dares to make an unusual parallel between the rhythm of the distribution of settlement ranges in the territorial level of the proposals of the Russians de-urbanists and the cinematic sequence of elements from "La Vilette", trying to establish conceptual coexistence, a kind of fractal view of the auto-similarity, in different contexts and scales.

We could go on with the hyperspace notion that will probably also find shelter in the modern architecture discourse. A notion developed by Jameson and that is equivalent to the connotation of "no place". A notion related with the dearth of orientation and identification in the physical space, and also, dependent on the way displacement provokes sensations of discomfort, vertigo, in the presence of configurations and complex architectonic typologies, in the form of a labyrinth, simulations, velocities, etc. The hyperspace is related with schemes of perception that extrapolate the usual perception, developing the sensorial capacity in experiences that no one had thought of. (Jameson, 1989: 74).

Today, the sophisticated airports, theme parts, shopping malls, the lexicon and syntax found in Las Vegos configure hyperspaces, no-places. In o certain way, this disorientation and spatiol non-identification could be found in a set of modern architecture and urbanism proposals, both in the proposols of the Russian constructivists as well as in the Western Hemisphere, in Mario Chiattoni"s drawings in his "Metropolis" (1914) and especially in Saint'Elia's proposals of "La Cittá Nuova" and "Station for Airports and Trains" (1914), in which the futurist set of ideas enables a disturbing spatiality regarding the troditional schemes of perceiving architecture and the city.

I will only mention one more notion that may have a strong repercussion in the theory and historiography of architecture, the notion of technological/space/time". Since Bergson's philosophical speculations, simultaneous to the advent of the Theory of Relativity, the variable time (becoming) has assumed a hegemonic position in discourse regarding space (be). To produce speed became and obsession of modernity, promoting a king of "shrinking of space effect". With the advent of the train, steam, telephone, airplane and the radio speed played and outstanding role in the urbanization processes. The equation "time is money" became the dilemma of the capitalist system throughout its different phoses. The development of modernity technology/mechanics played a premonition role in the search of the instantaneity of the present as a simulation of the future. Both the duration of Bergson's "instant' in philosophy, as well as the futurist movement performance, whose premise of time is speed, can be interpreted as "a frozen" perceptive instant. A metaphor, or in other words, a condensation of time: "the permanent present", a premonition of the technological/space/time. The mechanical speed of modernity, the Bergsonian "instant and its adoption by the futurists, must also be interpreted as a process of erosing reality from the present facts and things, configured in the "real time" advent of the electronic technologies. In the scope of this question, Virilio asks:

According to Gaborian, if time is one more obscurity that erases the material traces one by one, separating them from the reality of facts and things, what can we say about the effect of the time-light reality, af a false proximity of a world without thickness and shade, whose promised unification enchanted McLuhan?"

Before concluding, we find appropriate to establish a relationship between the state of the art of theory and history of architecture and the new electronic technologies that are pragressively abolishing the notions of physical dimension, since we are witnessing a transmutation of the representations. It is possible to confirm that:

"To the emergence of forms and volumes appropriate to persist in the duration of their material support, there is a succession of images whose sole duration is the persistence in the retina... if yesterday the architectonic could be compared to geology, to the tectonic of the natural projections, to the pyramids, to the nea-gathic sinuosity, from now on it can only be compared to the leading edge technologies, whose vertiginous deeds exile us from the horizon of the earth" (Virilio, 1995; 1921).

Conclusions

In this new cultural/technological context that enables inexhaustible informotional files, having in mind the Internet and the other communications means (TV, VIDEO, CD-ROM, etc,), our question is: how can we use the potentialities of the new cyberspace technologies focusing on the professional formation of the architect regarding the disciplines of the theory and history of architecture, and in this specific case, of modern architecture? The presupposition is that as a generator of cyberculture, the Internet together with the vast repertoire of images, can offer conceptual texts pertinent to the new contemporaneous formation of discourse about architecture and its history. In case this does not happen, we will be facing the most rigorous academic repetition. According to Delezue, repetition occurs when we refer to "elements that are really distinct; however they have strictly the same concept. The repetition appears, then, as o difference without concept". (Deleuze, 1988: pp. 19-43).

Thus, the responsibility of the "virtual communities" that deal with the theory and history of architecture go beyand the traditional academia classroom environments, assuming a dimension and a range never thought of before for the formation of the 21st century architect. It is true that this rereading proposal is still incipient, however it seems to promise a stimulating route. There are many difficulties. It is not easy for an architect theorist and historian to absorb and adopt the concept of rhizome in the theory and history of architecture. It is understandable that it is not an established practice in the architecture academia, "to start from the middle, by the middle, entering and leaving, with neither a beginning nor an end" and least of all "to produce the unconscious and based on it a new enunciation, giving credit to Deleuze's motto "make a rhizome and not a root, never plant! Da not sow, pick up. Do not be one or the other, be multiplicities" (Deleuze, Guattari, 1936: 28,36).

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HOUSING SESSION

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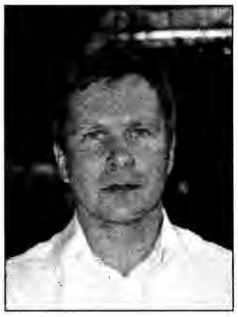

Mart Kalm

Sonia Marques

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Housing Session Report

by the chair, Miles Glendinning

The mass housing question: a European dilemma?

The Final Program for the 2000 lays special stress on the relationships between modern urban form and political meaning and urban social change. These relationships were seen at their most intense in the field of housing. However, that identity was chronologically and geographically restricted, being confined largely to mid 20th-century Europe. That very restrictedness, and the contrast with other parts of the world, is itself significant in the context of contemporary globalisation. Docomomo, with its twin focus on past and future and its global scope, is well placed to bring out these lessons.

Historical definition

In mid 20th-century Europe, housing was the building type which was seen as the key arena for actually realising on a large scale the MoMo's values of mass provision in accordance with rationalist standards. Interwar aspirations and prototypes were followed, after World War II, by huge efforts to implement modern mass housing production on a general basis. Inevitably, because of the highly politicised status of the 'housing question' in Europe, housing production also became bound up with politics. More precisely, it became bound up wih a process of forceful advocacy followed by equally vehement rejection. Within Europe and Russia (European and Asian), alongside the common architectural forms (tower blocks, etc.), there were considerable differences in the way that interrelationship with politics was expressed. In the socialist blac, mass housing was bound up with Soviet power and more extreme Fordist doctrines of mass production, while in Western Europe the social-democratic welfare state framework covered a broad spectrum, from direct state intervention (e.g. Scotland and England) to indirect subsidising of private production (Belgium). In all cases, that phase of forceful production was followed be a political-architectural rejection, which varied from the 1960s/70s reaction agtainst state paternalism in W Europe to the post-1989 collapse of Soviet power in the 'east'. Overall, the trend was away from centralisation to more 'participatory' processes, and away from 'social planning' to more 'market' contexts. Bound up with these was a rich discourse of socio-political controversy, with terms such as 'democracy', 'equality' and 'human' used in radically differing contexts.

Little or none of these violent fluctuations were found in other parts of the world - with the exception of some dense city-states (e.g. Hong Kong) and exclaves of the socialist bloc (e.g. North Korea). Typical is the kind of pattern in Brasil, where (despite some set-piece projects) in gneral social housng had a far lower political profile, and the key setpieces of modern urbanism were of a more 'public' monumental character, including Brasilia as a whole. In such countries, individual private villas and private apartment blocks were more of a focus for Modernism - but inevitably at a lower level of prominence than the huge social projects in Europe. A special position was occupied by the USA, where some relatively large scale public housing programs were undertaken in the big cities, but at a severely restricted level of expense and cultural prestige, given the USA's orientation to market capitalism.

Documentation and preservation issues: facing the future

In the Housing Session at the 2000 Conference, the papers have been arranged to contrast the 'mass-housing European' and 'non-mass-housing, non-European' contexts, both in historical definition and in the implications for documentation and conservation. From the documentation/conservation viewpoint, the issue of social housing poses complex problems. In 'mass housing' countries, the extreme prominence, physical and historical, of the vast arrays of blocks and towers brings great advantages for documentation, both for the prestigious showpieces and for the 'everyday' areas. In both cases there is often copious archive material, ranging fram newspaper and publicity reports to mundane municipal records and statistics. But this same prominence brings disadvantages and problems for preservation. The mass housing areas are often still highly contentious, and often the subjects of 'community' initiatives for invasive alterations or demolitions. In contrast to other Modernist programmes that were nat targeted specifically at poorer people,

sociol housing, by its very nature and 'genuineness' inevitably has some self -stigmatising aspects, unless very carefully managed. In western and northern Europe, that stigmatising process forms part of the continuing wider decay of state welfarism. In the former socialist bloc countries, it is accentuated by the association of mass housing with Soviet oppression. In both cases, the late 1990s' revival of interest and fashionable status of Modernism has largely bypassed postwar mass social housing, which is often portrayed as a monstrous perversion of more poetic interwar Modernist ideals. Arguably, such a view is only possible by a credulous acceptance of the idealistic, emancipatory propaganda of the interwar 'pioneers', whereas in fact the large scale implementation of Modernist mass provision ideals was always inevitably bound to involve compromises and economies. To this writer, it seems clear that the huge and often now decaying social-housing zones of towers and slabs ringing cities across northern Europe, from Paris to Moscow, and even beyond towards Irkutsk and Khabarovsk, are part of the Modern Movement, a central and vital part, albeit a deeply problematic one. The same can be said, with even greater emphasis, of the vast and far more socially 'successful' social-housing programmes of Hongkong and Singapore. Outside Europe, the former USSR and these territories, 'housing' is far less of a distinct problem area for preservation, as the overwhelmingly private ownership of dwellings, whether in apartment blocks or single family houses, merges relatively seamlessly int the building stock as a whole: 'housing' is samething far more fragmented and even individualised.

For future policy-makers in the field of urbanism, this strong contrast between the 'mass-housing' and 'non-mass-housing' parts of the world is highly instructive. It suggests the potential, but also the limits, of any resistance to the levelling-down, homogenising, fragmenting effects of present-day globalisation. The 'non-mass-housing' areas show the possibilities of working within the system of capitalism, making small-scale progress while the general built environment continues to develop anarchically. The 'mass-housing' areas show the possibilities of a heroic attempt to turn the tide, but also the risks of a heroic 'failure'. What may come out of this comprison is the potential of a compromise between the two extremes: namely, interventions by the state which effectively harness and control the private sector, in accordance with large-scale urbanistic and habitation concepts, without attempting to build and manage mass housing itself.

Paola Di Biagi

Fifty Years After the INA-Casa Plan

The quote Plan to Increase Blue-collar Employment. Housing for Workers", better know as the Ina-Casa Plan was approved in Itoly fifty yeors ago. It was the first substantial attempt to build public housing throughout the country and represented ane of the most important phases of post-WWII reconstruction, as well as, more generally, the history of twentieth-century orchitecture and urban planning. The time has now come to reflect on the importance - both nationally and locally - of this patrimony of housing and on the urban space it created in Italian cities.

A brief history is necessary. The Ina-Casa Plan was promoted by the Minister of Labor in 1949, a few years after the war, with the goal of resolving the problem of the blue-collar unemployment. At that time building seemed to be the sector best-suited to salving this problem and to re-launching post-war economic development.

The Plan was financed with a system, then proposed as an expression of national solidarity, that foresaw the participation of the State, employers and, to a small extent, all employees. It proved to be an important experience not only from the point of view of employment. Over a period of fourteen yeors, from 1949 to 1963, it permitted the construction of about 400.000 residences (two million rooms), allowing thousands of families residing in poor conditions (often in basements, caves and hovels) to move into healthy, decent housing. The strategy for locating projects favored their maximum dispersion and new neighborhaods were built in all major Italian cities, along with complexes ar even individual buildings in most of the smaller centers. Access to housing awnership was widely favored, and under pressure by Christian Democratic Party then in power almost 70% of the residences built were conceded an a mortgage basis.

The projects were planned and coordinoted by a lean centralized structure, made up of a political branch, known os the Implementation Committee ond directed by the Torinese engineer Filiberto Guala, and a technical branch or Ina-Casa Management, presided over by Arnaldo Foschini, an outstanding exponent of the "Rome school", and then head of the Foculty of Architecture at the University of Rome. Faschini's role was determinant, both from the point of view of the Plan's operation and its technical contents, and from that of having involved the entire categary of architects on a national level.

It was not only the "best" Italian architects - Mario Ridolfi, Giancarlo De Carlo, Mario De Renzi, Mollino, Ludovico Quaroni, Giuseppe Samonà, Federico Gorio, Gino Valle ... -, who worked for Ina-Casa but almost all the architects of that time. Competitions were held on specific design topics, from which the lists of suitable designers were selected. Over time the architects and engineers who worked on Ina-Casa projects grew to be numbered in the thousands. For some middle-oged architects Ina-Caso commissions were the first opportunities of a certain importance after the war, while for younger professionals they provided first jobs. It con perhaps be affirmed that the Ina-Casa Plan represented not only an opportunity for braadening architects and urban planners' thought but for their employment os well, alongside that af blue-collar workers.

One of the salient aspects of these fourteen years was the construction of housing within morphologically and functionally designed and completed wholes, that is, entire neighborhoods. It was the first, significant, ample and widespread Italian experience of this sort. The Plan was seen, above all by Italian architects and urban planners, as a great opportunity far correcting the aim of past-war reconstruction: no more casual dissemination of projects, incapable of imparting order and design quality to expanding Italian cities, but a policy that called for "grouping" projects together and constructing the city in organic and self-sufficient sections.

Some of the neighborhoods that were built went down in the history of Italian post-war architecture and were articulated araund varied concepts of the city, space and community [i.e.: Tiburtino in Rome by Ridalfi and Quaroni, Falchera in Turin by Astengo, Forte Quezzi in Genoa by Daneri, Cavedone in Bologna by Gorio, Cesate by Albini, Gardella, Barbiana by Belgioioso, Peressutti and Rogers, San Marco in Mestre by Samanà and Piccinato, Valco San Paolo in Rome by De Renzi and Muratori, the Sesto San Giovanni project by De Carlo, Cerignola by Ridolfi, etc). But it is not only the "exemplary examples" that are worthy of note. Whoever visits these neighborhoods today can note the effart that was made to elevate and promote the quality af architectural and urban design, something Ina-Casa in-

deed achieved. In this sense, the entity's architectural office, coordinated until 1952 by Adalberto Libera, kept an important check on projects and published a few brief manuals drafted with the goal of "guiding", instead of codifying, housing and neighborhood design, in the attempt to attribute a shared quality to all projects, while at the same time avoiding excessive homogeneity and repetition in implementing the plan.

With the Ina-Casa plan an attempt was made to delineate an Italian route to modernization capable of bringing innovation and tradition together. The plan actually revealed the aspiration of achieving progress in technique, life styles, and an idea of the city that was capable of upholding Italian and local tradition. The manuals' recommended paying attention to the characteristics of the landscape and the preexisting historical centers, to life styles, the climate, construction materials, artisan products, local building systems, etc., demonstrating the idea of rooting the new projects in a place and tradition that was regional as well as national. (i.e.: Capri, Alberobello, Perugia, Cortina).

In addition to giving attention to local specifics, the manuals also suggested looking toward foreign models and were rich in European references. The examples cited included those of Northern Europe, the garden cities or the neighborhoods of Scandinavian organicism, rather than rationalist neighborhoods. The second manual explained: "Housing has to contribute to forming the urban environment, keeping in mind the spiritual and material needs of real men and not abstract beings: of men that don't love and don't understand indefinite and monotone repetitions of the same type of residence... that don't love checkerboard arrangements, but environments that are quiet and animated at the same time. It was to be the site conditions, the sunlight, the landscape, the vegetation, the preexisting environment, the sense of color that were to suggest the composition of the layout so that inhabitants of the new urban nuclei could have the impression that there was something spontaneous, genuine and inseparably melded with the place in which they rose".

In support of these ideas, an articulation, differentiation and hierarchy of elements were recommended in the urban composition: building types, open spaces, street layouts, centrality, services, etc.. All of these elements were important in expressing the organic and community approach to the city that was widespread in urban theory and design in the first half of the fifties in Italy and that Ina-Casa contributed to exploring.

Despite its importance, no one in the past decades has written either a comprehensive history of this national plan or a set of local case studies. All one finds on the Ina-Casa Plan are a few partial and fragmented texts within other more comprehensive history books on building policies and architecture or urban planning of the second half of the twentieth century, all written from a particular point of view or orientation. In both the literature and in common opinion this plan has often been covered by a thin blanket of criticism, at times much too banal and commonplace. [The neighborhoods of Ina-Casa Plan are dismissed as projects leading to unchecked urban expansion, producers of urban revenue, creators of marginalization for the weaker social classes, expressions of a vernacular idea of living and of architecture. The Plan is seen as overbearing in the face of local administration, an expression of conservative politics, etc..] Nor has attention been given in more recent years to the projects for up-grading, protecting and conserving the neighborhoods built at that time.

An occasion to look back on this was presented last year in Venice, where I organized a series initiatives focused on this Plan, including an exhibition and a conference, as well as a design competition for young architects to rehabilitate three of these neighborhoods. The goal behind my research is not only that reconstructing a period of Italian architectural and urban planning history, bringing it once again to the center of architects, urban planners and scholars' attention, but above all to work on the material results of this plan, to re-view at a distance of some decades the neighborhoods built in various urban spaces, to be able to pinpoint their place and meaning not only in the history of twentieth-century Italian architecture and urban planning, but in the contemporary city and society as well.

Returning more generally to that experience of housing and urban space, to the neighborhoods constructed at that time, as well as how they have fared over time and how we as citizens, scholars, designers find them today, can be justified in terms of *interest* and *dissatisfaction*.

The *interest* is for the "public city", for those neighborhoods built in 1900s by various entities and administrations, particularly after WWII, with the goal of providing housing and services to weaker social classes. Going beyond the specific national and local cases as well as the architectural quality of some of its sections, the public city as a whole is surely of interest. It is interpretable not only as a place of emargination and decay, but also as a "document/monument" of modernity, the result of social policies, and ideas about the city and society that have contributed to creating modern urban planning.

851Ever since the nineteenth century urban planning has pursued goals of common interests and has created theories and tools that have attempted to shift the confines between two processes: that of con-

structing public space and that of building its private equivalent. It has tried to bring individual and collective interests together in a "fair" way, taking the position of those social groups less favored by the market, by institutions and by history. It has elaborated methods and tools to recognize and satisfy primary, essential, "natural" needs, with respect to which it deems it to be "fair", of priority and general interest, that collectivity, and thus the institutions that represent it, respond. Thus, urban planning has proposed itself as a broad "representation" of man's fundamental needs, i.e. inhabitable space; of those needs that concern entire social groups and cannot be met by individuals and the private sphere alone, but necessitate public intervention capable of legitimizing their general character.

These fundamental presuppositions, which organized modern urban planning research and the modern movement, also led to ideas on the city and its space, on neighborhoods and housing, and on domestic and urban space that were pursued and most explicitly expressed in the neighborhoods built for public housing. In Italy as well - and on the example of other countries - this kind of response (even if often quantitatively insufficient) produced new urban areas. The neighborhoods built by Ina-Casa in the 1950s number among these.

Public housing took on additional value in that it became an important material with which to compose the space of the twentieth-century city, with which to give it new form. Entire areas of the city were designed and built in an attempt to oppose the urban outskirts then developing, especially after WWII, through the juxtaposition of dispersed, banal, fragmentary and speculative projects, in the attempt to point out new directions for the city's growth and to propose examples that could be imitated by private intervention. These neighborhoods became the symbol of spatial conquest; of the endowment of uses and primary facilities; and of the coexistence of individual and collective spheres, of built and open space, and of interior and exterior inhabitable space.

The public neighborhoods reveal traces of those research programs that, since the last century, have demonstrated how what truly takes on weight and value in the city, even with respect to housing, is open space. Here the project of modernity that dedicated so much attention to unbuilt space appears more limpid: here open and built space belong reciprocally to one another; each one attributes form, meaning and value to the other. The size and characteristics of the site are able to dictate conditions to the built environment: the building type - the minimum unit of the urban composition -, its measure, form and repetition are conditioned on one hand by the study of the housing module and on the other by the amount and conformation of the unbuilt land.

To the *interest* for the public city, understood as representative of the issues above, we can add the *dissatisfaction* that, through the generically critical judgements superimposed on it in Italy as elsewhere, has come to the point of making it indistinctly synonymous with emargination, urban and social decay. The neighborhoods, especially those constructed from the 1960s on, have become emblematic of the poor quality of the urban outskirts. Even the term outskirts itself is almost always associated with negative meanings and hence the entire city of this century has become indistinctly problematic. The dissatisfaction is for the commonplace; for the criticism one finds deposited on the space of our city, a dust that inhibits new approaches and reinterpretations capable of identifying the best sections of the modern city and not only those that fill the history books of architecture and urban planning.

The problematic nature of the criticism on the public city and the outskirts also derives from the fact that they involve, perhaps unconsciously but certainly deductively, a large part of twentieth-century urban history and those studies aimed at improving inhabitable space which began to be developed in the nineteenth century and were later taken on by modern movement. Yet, by avoiding generic and undifferentiated criticism a more comprehensive balance can be reached, an assessment capable of acknowledging that without this research and these neighborhoods it would have been impossible to satisfy the housing and service demand of millions of Europeans. And without these experiments city space would be much less articulated and rich, and the history of urban planning and architecture much less intense and fertile. All of this contributes to the value of the public neighborhoods built throughout the century, which today, at least in Italy, no longer represent a modality of the city's construction and growth. This, in turn, obliges us to question ourselves not only on the issue of rehabilitation but also that of how to protect this modern patrimony.

Coming back to public neighborhoods and in particular to those of Ina-Casa, it is necessary to recognize the traces of the previously mentioned research not only by measuring dissatisfaction with facile criticism and prejudice, not only by ascertaining the interest for some of these architectural structures and spaces, but at times by observing their decay as well and by recognizing their need for transformation, ascertaining the all-to-frequent inappropriateness of new maintenance projects (often left to single initiatives), or that of rehabilitation projects promoted by public entities insensitive to protection.

The issue of up-grading and protecting these neighborhoods is not a simple one. It is even more problematic with respect to the conservation of modern buildings, given the particular nature of these sections of the city which are not individual structures but urban complexes, the results of articulating different kinds of space and use. They are indeed sections of the contemporary city and society whose inhabitants express a demand for quality that requires renovation projects that can contranst with protective acts, when understood as simple conservation.

1To be able to launch effective projects of upgrading, rehabilitation and protection (listed in a sequential order), it is necessary to ask a few more general questions. In the first place, what does "patrimony" mean for the public city and, therefore, what should be protected? What has been constructed, the buildings, the collective facilities, the materials, the open spaces, etc.? The original design concept, often modified or betrayed in construction; the layout and the design of the neighborhood as a whole, the single principles of settlement, etc.? The idea of community it attempted to express? The forms the neighborhood has taken on through the modifications brought about by its inhabitants' day-to-day? The traces left behind by the people who have lived there and changed it?

What has patrimony become and for whom? For the inhabitants, administrators, urban planners and architects? As a consequence, how should rehabilitation-protection projects and actions be articulated and dosed? What are the most suitable tools? How should we put together tools and cognitive methods for identifying and cataloguing these ambits of protection and how are they to be placed in relation to descriptive processes and projects of intervention?

And then, in the specific Italian case of the neighborhoods produced by the Ina-Casa Plan, are they to be considered as a group of patrimonial subjects for which to define policies for intervention and protection coordinated on a national level? Should the great variety of projects built (of which a census must be taken, how many and where?) be considered as a set of distinct blocks, at the same time belonging to a single unitary constellation, representing the result of the same plan, implemented in a circumscribed period? In this sense what would constitute the minimum common denominator to be identified as the basis for a unitary national policy of protection? Or, on the contrary, should rehabilitation and protection policies be defined locally, given that each neighborhood belongs much more to a local urban and social history than to other more comprehensive histories?

Amidst many doubts and questions, one certainty can be affirmed. In light of all the above, what lends itself most to being redefined and re-signified is the unbuilt public and collective space and the set of relationships it establishes with built space and with the individuals and the social groups living in it. What, from the design phase on, has distinguished these neighborhoods as unitary urban sections and differentiates them from the other neighboring twentieth-century urban expansion is the role of open space in the design of the whole. From the very idea of residential unit itself, this space carried out - in design phase and "on the ground" - a role in structuring the entire area. It is declined here in a broader concept of "inhabitable space" in which the solid and the void, the interior and the exterior, the domestic and the urban are interconnected. In the passage from planning to implementation there is often a schism between the construction of the buildings and that of its open space and, over time, between the maintenance of the former and the care for the latter. These separations have had a negative impact on the quality on the unbuilt environment, which has at times remained vague, disqualified, ruled by cars and expropriated by the inhabitants.

Redefining this space - perhaps the only element that can establish new relationships between urban areas and people - renders particularly important public intervention in the heterogeneous landscape of the contemporary city, where the absence of meaningful relationships between things estranges social subjects and their activities. After many years of introducing new ideas about living and physical representation in urban space, public intervention has now to confront the importance of this space's "meoning".

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Torino, Falchera Area, 1950-52, G. Astengo (u), S. Molli Boffa, M. Passanti (c), N. Renacco, A. Rizzotti; E.G. Sottsass (c), G. Becker, G. Fasana, N. Grassi, M. Oreglia, P. Perona, A. Romano.

Fig. A1 – General Plan

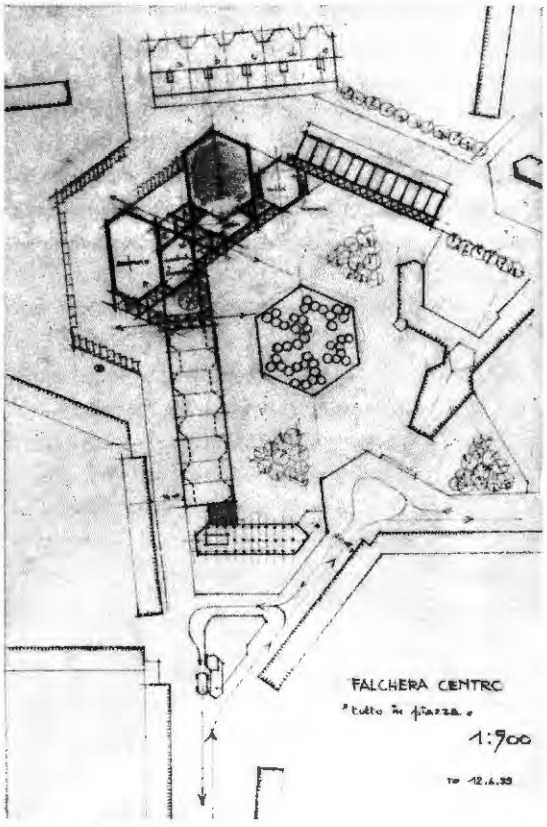

Fig. A3 – Central Square

Fig. A2 – Aerial View

Fig. A4 – Central Square

Fig. A5 – Historical Photos

Fig. A6 – Historical Photos

Fig. A7 – Historicol Photos

Fig. A8 – Historical Photos

B Genova
Genova, Forte Quezzi Area, 1956-1957, L.C. Daneri (c), L. Grossi Bianchi, V. Oddi, F. Surace, G. Zappa; E. Fuselli (c), R. De Maestri, G. Fortunoto, G. Gaggero, M. Innocenti; C. Andreoni (c), G. Coioli, D. Corte, O. Matelli, M. Tavoletti, P. Tessiore; R. Morozzo Della Rocca (c), M. Bracciolini, G. Cotroneo, M. Dasso, D. Datto, A. Spina; M. Poteri (c), V. Ghiglione, E. Loi, M. Loi, M. Testoni; G.F. Pulitzer (c), E. Arnaldi, A. Guerello, G. Pazzi; A. Sibilla (c), E. Magnani, A. Sibilla, V. Esposti

1
2-3-4-5 Historical Photos
6-7 Drafts of the Church

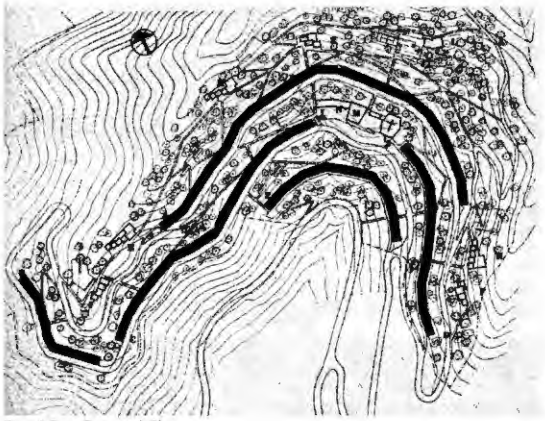
Fig. 1B – General Plan


Fig. 2B – Historical Photos


Fig. 3B – Historical Photos


Fig. 4B – Historical Photos

Fig. 5B – Historical Photos

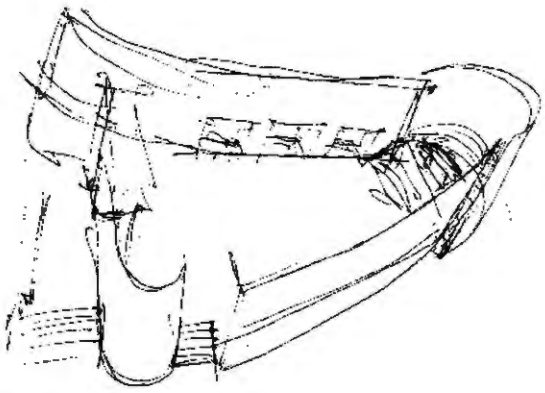

Fig. 6B – Drafts of the Church

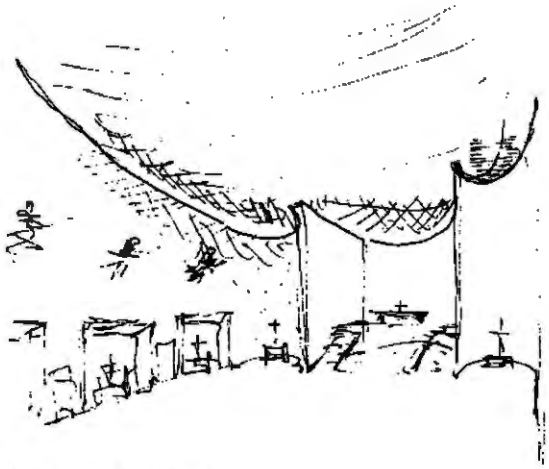

Fig. 7B – Drafts of the Church

KEYWORDS

Italy, Public housing, habitable space, urban heritoge, renovation/conservation

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Mart Kalm

Modern city as tool for russification: Estonian experience

Abstract

Ideology

The idea of Modern City to provide population with decent accommodation has been democratic and egalitarian and therefore high-minded. Although these goals have been achieved it doesn_t mean the pleasont neighbourhood is created. The architectural rigour and bleakness of environment in planned cities has been widely discussed, but in special cases this negative impact is doubled by state policy of accommodation. History: Starting from Hrushtshov thaw in mid-1950s-modernist cities consisting of only prefabricated Housing were largely built in all Eastern-bloc countries. This step was welcomed in Estonia, a country occupied and heavily bombed by the USSR during the WWII and still suffering under serious shortage of housing. The modern cities were rather imperfect because of the lack of infrastructure and low construction quality. Economic mechanism: In 1960-70s lots of industries were found in Estonia by Soviet officials. As there was not enough labour the workers were imported from the rest of the USSR. There didn_t exist free housing market in the USSR and the flats had to be pravided by emplayers. These new industries attracted immigrants thanks to the new flats they offered. National political result: Russian-speaking immigrants inhabited new modern cities and the local Estonians had ta remain in old pre-Soviet time housing with rather modest conveniences. Estonians felt Soviet State considers them as second-rate people and Russian-speaking immigrants as privileged. Protection and conservation: Although architectural historians see in Soviet period modern cities some architectural and urban values the pu-blic opinion denies these. For ordinary people the 1960-80s housing estates symbolise russification period and they are ogoinst using public money for the revitalisation of these areas. These modern ci-ties are in the condition of decay and ghettos are quickly forming. Conclusion: Twenty years ago Estonians dreamed about possibility to live in new modern city but nowadays they prefer to revitalise old pre-Soviet time housing or to build new estates. Thank to the national-political connotations the idea of modern city was double discredited in Estonia.

KEYWORDS

Housing, russification, calonisation, immigration, culture conflicts

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Philippe Panerai

The heritage of Grands Ensembles

KEYWORDS
France, Grands Ensembles

Philippe Panerai *was born in the Atlantic seashore of France in 1940. As a professor; since 1969, he conduced many rechearches and wrote books linked by urban problematics, such as "Formes urbaines, de l'îlot à la barre". As an urbanist, he is nowadays mainly working on the re-creation of urban fabrics in the "grands ensembles" in Grenoble and Sarcelles, on the constitution of the peripheric territory of cities, on the construction of public spaces in town.*

Sonia Marques,
Edja Trigueiro

À la recherche de la maison moderniste perdue

Introduction

The modernist house from a paradigmatic view to Brazilian adaptations

As is widely known, housing was at the core of thoughts and debates involving the pioneers of the Modern Movement in Europe, at the CIAMs, and particularly in the achievements of German architects involved in large scale housing programmes based on *machine à habiter* or *existenz minimum* concepts. In the US, whereas housing experts (i.e. Bauer and Mumford) emphasised the European movement original principles as tied to social purposes, the Modern Movement was being presented (Hitchcock & Johnson, MoMA 1932 exhibition) as a new style – *the International Style*. The divorce thus produced between architecture – a matter of style – and housing – a social issue – has, as is here believed, contributed to restrict the fuller modernist experience to a few European countries or to the experiments of *avant-guarde* groups scattered around the world. Despite national differences and the pervasiveness of traditional exterior models it can be said that modernity brought about dramatic changes within the home. An instance of that is the alteration in the articulation of the social and the service spheres in Europe as well as in North America, by pulling kitchens to the focus of the domestic scene. Early symptoms of this process in British houses in the aftermath of World War I have been demonstrated in an earlier study (Trigueiro, 1997). It is argued here that in Brazil modernity did not go beyond the masters' social sphere (Marques, 1994).

Modernism *à brasileira*

In Brazil the ubiquitous acceptance of the modernist formal repertoire not only overwhelms the scenery even of old town cores but often mutilate individual built shells in their former colonial/eclectic integrity, with added modernist bits and pieces in a sad 'frankensteinian' fashion. This *look of modernity* – with its geometrical volume composition, stripped surfaces, horizontal windows and fake flat roofs – goes little beyond skin surface, its true face being unveiled in the realm of domesticity which constitutes, in some aspects, quite the reverse of what had been prescribed in the early modernist discourse of the twenties. Although the emergence of certain spatial articulations identified in this study points towards changing ways of life, the recurrence of patterns found in pre-modernist homes suggests that space is organised to reproduce old types of interface among the communities of home users – masters, visitors and the others.

Research 1: of masters, visitors and the others

Data and analytical tools

Twelve house plans randomly selected from a database being organised by UFRN architectural students make up the modernist sample. These cases – built from the 50's to the 70's, when the modernist formal repertoire disseminated throughout Brazil – are analysed and results compared to pre-modernist examples investigated in previous studies. Observations of key formal features and layout organisation are fine tuned by the investigation of their spatial structure through the application of syntactic analysis.

The way essential functions relate to one another and to all others in a building lie behind the notion of *genotype* defined as the "... *abstract rules underlying spatial forms.*" (Hillier & Hanson,1984:12) These rules can be retrieved from a plan by a set of analytical techniques of which graph representation (*access graphs*) and numerical measurements (*integration values*) are used in this study. Access graphs are matrixes of interconnected spaces in a building with each space represented by a dot and their links by lines, as shown in figure 1b. Computer applications calculate each matrix so to translate topological aspects into numerical values. Integration values – the measurement to be referred here – express how each space articulates with all others in the complex. Lower to higher values make up a scale from more integration to more segregation.

When spaces that accommodate certain functions relate to the complex in a consistent pattern or numerical order across a sample there are reasons to believe that the graphic/numerical expression of a socio-cultural pattern – a genotype – has been revealed (Hanson, 1992). The identification of genotypical patterns of integration among the main dif-

ferent domestic functions may be viewed as the conceptual foundations in this attempt to decipher the soul of the local modernist home.

Of shapes, layouts, orientation and social interface

Three types of layout associate with certain built shells that, albeit not exhausting the repertoire available at each period, represent colonial, eclectic and modernist dwellings.

The front room, alcoves-plus-corridors, back room-plus-kitchen layout of one-volume, side-gabled terraced houses (figure 1) has conquered archetypal status in historiography as they dominated the built environment up to the last quarter of the nineteenth century and still function as landmarks for older town cores. The front-core-back layout, associates with day-night-day activities and with inhabitants-visitors (mainly male), inhabitants-inhabitants, and inhabitants-servants (mainly female) modes of interface.

Despite their diverse built shells the late nineteenth/early twentieth century, multi-volume, highly-ornamented, detached eclectic houses (from French neoclassical to Brazilian neocolonial through Alpine chalets and Victorian villas – fig. 2) present a recurrent layout of two distinct sequences of cells (most intercommunicating), one of day rooms, the other of bedrooms along a central axis. Terrace/porch, visitors room, dining room, servery/daily meals (copa), kitchen and service lobby form the day room sequence with the main dining room dominating the layout in the centre; outbuildings for servants are the norm. They encapsulate two modes of articulation: (1) one that can be referred to as of *lateralité* (as found for Normandy farm houses by Hanson et al, 1999), with day and night activities developing in spaces located at different sides along a central axis; (2) another of the front-back type, with the front day rooms accommodating the interface of inhabitants-visitors (adult family members of either sex), and the back day rooms accommodating that of inhabitants-servants.

More or less faithful to the international style formal repertoire (fig. 3) the layouts of detached, semi-detached and even terraced modernist houses (as these manifested in all settlement types), characterise mainly by being subdivided in sectors – social, service and private – which have inspired the notion of 'the sector's paradigm' (Amorim, 1999). These are orientated primarily to meet environmental requirements with the 'noble' sectors – social and private – being privileged (figures 4, 5, 6 and 7). The private sector of bedrooms no longer intercommunicate, being mostly dead end cells, whereas servants quarters albeit usually built under the same roof, do not link to ony other part of the building except through the kitchen. Social cells still bridge the outside and the other sectors, thus keeping their traditional double roles of functional and transitional spaces, but the connections to the bedroom quarters are often permeated by halls and passages.

Of configuration and interfaces: from the repertoire

Elsewhere (Trigueiro,1994) the space configuration of fifty colonial and eclectic houses were syntactically analysed. Three predominant configuration aspects emerged as highly suggestive of genotypical patterns in both sets: (1) the visitors' room and the master bedroom are strategically positioned in configurational terms by locating closer to the main entrance, benefiting from alternative accesses and being highly integrated (lying *shallow* and on a ring in the access graph rooted from the street, and in the integrating side of the scale of integration values); (2) all service-related spaces, including the kitchen, are very segregated, do not lie on rings and are only accessible by means of various other spaces; and (3) the street is very segregated but the addition of alternative entrances plays a decisive role in altering patterns in some colonial and most eclectic houses.

By comparing graphs rooted from the street through the front door with graphs reworked to account for alternative entrances (fig.1), distinct patterns appear to encode distinct types of interface: in some cases the integration hierarchy was altered and differences in integration reduced, in others nothing changed. The flexible version associates with suburban colonial houses and predominates among eclectic houses whose most integrated room is usually the dining room whereas the version in which the structure remained unaltered associates with inner town colonial dwellings whose most integrated space is the male-dominated front room. Such results reinforce the notion of the urban colonial *sobrado* of the mid-nineteenth century as the highest expression of Brazilian patriarchal society (Freyre, 1981) and the departure from that model in the early decades of the twentieth century.

The pervasiveness with which the master bedroom and the visitors' room retain their integrating and controlling properties concerning all other spaces are evidences of continuity in the interfaces between the master – and later also the mistress – and the rest of the household. On the other hand the role played by dining rooms – the female-orientated, out-of-sight back room of colonial houses and the highly integrating central focus of social display in the 20's – highlights the fact that be it the visitors' or the dining room, the focus of integration in colonial as well as eclectic houses is the social sphere,

closed to women in the farmer orchestrated by women in the latter.

Of configuration and interfaces in modernist houses

Of the twelve modernist plans investigated most (8 cases) display the sequence visitors' room, dining room, kitchen with the house entered through the front door, as found in pre-modernist houses; either the visitors's or the dining room is the most integrated functional space (five cases each) as happened to pre-modernist houses; the street or the maids' room is the most segregated space (seven and five cases, respectively), as found for previous homes. (Figs. 4, 5, 6 and 7; tables 1 and 2)

On the other hand, the addition of alternative entrances does not alter the hierarchy of integration in five cases, generates only minor shiftings in the integration scale in five others and, surprisingly, sends the kitchen down the integration scale in two.

Some changes in the configuration of modernist homes as relates their pre-modernist counterparts point toward the reverse of what had been expected to have happened had Brazilian homes evolved towards informality and easy of movement as often prescribed in the modernist discourse of the twenties. The new requirements for privacy severed the 'private sector' from the rest of the house and turned formerly communicating bedrooms into dead end cells, often self-contained with their en suite bathrooms. However, this apparently reverse outcome reveals the contours of our own modernity as it signals the slackening of parental authority and a tendency for selective, occasional episodes of co-presence among dwellers which recent syntactic analysis (Holanda, 1999) seems to confirm. The apparent contradiction between increasing demands for privacy and enlarged social sectors - with added terraces, 'varandas' and 'pergolas' - seems to associate more with the need for status display than with expectations of a richer social life at a time in which a growing middle class was rapidly turning urban. However, this issue has not been satisfactorily investigated here and demands further studies.

On the other hand the segregating character of service-related spaces inherited from colonial, through eclectic, to modernist houses - in which kitchens alter little and maids' rooms remain as segregated as slaves' quarters of colonial times - is in itself a measure of the limits of our modernity.

Research II: current dwelling modes: any news?

Data and method of investigation

In the research 'Novas Formas de Morar', currently in progress, selection follows the identification of dwellers' status. Conditions associated with the post-modernity, as extensively referred in the literature, are privileged: individual dwellers, such as single parent families, home-based working family heads, restructured families, etc. Observations and open surveys help to reveal how the house is being used, and identify conspicuous or inconspicuous conversions that may indicate transformations regarding previous arrangements.

Reorganising public and private within the home: keeping the 'hard core'

Some aspects of present day housing which manifest visibly in the built environment and seem to associate with new domestic requirements suggest a reenactment of modernist proposals (i.e. the shrinking of service-related space) whereas others point towards a setback from them (enclosed semi-private communal areas strongly detached from the public space), and others, still, signal towards the emergence of novel themes (the home-based office).

In the twelve cases observed so far, changes in the previous design features are almost non-existent. They do happen, however, in significant degrees in the ways space is used and this fact points towards a loss of significance of the social sphere – represented by the duet living and dining room – even when they retain their traditional arrangement in the home. Nobody seems to entertain in one's houses or flats. Reception spaces have been transferred to semi-private mezzanines and reception areas of apartment buildings or to 'reception houses' that multiply in most towns. Dining rooms have been substituted by the public premises of self-service canteens and restaurants in or around work places, where most people have lunch and often dinner. Kept as sacred icons, dining rooms are seldom used as gathering places for household members and/or visitors at one same time. Bedrooms in the so-called private sector tend to become whole houses in themselves with en suite bathrooms and a series of facilities such as TV/video/sound systems, fridges, computers and the like. The inhabitant/vehicle ratio increases. Service-related spaces, however, remain as a segregated 'hard core' in the fashion of the great majority of pre-modernist and modernist houses. The argument is illustrated by three instances of recently built apartment flats in Natal.

a) In middle-class 'Plano Cem' apartment complexes (Loureiro & Marques,1999), kitchens and service areas amalgamate, and there is no maid's room, but a common bathroom and toilet facilities on the ground floor. The designer assumed that maids/nannies would be occasional workers. Actually, adaptations such as a hammock hanging in the kitchen as a sleeping arrangement for the ubiquitous maid are being introduced. On the opposite side, large common leisure areas are very success-

ful for barbecues and sport and as substitutes for dining and living rooms as pointed above.

b) In contemporary upper class dwellings three main differences from modern Brazilian standards appear on new designs or conversions: (1) the proliferation of en suite bathrooms; (2) of garages and (3) of reception halls inside communal areas.

c) Finally, a recent conversion of an upper class apartment into a 'potiguar' loft (Teles, 1999), revealed the presence of a social sector fashioned after New Yorker lofts (Riley, op.cit) alongside that of the same good old, immutable 'hard core' that signals the continuity of social relations based on low paid working class.

Conclusion

The international resonance conquered by the Brazilian modern architecture wos essentially indebted to public buildings and formal aspects. Plastic dare may also be found in housing alongside outdated building technologies, not examined in this study, and especially alongside evidences of o contradictory face of aur modernity, or of our missed-out modernity, that do not seem resolved in the present day. Thus, despite similarities between same social enclaves in Brazil and the post-industrial western world in terms of '... current demagraphic patterns, the shifting boundary between private and public realms, and new concepts of work and leisure ...', as stoted recently in the MoMA exhibition 'The Un-private House' (Riley, 1999), novel domestic space designs have not os yet emerged and our *recherche pour une modernité perdue* seems reenocted.

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KEYWORDS

Modernist house, Change and continuity, Space configuration

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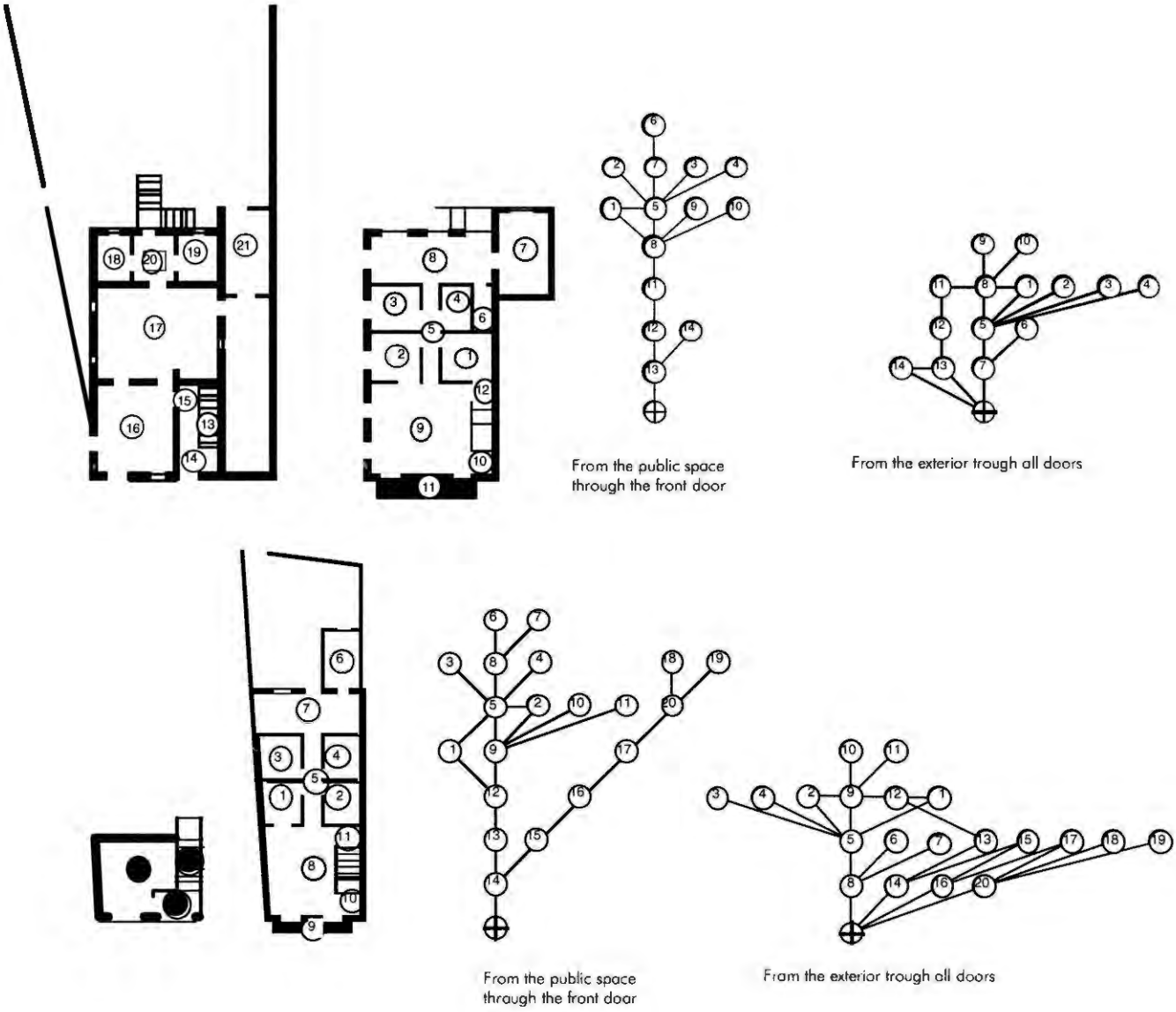
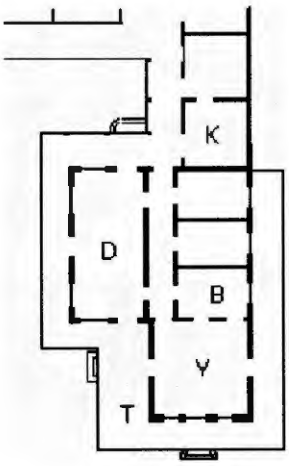
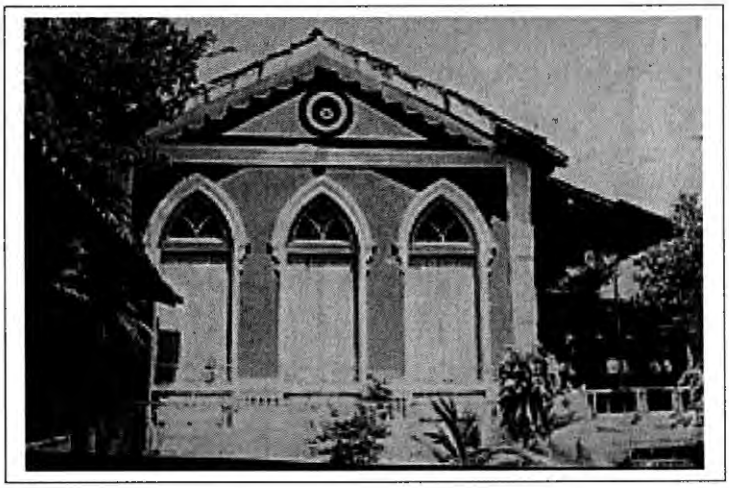
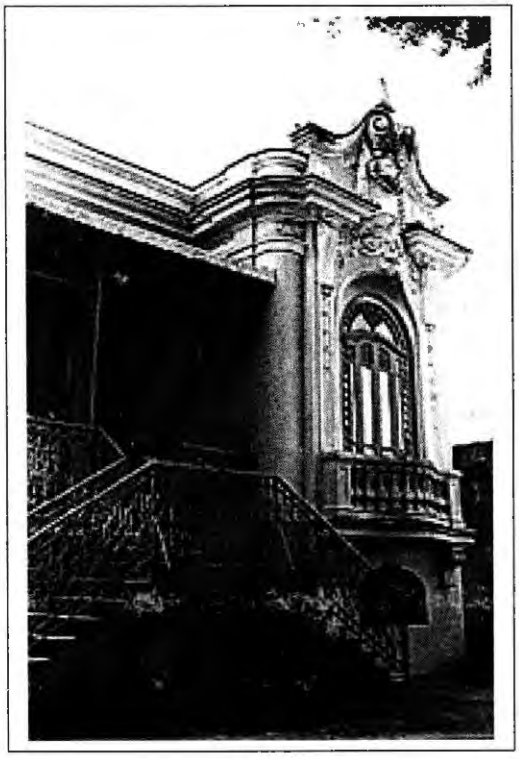


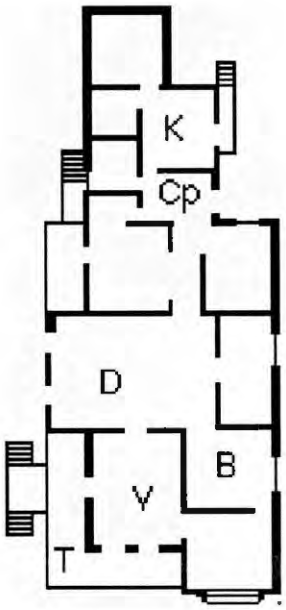
Source: Trigueiro, E. B. F. (1994). "Change (and continuity) in domestic space design". Doctoral thesis, UCL.

Fig. 1 – Access graphs of colonial sobrados





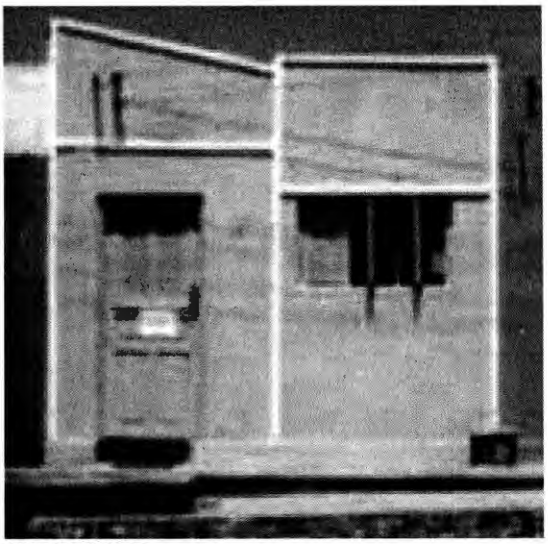




D – Dining room
V – Visitor´s room
T – social Terrace
K – Kitchen
B – Master bed
Cp – "Capa"

Source: Trigueiro, E. B. F. (1994), " Change (and continuity) in domestic space design", Doctoral Thesis, UCL

Fig. 2 – Ecletic houses



RUA DO MOTOR
Source: Araújo, B. C. D. et al. (1999) "Estudo morfológico de exemplares modernistas na Praia do Meio", Coursework, UFRN.

RUA ADAUTO CÂMARA
Source: Macedo, L. (1999). "Estudo morfológico de uma edificação modernista", Coursework, UFRN.

RUA HENRY KOSTER
Source: Galvão, V. C. et al. (2000)
"Levantamento histórico das edificações", Coursework, UFRN.

RUA OLIVEIRA GALVÃO (2)
Source: Dantas, U. C. (2000)
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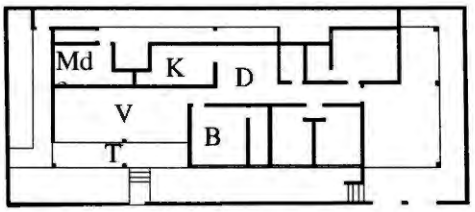
RUA JUNDIAÍ
Source: Rodrigues, A. (1999)
"Platibanda azul", Coursework, UFRN

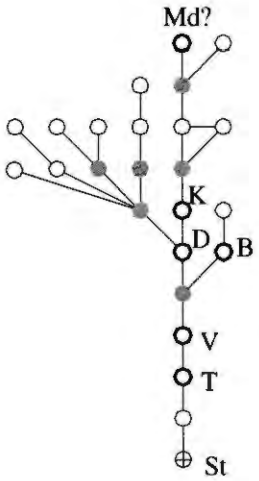
RUA PINTO MARTINS
Source: Guedes, A. A. et al. (1999)
"Estudo morfológico", Coursework, UFRN.

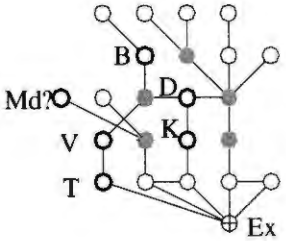
AV. SILVIO PEDROSA
Source: Bulhões, T. et al. (1999) "Estudo morfológico de uma edificação modernista em Natal", Coursework, UFRN.

Fig. 3 – Same modernist houses investigated

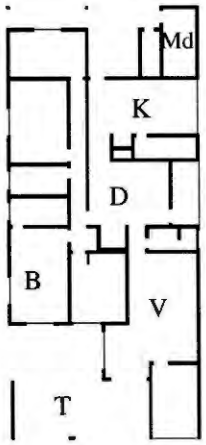
RUA JUNDIAÍ
Source: Rodrigues, A. (1999)
'Platibando azul", Coursework, UFRN

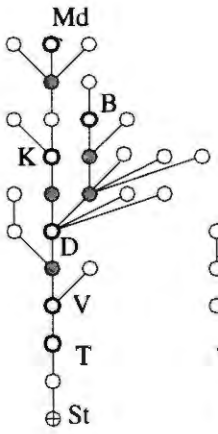


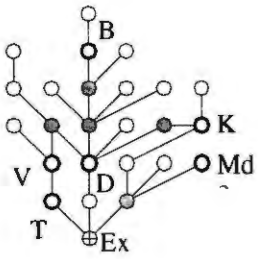


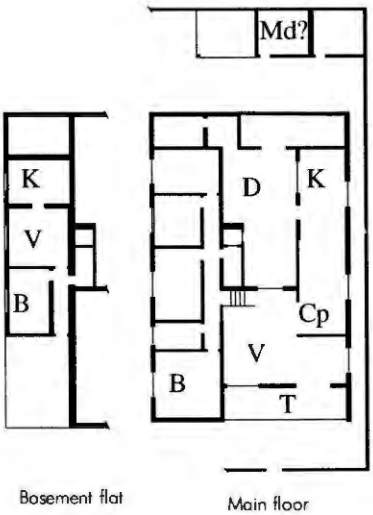


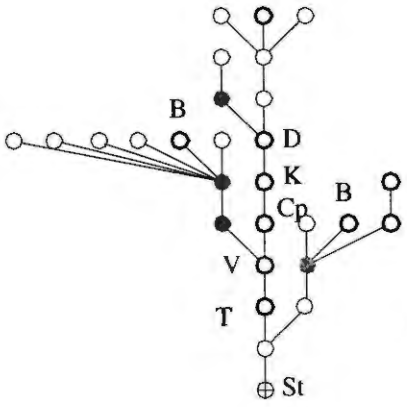
RUA 25 DE DEZEMBRO
Source: MELO, L. F. G. °; et al. (1999). "Estudo de edificações modernistas na Praia do Meio", Coursework, UFRN.

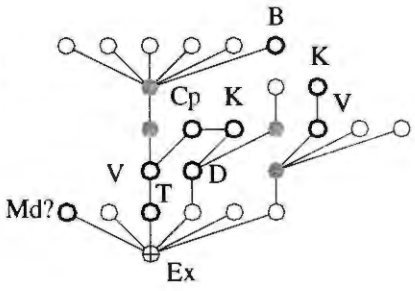










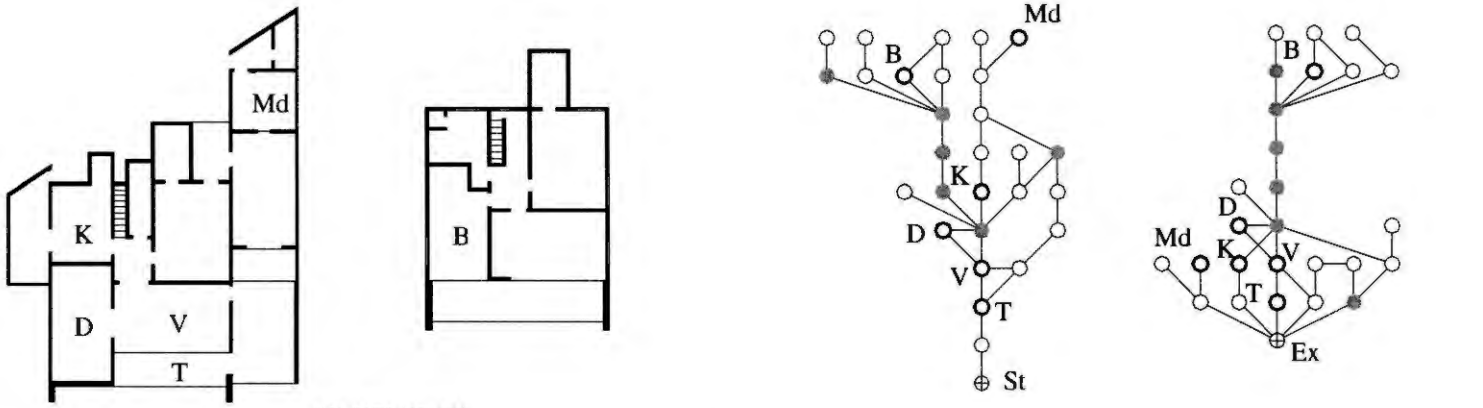


RUA ADALTO CÂMARA
Source: Macedo, L (1999). "Estudo morfológico e levantamento de uma edificação modernista, Coursework, UFRN

transition space

V – Visitors' room
T – social Terrace
D – Dining room
Cp – Copa
K – Kitchen
B – master Bedroom
Md – Maid's bedroom
Ex – Exterior
St – Street

Fig. 4 – Built shells, floor plans and access graphs



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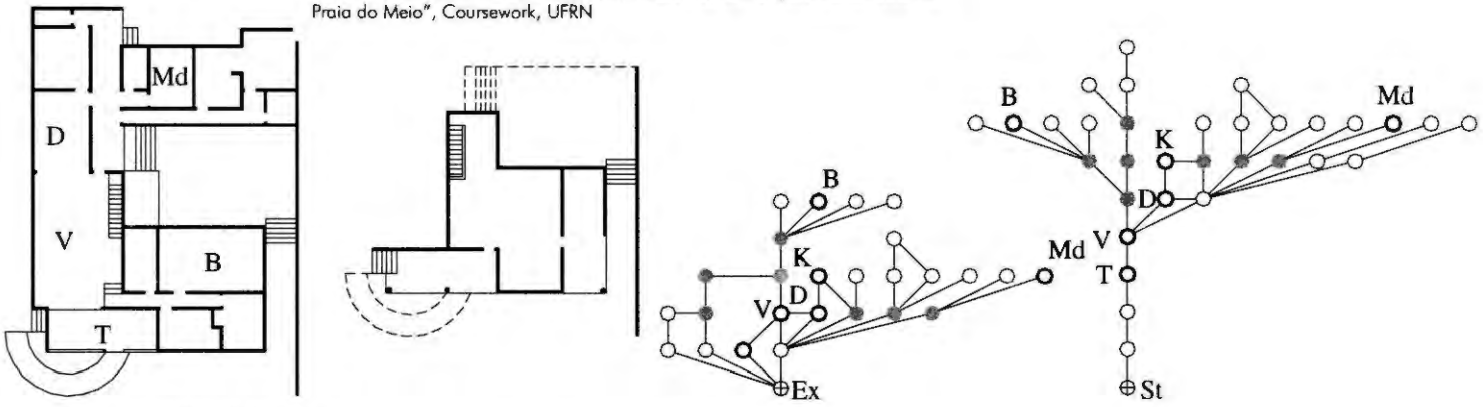

RUA JOAQUIM MANOEL
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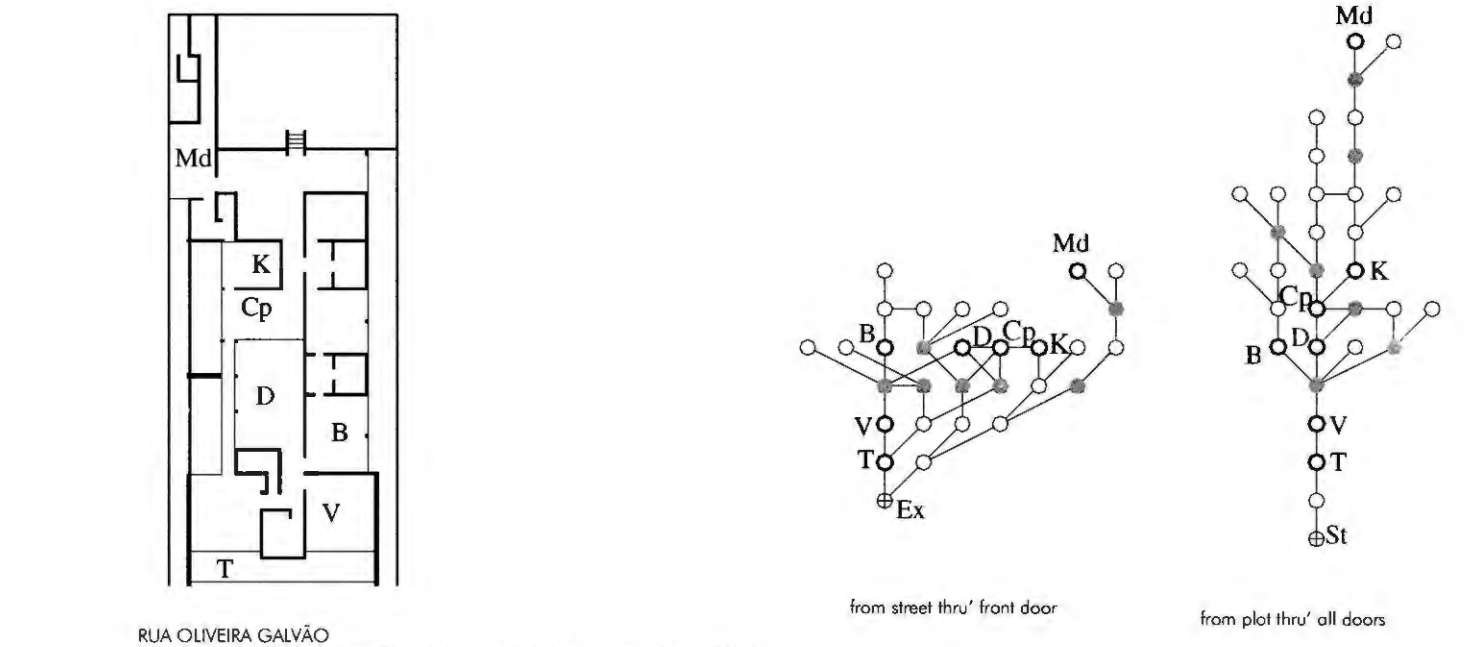


from street thru' front door

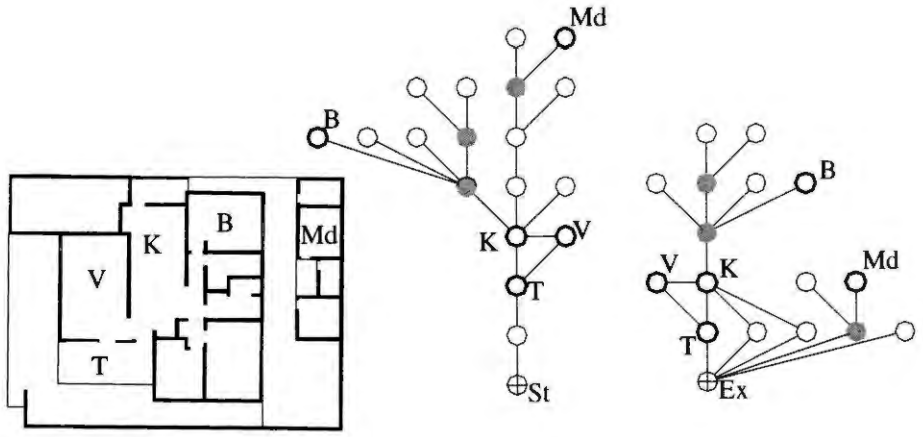
from plot thru' all doors

RUA OLIVEIRA GALVÃO
Source: Dantas, U. C. (1999). "Arquitetura modernista: um exemplor em Natal. Coursework, UFRN

Key to room functions

● transition space	V – Visitors' room	Cp – Copa	Md – Maid's bedroom
	T – Social Terrace	K – Kitchen	Ex – Exterior
	D – Dining room	B – master Bedroom	St – Street

Fig. 5 – Built shells, floor plans and access graphs



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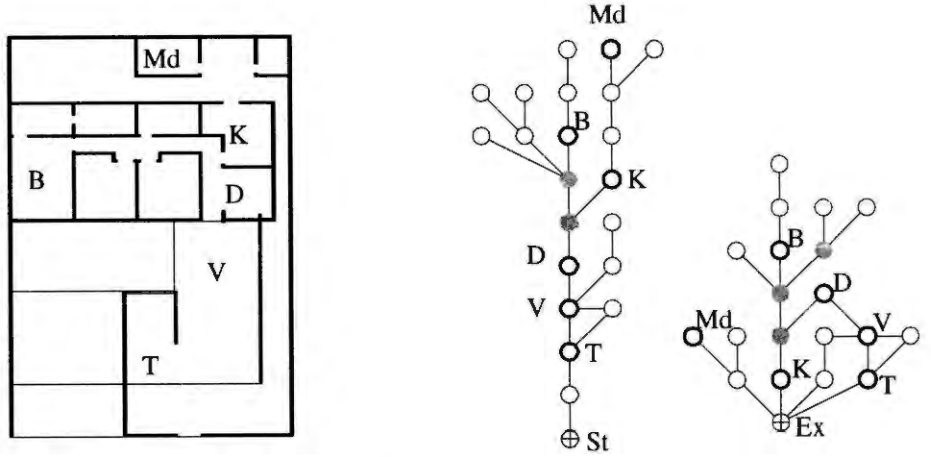

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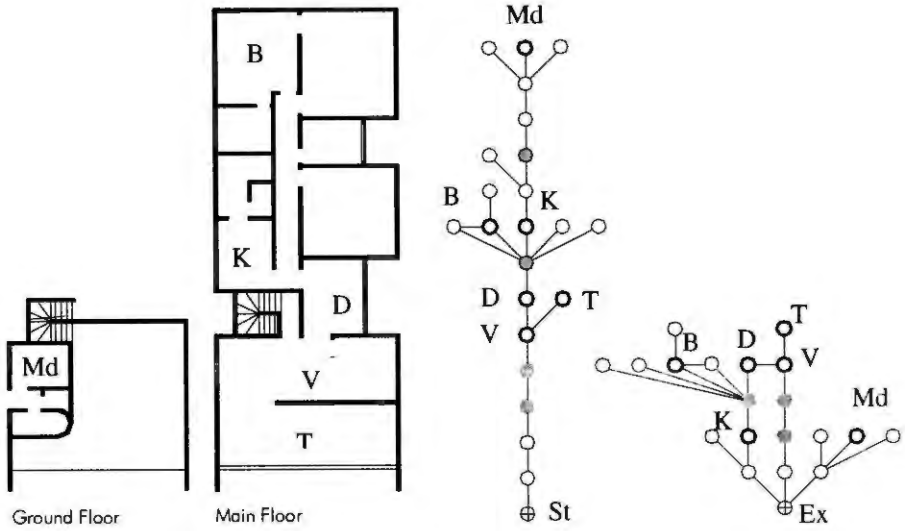


RUA PINTO MARTINS
Source: Guedes, A.A. et al.(1999)
'Estudo morfológico", Coursework, UFRN

from street thru' front door

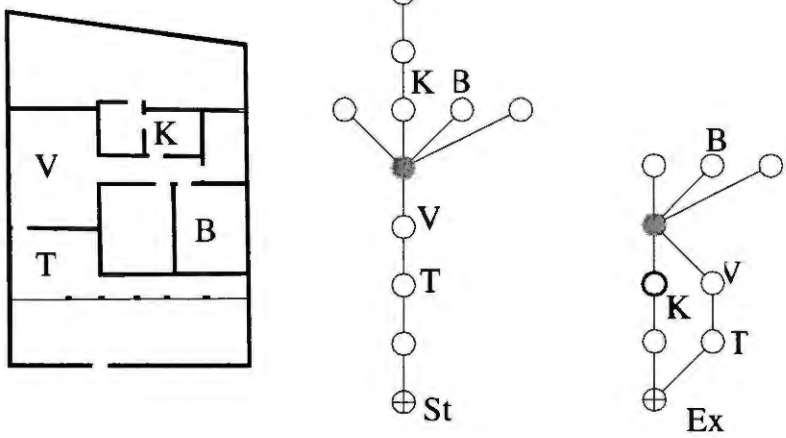
from plat thru' all doors

Key to room functions

● transition space	V – Visitors' room	Cp – Copa	Md – Maid's bedroom
	T – social Terrace	K – Kitchen	Ex – Exterior
	D – Dining room	B – master Bedroom	St – Street

Fig. 6 – Built shells, floor plans and access graphs

RUA SILVA JARDIM
Source: Pinheiro, M.H.(1999)
'Vila Ferroviário – Rocos', Coursework, UFRN



RUA DO MOTOR
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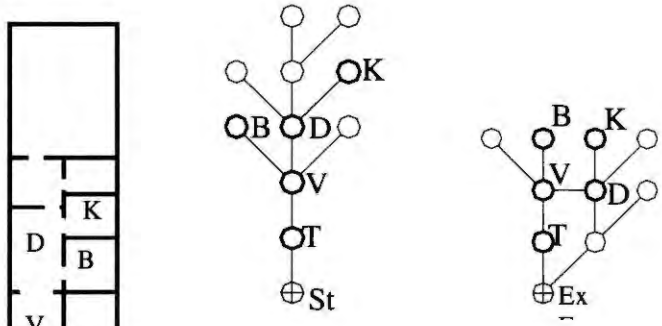

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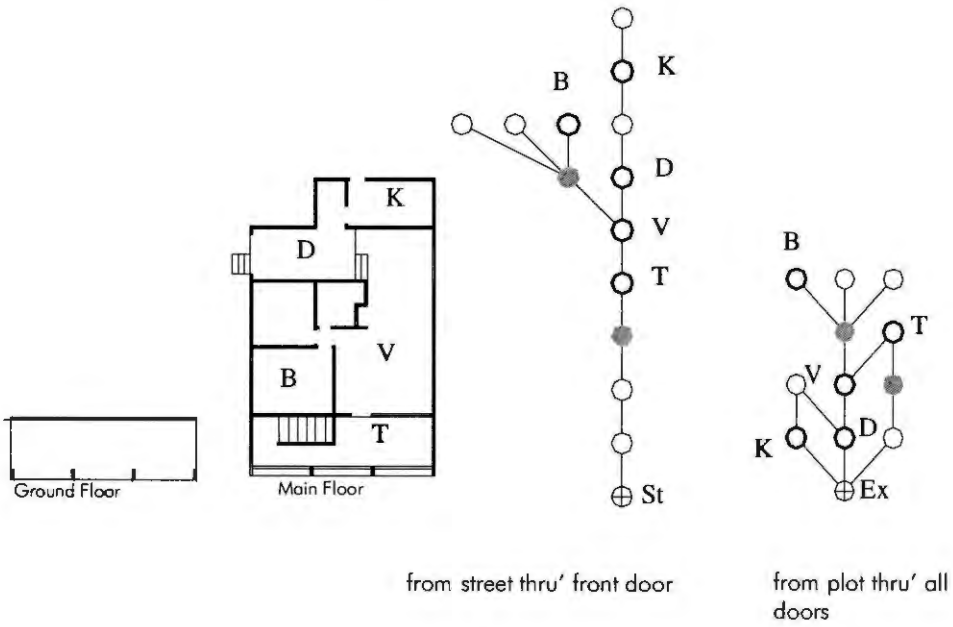

Key to room functions

● transition space	V – Visitors' room	Cp – Copa	Md – Maid's bedroom
	T – social Terrace	K – Kitchen	Ex – Exterior
	D – Dining room	B – master Bedroom	St – Street

Fig. 7 – Built shells, floor plans and access graphs

Paul Meurs

Creating historic modern cities, by learning from modern historic cities*

'O Novo Mundo já não é este lado do Atlântico, nem tampouco o outro lado do Pacífico. O Novo Mundo não está à esquerda nem à direita, mas em cima de nós; precisamos elevar o espírito para alcançá-lo, pois já não é uma questão de espaço, porém de tempo, de evolução e de maturidade. O Novo Mundo é agora a Nova Era, e cabe à inteligência retomar o seu comando.'
Lúcia Costa, Módulo (1987) 93, 18.

'The New World is no longer restricted to this side of the Atlantic Ocean, or the other side of the Pacific. The New World does not lay to our left nor to our right, but can be found above us, we should lift our mind to reach it, as it is no longer a matter of space, but rather of time, of evolution and maturity. The New World is now the New Age, and it is up to the intellect to recover its command.'
Lúcio Costa, Módulo (1987) 93, 18.

The New Age has arrived in the Netherlands. Globalization, mobility, individualization and virtual reality play an important role in contemporary daily life. Still, this part of the Old World does not just live the New Age alone. The ever stressed and hurrying Dutch also seek 'mental resting points', like landmarks and memory anchors. There is big public support for the preservation of monuments, historic towns, landscapes and nature reserves. Hundreds of private and public organizations with millions of members act in the field of nature and monument preservation. The popularity of these organizations is hard to match with that other national passion: the rush for economic growth and prosperity, manifest in large houses, big cars, wide speedways and an extensive leisure and service structure. In this context, the simultaneous desires for innovation and preservation cause tensions in the built environment. The fragile balance between rupture (longing for the new) and continuity (sticking to the old) is reflected in planning, thus drawing up the outlines of a past and a future in the cities.

How should the CIAM-based postwar neighbourhoods be treated in this respect? The tendency is to tear them all down and substitute them for new neighbourhaods with a stronger identity, human scale and personality. Instead of the traditional and moralistic discourse to (over-)estimate their artistic, historic and cultural value (it will take decades to change the current public opinion), a better strategy to invert this tendency is to stress their potential to be transformed into areas full of identity, human scale and personality, as unique components of the postmodern network cities. In the past, a similar transformation took place in the inner cities. We can learn from this process, which took place from the late 19th Century onwards and was - surprise - conducted by modern architects and planners.

The quest for identity

The (re-)development of urban sites brings about a search for 'local identity'. Apparently, identity can be invented. What is actually meant with the term 'identity of the built environment' is hard to say, it is a feature that transforms 'space' into 'place': a unique setting in which people can feel at home. The challenge to create identity is biggest in anonymous peripheries, where monotonous residential areas, gray business districts, large urban development areas and small green areas can be found. Sometimes history provides a basis for the creation of a specific spatial layout, for instance when country estates, ancient defense lines or monumental infrastructure can direct and be incorporated into new urban plans. Landscape can also bring local identity into urban plans, although The Netherlands have little to offer in this respect: some lakes, bushes, open areas and canals. On sites that lack clearly defined and visible physical features, identity has to be 'invented'. The new context can derive from new functions, as is the case in the surroundings of the XXL football stadium of Ajax in the periphery of Amsterdam. Other options are to create an artificial context with narrative urbanism (practiced in The Netherlands for instance by the urban planner Ashok Bhalotra) or to re-write history, a very popular planning tool that has already resulted in 21st Century castles with luxurious apartments and brand-new historic country estates filled with ordinary family homes. All the efforts to create an identity have

one disadvantage: they often only lead to theatrical settings. The functions stay homogeneous, the use is monotonous and the mix of average citizens is the same as in any suburb anywhere else. Faked identities *suggest* an anchor, a superficial tie between resident and residence.

Historic cities

Faced with the challenge to create urban areas with an 'identity', one is tempted to consider the CIAM-based postwar urban extensions and the historic inner cities as bad and good examples respectively. The differences between them are considerable. The inner cities have numerous historic layers, they bear traces of centuries of human activity and feature a mix of functions. The urban fabric is compiled out of individual constructions into a continuous building mass in which the public space is left open. The human scale, the spatial diversity and the picturesque appearance make up attractive environments for living, working and leisure. New buildings can be incorporated easily into the townscape, complementing the dominant context with either contemporary or historic forms. The tourist potential of the inner cities proves their well defined character, the pleasant atmosphere is a basis for on entire industry of tourism and leisure that has developed in the historic districts. Eventually the old towns have become the logotypes of the big modern cities that have developed around them, their visual identity is scaled up to large urban regions.

Postwar extensions

Postwar neighbourhoods lack, just like many older urban extensions, the historic layers of the inner cities. They have homogeneous economic profiles and spatial structures and offer a poor mix of functions. The townscape is built up out of large volumes that stand solitary in a continuous open space. Similar neighbourhoods are spread over around the country: if you have seen one, you have seen them all. The large scale and the monotony cause disorientation and add to unfriendly public spaces. Visitors are a rare species in these areas, they can be recognized by the detailed maps they carry around in order not to get lost.

The future of these neighbourhoods, that were built in large numbers with small budgets, is now being discussed. Conceived as strongholds for a better world to come, many of these urban complexes barely made it to the year 2000. A large number of buildings urgently needs structural repairs and the apartments are considered too small. Besides, the housing stock of these neighbourhoods is too homogeneous to attend to the current demands and the use and maintenance of the vast public space has become problematic. The collective services and centers do not correspond to today's requirements of the individualistic and heterogeneous user profile and security seems to be hard to deal with. These and other factors make town planners and developers argue that reforms are necessary and in many cases that demolition is inevitable. In all the big cities a number of blocks has been erased already. The new Housing Act (2000) estimates that 500.000 dwellings of the postwar housing stock (equivalent to 7,5% of the country's total dwelling stock) will have to be substituted.

The modern city at age

If Dutch common sense would prevail, it would be acknowledged that the (anonymous) planners of the Middle Ages and the Golden Age (17th Century) would have been more capable to face the challenges of 21st Century urbanism than the planners of the 20th Century. But of course, it is all too simple to praise the inner cities with their mixed functions and the tiny urban fabric, and to condemn the urban extensions with their rigid separation of functions and the open urban layout. Is demolition the most likely future for modern towns and neighbourhoods? There are utilitarian, conceptual and historic arguments to plea for a careful examination of the opportunities to recycle modern town planning, rather than eliminating it on forehand.

The utilitarian argument is simple: as long as existing structures can be partly or largely integrated into new solutions, a waste of material, energy and sometimes money can be prevented. New designs and architectonic, technical and typological solutions can bring up innovative architecture that adds value to the contemporary building production. The conceptual argument deals with the concern about these 'problematic' areas and the desire to substitute them by areas with more variety, identity and human scale. It seems to be controversial to erase the only historic layer of the urban extensions and start from scratch, subsequently trying to create in artificial ways new identities by faking a history that never was. The problem of the suburbs is not their concept, but rather their poor and homogeneous elaboration. Arming the existing urban fabric and the architectonic structures with new uses and users, mixing functions, establishing new centers and public spaces and introducing new typologies can lead to genuine modern areas: modern in concept, updated in functions and enriched and matured over time.

The historic argument to reconsider the future of the extensive urban extensions from the 1950s and 1960s is *not* that they are unique, bare the memories of an important time and reflect important cultural values and architectural principles. They are

all but unique, although some blocks and urban plans may have exceptional qualities. As we are talking large numbers and massive areas it seems to be mediocre and irrelevant to use qualifications of monument-worthiness.

The historic argument has nothing to do with the way modern architects faced the future of their work as well. They became known for stating that functional architecture without adequate functions should be demolished and that their creations should never be an exception to this. Nobody ever wondered if the architects of churches and palaces in the Middle Ages and later ever agreed with the transformation of their work in tourist attractions and pleasure domes. How the modern architects looked at the future is part of a contemporary discourse that has little to do with the actual debate on the city. They are not in charge with the planning in the 21st Century, but we are. If we valorize non-functional functionalism for other than purely utilitarian reasons, we have the full right to do so. The historic argument to cherish postwar neighbourhoods that is presented here is that we can learn from history how to transform and adapt 'problematic' urban areas for new uses, without loosing their architectonic and urban features. In this respect we should not study how modern architects faced the future one hundred years ago, but how they faced the past.

Image

The inner cities that nowadays are considered amongst the most wanted living and working spaces, have little in common with the situation that existed there around the year 1900. A look at the ancient pictures, reveals that even Amsterdam was a dull town one day. The images transmit a provincial atmosphere and a narrow minded attitude. The variety of architecture, functions, scales and lifestyles that nowadays make up the charm and the image of the city were not existing by then. In that recent past, there was hardly any positive appreciation for historic towns. They were considered to be a source of diseases and a place of human decay. The smell of the polluted canals and the polluting industry must have been disgusting. Modern traffic jammed the old streets and the overcrowded residential areas were in need of demolition and reconstruction. From the end of the 19th Century onwards, sanitation engineers, architects and housing specialist all asked for radical interventions in the inner cities. Historians agreed, as long as the existing monuments and sites were not demolished accidentally.

The paintings of G.H. Breitner show the tremendous impact of the interventions in the old cities. The historic parts of Amsterdam and the other large cities in Holland faced profound reconstruction on behalf of traffic improvement, substitution of functions, the creation of a modern city-core, building activities and monument preservation. Nevertheless, the old pictures and paintings of the old towns that were produced around 1900 can still easily be identified for anyone who is slightly familiar with today's situation in these towns. Except for the downtown of Rotterdam, which was largely destroyed during World War II, all the old towns in The Netherlands managed to stay themselves while they transformed into modern city centers.

Re-invention

The negative image of the Dutch inner cities one hundred years ago can be compared to the image of the postwar suburbs today. The subsequent question is obvious: can the decaying suburbs undergo a similar improvement of their image as the city centers experienced over the last Century? It is challenging to think of strategies to change these areas into consolidated ensembles which attract residents and investors. As for their size and homogeneous functional and spatial structures, it will be hard to stick rigidly to the existing form. In a gradual process of development, differentiation, densification, mixing of functions and renewal, these areas can gain a new spirit and an economic input, without loosing their specific features.

There is no need to pull down all the decaying blocks at once, if a part remains it offers cheap dwellings and may - sooner or later - open opportunities to accommodate programs that do not exist today, just like what happened with abandoned warehouses, schools and workers homes in the inner cities. As long as massive demolition prevails, we might get state of the art neighbourhoods with a very varied architecture and green structures, but with a one dimensional soul, an identity of superficial forms.

Of course it is unthinkable that the urban extensions can be transformed into historic inner cities. They have an open layout and a different scale, they are dimensioned to accommodate trains and cars, date from another era and will never contain the functions that are clustered in the traditional downtown.

Yet, a transformation process might take place that shows similarities to the transformation of the old towns in modern city centers over the last 100 years. Not the comparison of the historic center and the suburbs in terms of design or functional program is relevant, but rather the conceptual approach matters: a unprejudiced interpretation of the existing situation, development of new functional programs, the search for architectonic and urbanistic adaptions to new requirements and tendencies, as well as the creative process to bring a new spirit into areas with proper characteristics. Identities do

not have to be invented, the modern city itself should be re-invented.

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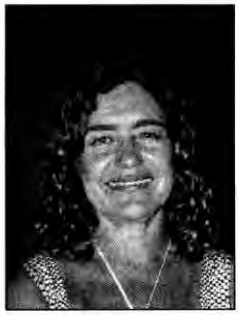

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SOS Berlin Alexanderplatz: the razing of DDR Modernism

Introduction

In three dramatic periods of 20th century Germany - nazism, post-war and reunification - political, ideological and economic factors brought about large scale urban destruction and reconstruction of the pre-existing built environment of german cities, especially Berlin. In Nazi Germany, architecture was used by Hitler as an instrument of state propaganda and his plans to transform Berlin into Germania, the Capital of the Third Reich, imbued with a gigantic monumentalism expressing victory, domination and glory, if built, would have devastated the entire Berlin urban and architectural structure and skyline. (Cavalcanti: 1994; 1997)

Post-war Germany was a divided state controlled by Western and Eastern Allied occupiers. In Berlin, the post-war reconstruction was carried out according to antaganic and conflictive urban and architectural principles which responded to political régimes ideologically opposed and with distinct economic priorities which brought about further destruction to the already shattered city's built environment, both in the west and east. This was aggravated with the construction of the Berlin Wall in 1961, the most celebrated political allegory of the Cold War, which turned Berlin into the nerve centre of the political, military and ideological confrontation between Eastern and Western Europe. In the *Deutsche Demokratische Republik*-DDR (the German Democratic Republic), both in the early years under Stalin's rule and later, with the de-Stalinization process installed by Nikita Krushchev, the politics of urban reconstruction of the bombed cities were imbuied with a strong ideological conotation in which architecture and urban design were used as powerful political weapons to express the new society and to pave the path to Socialism. (Cavalcanti & Brendle: 1998)

In East Berlin, *die Hauptstadt der DDR* (the capital of the German Democratic Republic), the National Programme of Reconstruction began only in 1951, but the first modernist buildings had already been designed in 1949, by Hans Scharoun's associate, Ludmilla Herzenstein, in the former Frankfurter Allee, renamed later Stalinallee. Then, the Socialist Realism in Eastern Europe imposed by the USSR during the Stalin Era, in the DDR as well as in all people's democracies, become the only accepted and correct language to express oficial ideology and the new political order in literature, art, architecture and urban planning. As a result, Functionalism and the Bauhaus were officially rejected and considered as an instrument of american imperialism and the clear expression of Western decadence.

The Stalinallee was turned into an ostentatious axis lined with oversized architectural structures decorated with pseudoclossical motifs setting a pattern for urban and architectural developments in the DDR, such as the Lange Strasse in Rostock and the Rossplatz in Leipzig. Modernism was to come again to the DDR and to East Berlin only after the death of Stalin in 1953 when the Stalinallee was renamed Karl-Marx-Allee.

In the *Bundesrepublik Deutschland* (the Federal Republic of Germany), Modernism was to express in architecture and city planning the western liberalism and democracy. The most spectacular answer to what was called "red classicism" of the east was the *Internationale Bauaustellung Berlin - Interbau*, which gathered in Hansaviertel, in West Berlin, the work of great masters of Modernism such as Walter Gropius, Le Corbusier, Oscar Niemeyer, Alvar Aalto, among many others.

In 1991, the reunification of the country which followed the colapse of Communism and the fall of the Berlin Walll in 1989, brought about further replanning of Berlin, now as the Federal Capital of reunited Germany. Since then, government projects as well as megaprojects of private capital such as the Patsdamerplatz, Leipzigstrasse, Friedrichstrasse, Pariserplatz, etc., have launched a boom of reconstruction in the two former divided cities and attracted powerful investors and developers to what has been called "the biggest building site in Europe".

Alexanderplatz and its neighbauring building ensembles, an important architectural and urban heritage of DDR Modernism, are under threat. An international competition carried out in 1993 sponsored by the *Berliner Senat* and 8 private investors[1] set

the guidelines for o comprehensive redesign which is due to start in 2001. The first prize, by Hans Kollhof, colls for rodical physical changes of the whole area and the demolition of most of the Modern buildings, except those by Behrens.

Alexanderplatz and the *Zentrale Achse Berlin*: Modernism in the *Hauptstadt der DDR*

Alexanderplatz or Alex, as it is called by Eastern Berliners, is Berlin's most complex urban place as it carries contradictory and conflictive political, ideological and affective messages and meanings for its citizens. In the classic Alfred Döblin's novel, *Berlin Alexanderplatz*, it is showed as a Berlin crucial paint where the working class or the underground people used to meet. As one of the busiest traffic junctions in the city and a place which gathered a large variety of functions (working place, dwellings, private and government offices, public transport, trade, cultural and entertainment facilities, etc.), it underwent great urban and architectural changes throughout the 20th century[2] reflecting its urban, social and political history which have been determinant factors shaping its built form[3].

The air raids of World War II left Berlin devastated. In Alexanderplatz, the only buildings which could be reconstructed were the Alexander and Berolina Haus, by Peter Behrens. The Resolution of the Council of Ministers of 7 July 1950 approved the „16 Principles of Urban Development" which defined the urban planning guidelines for the reconstruction of East Berlin's centre, still during Walter Ulbricht's rule which was very much in line with Moscaw's opposition to Modernism. Accordingly, „the most important and most monumental buildings were to be constructed in the city centre, dominating the architectural composition of urban planning and determining the architectural profile of the city". (Flierl: 1998)

With the return of Modernism to the German Democratic Republic which followed the death of Stalin in 1953, the plan for the reconstruction of East Berlin as the capital of the DDR was conceived as a functional and aesthetical unity and consisted of a West-East structural axis of 3,6km stretching from Brandenburger Tor to Alexanderplatz (and later to Strausberger Platz), officially called *Zentrale Achse*, crossing at Alexanderplatz, along which the central government buildings or the political forum, civic places, as well as large dwellings complexes were set. By reducing building density, both residentiol and work-place, spacious green areas, wide streets and dispersed development granted better hygienic conditions allowing the city to breathe.

The planning of Alexanderplatz evolved from a Competition of Ideas for the Socialist Design of the Germon Democratic Republic - 1958 /1960 and was carried out in connection with the road traffic restructuring of the inner city. From the very beginning the role of Alexanderplatz in the *Zentrale Achse* was clear : "to make intelligible (in visual terms) the unity of the axial relations, which converged from the West and from the South East to meet in the area of the square." (Tscheschner, 1993: 38) Alexanderplatz was also the main Eastern entrance to the city centre where the main roads converged, and a strategic point for a large public tronsport system composed of tram, underground and metropolitan railway. In 1963, the traffic at Alexanderplatz was both chaotic and congested with an estimated number of 3500 vehicles and 150 trams crossing it per hour. Thus a final traffic solution for Alexanderplatz was put forward in 1964 consisting of 4 junctions arranged in various levels, an underground intersection off Alexanderstrasse and pedestrian zones.

The *Zentrale Achse* was to be the nerve point of the new political and administrative centre of *Berlin Haupstadt der DDR* where the highest and most representative buildings were to be located at Marx-Engels-Platz/Alexanderplatz. The dominant feature of the *Zentrale Achse* was its highly centralized structure and the monumental scale of its buildings and public open spaces. It was divided into three main sectors: Unter den Linden, Marx-Engels-Platz/ Alexander Platz, and from Alexander Platz to Strausberger Platz, on Karl-Marx-Allee. In the political forum or the political centre of East Berlin were placed the main buildings of the DDR government designed according to Modernism, such as the *Ministeriums für Auswärtige Angelegenheiten*, the Foreign Ministry Building and the *Palast der Republik* both designed by Josef Kaiser, and the *Staatsratsgebäude*, the Council of State Building by Roland Korn and Hans-Erich Bogatzky.

Alexanderplatz, as it is *still* seen today, apart from being a strategic traffic intersection for East Berlin, shows an important part of the DDR architectural, urban, social and political history which goes beyond simplistic aesthetical appreciations. Its built form and urban ensembles depict the consolidation of the drastic shift towards industrialization, rationalization and prefabrication, which marked the return to Modernism in the DDR. This process was initiated with the *Haus des Lehrers* and *Kongresshalle*, by Hermann Henselmann, the first buildings constructed at Alexanderplatz, and with the second part of the Karl-Marx-Allee (from Alexander Platz to Strausberger Platz). There, instead of a ceremonial axis spelling the anachronic eclecticism of the reactionary Socialist Realism, a large housing state was built consisting of 14.500 dwellings, schools, cin-

emas, hotel, shops and facilities designed according to Modern architectural vocabulary and constructed in prefabricated slabs of concrete (*Platten*) with unadorned and standard elements. Buildings such as Kino Kosmos (1962), Kino Internationol (1963), Café Moskau (1964) and the Interhotel Berolina (1963) by Joseph Kaiser, are representative architectural landmarks of this period.

The main concept underlying the redesigning of Alexanderplatz was to create o monumental ensemble conceived as o planned unity to be the centre of social life for Eastern Berliners, with new uses and functians combining traffic connections with representative and prestige buildings such as:

the *Centrum-Warenhaus* (central department store), the biggest in the hole DDR, a project of Jasef Kaiser and associates from 1967-70, with fifteen thousand square metres and two thousand warking-places;

the *Interhatel Stadt Berlin* (a project from 1970 by R.Korn and associates, with 39 stories and 123,2 metres high, one thousand rooms, conference halls, restaurants and many other facilities;

the *Haus der Elektroindustrie*, a building complex of 10 stories designed by H.Mehlan and associates in 1969 providing 2700 working places;

the *Haus des Berliner Verlags*, from 1970-73, designed by K.-E.Swora and associates, with 17 stories and a programme which included studios, photographic laboratoires, conference halls, cafés, press centre, among other facilities; and

the *Haus der Statistik*, a project fram 1968-70 by M.Hörner and associates, with 11 stories and 2700 working places. (Schulz and Gräbner: 1974)

Architecture was alsa integrated with the work of many artists who created some celebrated symbols of Alexanderplatz, namely the coloured frieze of the *Haus des Lehrers* and the copper relief of the *Haus des Reisens* (recently removed), both by W. Womacka, the *Brunnen der Völkerfreunschaft*, a large sculpture-fountain and the 10-metre-high *Urania-Weltuhr*, a World Clock by E.John, erected in the large open spaces of the pedestrian zone af the square.

Alexanderplatz became very attractive for Eastern Berliners with its cultural and leisure facilities, despite the criticism of some architects and planners regarding its vast urban scale. According to Dorothea Tscheschner[4] (1993), Alexanderplatz became a centre in the daily life of the East Berlin population.

> *"Alexanderplatz soan develaped a magical attraction far the population after the dead years af construction... Unfartunately, many peaple erroneausly believe that this „display of strength" in developing Alexanderplatz, follawing the canstruction of Stalinallee, met with displeasure or rejection on the part of the populace; rather the oposite was true...the completion af Alexanderplatz was samething which people wanted to be proud af. They also saw in the „familiar" spaciousness of all the new [housing] estates a sign of the „progress" of city planning, which was associated with more sun, air and green areas, and by no means „retrogression or even destruction of the city".*

Between Marx-Engels-Platz and Alexanderplatz, the *Fernsehturm*, a 350-metre-high television tower with a panoramic restaurant based on a project of Hans Henselmann would become the symbolic and dominant landmark of East Berlin overlooking the entire city, being visible fram many parts of West Berlin, thus accentuating the ideological confrontation with the *Bundesrepublik Deutschland*. The television tower was a striking component of the new centre af East Berlin, concluded in 1969, in time for the celebration of the 20th anniversary of its foundation.

Alexanderplatz in Reunited Germany.

As soon as 1992, the Berlin government storted the restoration of Peter Behrens' buildings at Alexanderplatz, the Berolina and Alexanderhaus. (Pysall: 1998) This was followed by the preparations of a restricted competition on the overall planning concept for its redevelopment, introducing a co-partnership between private investors and the city's government. This proved to be a very profitable financial operation as the Berlin government will have to spend a mere DM19 millions, less than 20% of the total costs (DM140 million) of Alexanderplatz's total redevelopment. The private investors will be responsible for DM119 million, which includes design and building construction, infrastructure, landscape architecture, playgrounds and *kindergarten*. In 7 June, 1994, the *Berliner Senat* issued the *Senatbeschluß* nr.4835/94, a resolution approving the proposal of Hans Kollhoff, as the guidelines for the redesign of Alexanderplatz, which was to be turned into a "people's place", aimed at using Berlin's most important traffic junction to bring other functions and uses to what they called, an "overdimensioned" area. (*Senatsverwaltung für Stadtentwicklung Berlin*: 2000)

A laconic explanatory report by Hans Kollhoff totally ignored the architecture urban design of Alexanderplatz carried out in the DDR, only mentioning Peter Behrens' buildings as a reference for the new architectural structures facing directly the squore, which will be limited to 36,7 metres high. The main concept underlying the redevelopment of Alexanderplatz was the alleged reference to Berlin's 1920s urban fabric consisting of large and homo-

geneous block-structures, clearly showing a selection of a certain period of history to the detriment of others. In addition to this: "On the side facing away from the square, slender towers will grow out of the block-structures. They will be a second row of buildings which will mark the city skyline". (Kollhoff: 1994)

Kollhoff's argument is "taking into account the historical remains". Which historic remains? Isn't the orchitecture and urban design carried out during the DDR regime also historic?

A completely new built form mostly consisting of 150-metre-high skycrapers is superimposed on the pre-existing building fabric of Alexanderplatz with mixed-use functions combining residential areas, offices, hotels, cultural and leisure facilities, restaurants, bars, etc. and calling for the demolition of the *Interhotel Stadt Berlin*, the *Haus der Elektroindustrie*, the *Haus des Berliner Verlags*, the *Haus der Statistik* and the *Haus des Reisens*. The only building to be preserved from demolition is the *Centrum-Warenhaus*, renamed *Kaufhof*, but moved to the south of the square and deprived of its urban and architectural context.

Kollhoff's project remarks shows little deference for the meaning of the pre-existing built environment of Alexanderplatz: "We would like to conclude with a **sentimental proposal**. It is to reconstruct the Berolina statue apposite the international clock, which would of course remain preserved".

This is rather a *caricatural* proposal. The reconstruction of the Berolina statue is anachronic and turns a legitimate symbol of Berlin's past into a mere pastiche. Besides, the international clock, the *Uhrwelt*, was part of the overall Alexanderplatz urban space developed in the DDR period spelling out Modernism, and not an isolated peace of cosmetic design. It had, and it still has, an important meaning to Eastern Berliners.

Final Remarks

According to Rapoport (1990), capital cities exhibit the greatest urban design, spaces and buildings, being a center of rituals and ceremonies to communicate power and authority. Furthermore, when a new ruler, religion or ideology arises, new capitals are often formed with a new physical expression. This is also true in the replanning of Berlin as the capital of a reunited Germany, namely in the process of transition from Socialism to Capitalism in East Berlin, the former capital of the German Democratic Republic, the *Hauptstadt der Deutsche Demokratische Republik*.

In Berlin, a dramatic and politicized urban landscape has been produced in which many symbols representative of the former DDR régime have been changed or removed such as the old names of buildings, statues, streets and squares (e.g. the *Leninplatz* [5], in Berlin, became *Platz des Vereinten Nationen* and the Lenin statue removed in 1992)[6]. In addition to this, some buildings have been destroyed (e.g. the *Ministeriums für Auswärtige Angelegenheiten*, the Foreign Ministry Building, in Berlin, demolished in 1995). In 1993, the Berlin government ordered the *Palast der Republik* at Marx-Engels-Platz to be leveled and a compaign to replace it with a grotesque replica of the Hohenzollern Royal Palace (whose ruins were demolished in 1950 by the DDR government) launched. Wide protests from former DDR citizens prevented the demolition of the *Palast der Republik* and polemic and controversial discussions involving historic preservation, national identity, architectural aesthetics and symbolism carries on until today.

In December 1992, the *Bundesbauministerium* recommended the demolition of the *Staatsratsgebäude*, the Council of State Building, to make way for the new Foreign Ministry Building in the *Spreeinsel*. The outcry of more of 100 german architects, planners, historians and preservationists prevented its destruction. As stated by Cornelius Hertling, the President of the Berlin Chamber of Architects:

> *"We find inadmissible that buildings that have become a part of urban history are being wiped out especially because they convey burdened memories. This means to erase history and identity". (Quated in Baumeister, Badenschatz and Günter: 1995)*

The *Staatsratsgebäude*, a steel and glass structure which incorporated a baroque portal of the Royal Palace into its main facade is very representative of the early DDR's Modernism, being the first and the most important building of the régime, therefore strongly loaded with undesirable and troubled past experiences. Accordingly, the Building Commission at the *Deutscher Bundestag* (1994) did not understand the reasons to preserve the *Staatsratsgebäude* as "it was the seat of the second dictactorship in the german soil in this century". As Michael Wise (1998: 119) argues: "Destroying the East Germany remains was seen as a step toward expunging the evil of communism itself."

The incorporation of DDR listed architecture and urban design developments into the new *Denkmalliste des Landes Berlin* enacted in 1995 have arosed further polemic discussions in the *Berliner Parliament* as well as in society. Political, aesthetical and economic reasons are some of the arguments of those against the preservation of the DDR legacy such as the Karl-Marx-Allee. If the Karl-Marx-Allee is protected today it is mainly due to the last spec-

tacular action of the DDR régime which granted its preservatian in 1990, just days before the reunification of Germany, under the *Denkmalplegegesetz der DDR* (1975).

In 1995, the *Deutsche Nationalkamitee für Denkmalschutz*, issued a document called *"Nicht vergessen, sandern schützen und aufheben! Für die Erhaltung von Architektur und Städtebau der DDR "* (Do not forget, do protect and keep! For the preservatian of architecture and urban developments of the DDR), which recommended the preservation of the DDR recent urbon and orchitectural history. Its arguments were very clear:

> *"We should accept the DDR period as representative of the urban and architectural period of recent Germany, as a dacument of the Socialist architectural culture in which important buildings are representative of the DDR State and society". (Haspel, 1997: 122-123)*

Despite such efforts, Alexanderplatz, the heart of the capital of the former German Democratic Republic will be razed. As in Potsdamerplatz, powerful private investors bought a very large and strategic area of Berlin, taking over a symbolic and public territory in which a relevant part of german history was written, turning it into a private and banal theater of consumerism, and forging an artificial life carefully planned, programmed and managed to the empresarial success. A millianaire undertaking of private capital that through spectacular architectures seduces society, exploiting the already dramatic history of Berlin, its tragedies and myths. In fact, the image marketing and the use of the meaning of the place reveals the powerful manipulation of the private investors to create ideal sceneries for consumerism whose historic references are merely rethorical. Alexanderplatz/Marx-Engels-Platz should be preserved as an important piece of the urban and cultural identity of the farmer capital of the German Democratic Republic which combines its built environment with its complex urban functions, however vast or "overdimensioned". Monumentality is a characteristic of capital cities despite any ideology or political systems (e.g. Brasília, Washington D.C., Canberra). (Cavalcanti: 1994)

What is the difference between the so-called totalitarian Socialist planning and the totalitarian Capitalism which privatizes a huge memorial space in the heart af a solid and democratic Germany in the beginning of the 21th century? Today the ideological confrontation of the Cold War is over. The confrontation is economic. Therefore, many authors refer to the reunification of Germany as an annexation of the territories of the former DDR.

Post-Conference Note

After the presentation and discussian of this paper at the Sixth International DOCOMOMO Conference in Brasília, a letter of formal pratest against the destruction of Alexander Platz was signed by 97 architects, planners and students from oll over the world participating in the Conference. The original document was sent to the *Staatssekretär, Senatsverwaltung für Stadtenwicklung, Umweltschutz und Technologie - Berlin-Mitte*, with copies to the Architektenkammer Berlin, Londesdenkmalomt Berlin, Docomomo Germany, and to Prof. Hans Kollhoff, the author of the Alexanderplatz project. In addition, copies of this document were sent to a number of german academics and to the main newspapers and architectural magazines in Germany.

There was no answer or comments whatsover.

Fig. 1 – View of Alexanderplatz from 1973, from the *Fernsehturm* (Television Tower). On the right side, the Karl-Marx-Allee with the later architectural developments speling out modernism. In the foreground, the *Centrum-Warenhaus* and the Alexander and Berolina Haus by Peter Behrens.
Source: Landesbildstelle Berlin

Fig. – 2 View of the Karl-Marx-Allee from Hotel Stadt Berlin, at Alexanderplatz, in 1971. On the right side, the buildings of the *Haus des Lehrers* and *Kongresshalle* by Hermann Henselmann.
Source: Landesbildstelle Berlin

Fig. 3 – Alexanderplatz in 1973 during the festivities of the 10th *Weltspiele der Jugend und Studenten*. A lively centre in the daily life for Eastern Berliners. In the middle, the *Brunnen der Völkerfreunschaft*.
Source: Landesbildstelle Berlin

Fig. 4 – *Haus des Lehrers* by Hermann Henselmann at Alexanderplatz in 1981 and the pannel of ceramic and metal elements by Walter Womacka.
Source: Landesbildstelle Berlin

Fig. 5 – Alexanderplatz in 1985 with the *Urania-Weltuhr*, the World Clock by E. John and the building of the *Haus des Reisens*.
Source: Landesbildstelle Berlin

Fig. 6 – The project of the new Alexanderplatz by Hans Kollhoff. On the left side, the *Fernsehturm* (Television Tower). The shaded buildings are the new architectural structures proposed to reploce the pre-existing buildings.
The Alexander and Berolina Haus by Peter Behrens indicated in light countours, are to be preserved.
Source: *Alexanderplatz. Städtebaulicher Ideenwettbewerb*. Ernst & Sohn. Berlin with some sketches from the author.

NOTES

[1] Albert Abela Ameropa Ltd.Jersey, EUWO-Gruppe Berlin, Deutsche Interhotel Berlin GmbH, G+J Pressehaus am Alex GmbH & Co., Kaufhof Holding AG, Liegenschaftsgesellschaft der Treuhandanstalt mbH and TERRENO.

[2] For instance: Martin Wagner's street plan of 1931, the allied air raid of 1945, the Socialist reconstrution during DDR régime, and the project of Hans Kollhoff, which resulted from an international competition launched in 1992, coordinoted by the *Senatsverwaltung für Stadtenwicklung und Umweltschutz* (the Senote Urban Development and Environmental Protection Department).

[3] As this paper is focused on the post-war Modernist developments carried out in Alexonderplatz as a fundamental port of the overall plan for the reconstruction of East Berlin, the capital of DDR, its scope does not allow further discussion on the main factors of its urban and architecturol history.

[4] Dorothea Tscheschner was a city planner in East Berlin for 30 years and hos published many articles about the planning and reconstruction of Eost Berlin, as the capital of the DDR.

[5] A representative example of post-war reconstruction in Berlin, *Leninplatz*, today, *Platz des Vereinten Nationen*, by H.Henselmann and H.Mehlan (Fig.), was protected for being a prototype of the industrialized buildings in Germany and, as Haspel (1998b: 27) states, a landmark of *"DDR-Architekturmoderne"*.

[6] Since 1990, this process has also occured in many other cities of the former DDR (e.g. the *Olga Benario-Prestes Schule*, in Bernburg, is again called *Goethe Schule* and the Karl-Marx Stadt, renamed Chemnitz).

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KEYWORDS

politics, symbolism, cultural heritage, urban destruction, reconstruction

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Bernard Flaman

"Airport as city square": Toronto, Edmonton and Winnipeg Airports, 1964

Architects

Toronto Airport: John B. Parkin and Associates

Winnipeg Airport: Green Blankstein and Russel Architects

Edmanton Airport: Rensa and Minsos Architects

Introduction

Fig. 1 – Edmonton Concourse

The title of this presentation is borrowed from Deyan Sudjec's 1992 book "The 100 Mile City". The chapter, "Airport as City Square" traces the evolution of the madern airpart and presents a thesis where the airport is described as a traditional city in programmatic terms that includes public spaces, workplaces and transportation. However, these traditional civic elements are rendered in an urban form that has never existed before.

The following, documents a series of very powerful civic spaces created within three Canadian Airports, Toronto, Winnipeg and Edmonton. It explores the political and formal underpinnings of these projects and the relationship between public art and the public space in which it is housed. The Winnipeg airport is discussed as an example of critical regionalism that developed within the tenants of modernism.

Political Agenda

Between 1959 and1968, the Canadian government, through the Department of Transportation completed seven major new airport terminals. A set of three in Toronto, Winnipeg and Edmonton, were completed in early 1964, and became the first terminals in Canada to be designed for jet passenger aircraft. The technical objectives for the so-called "jetports" were not yet completely formulated and the design process exhibited a certain level of exploration and experimentation with basic passenger flaws. The result was three different approaches that shared the common programmatic elements of ticket concourse, public lounge, VIP lounge, arrivals area, restaurant and lunch counter.

Fig. 2 – Toronto Front

Toronto Airport was the largest and most daring. Originally conceived as the first of several "Aeroquays", it was based on a circular plan form to minimize walking distances with an integral multistory parking garage. Passengers arrived by a raadway that dipped below the aircraft ramp, similar to Heathrow, and emerged in front of the concourse in the centre of the building. From there it was a short walk to the hold rooms that ringed the concourse and lounges. The materiality of the camplex was dominated by an exposed concrete structure infilled with glass.

The Edmonton terminal, with separate departure and arrival levels and roadways, displays what has become one of the most common terminal forms. The building, monumental in form with a taut glass skin, had a conventianal steel damino frame.

The Winnipeg airport was deemed too small by the department of transport for an areoquay scheme or a two level roadway, so the designers compensated with an elegont, clear span departures and arrivals building. It is evident from these exomples that the form of the modern airport terminal was in the process of being invented ond its evolution progressed significantly during the eorly days of jet passenger travel.

One objective over which there seemed to be no confusion ond would guide the design of each building was that the terminals would convey o thoroughly modern and up to dote notional image that would serve as an intraduction to Canada and its culture to the foreign traveler. It would olso represent a unifying force to the citizens of a large nation composed of several different linguistic, cultural and topographic regions.

To this end, the Deportment of Transport ollocoted ½ of one percent of the project budget for ortwork, commissioned the top modernist architects in eoch city and placed special emphasis on the furniture that would complete the vision of a government sponsored public space of national importance.

The product, as the photographic documentation mokes clear, would be a series of sleek, beautifully designed buildings that housed 20 pieces of painting and sculpture commissioned with the guidance of the National Gallery, and the latest in Canadian and Internotionally designed furniture. These buildings formed port of an air transportation system that would connect the country and eclipse the railroad as a means of passenger travel. Symbolically, they projected a powerful image of Canada as a modern, unified nation.

The impetus for this series of exemplory buildings had its roots in a conscious effort of social and cultural engineering on the part of the federal govemment.

The writing of artist Ken Lum, has divided post Second World War cultural production inta two principal stages. The Massey-Levesque commission of 1949, a massive two-year inquiry that set cultural policy for the next twenty years and was instrumental in establishing the National Library, the Notional Film Board and The Canada Council for the Arts, marked the first stage. The Canadian Multicultural Act of 1971 represented the beginning of the second stage.

Lum states that the Massey-Levesque commission

"... was in fact a document of the intellectual anxieties of Canada's ruling Anglophone elite worried about the ascending signs of regional discontent ta which they believed themselves historically designated ta resalve."

He goes on to say,

"The task of the commission as it defined it was a difficult one: how to canstruct an identity for a nation that was comprised of isolated regions of diverse histaries and ta which the threat af American influences was always present". (Lum, 1999: pp. 76-83)

The Toronto, Winnipeg and Edmanton Airports serve as a visual example of the post-war directives of the Canadian Government toword a unified identity and culture.

Formal Agenda

The ambitions of the Massey-Levesque commission in Canada coincided with the rise of a variation of Modernism that argued in favour of a "highly charged iconographic reading of architecture". Canadian architect and theorist, George Baird describes this movement in his 1995 book "The Space of Appearance". He discusses Colin Rowe's 1947 essay, "The Mathematics of the Ideal Villa" and Rowe's mentor, Rudolf Wittkawer's 1949 publication of "Architectural Principles in the Age of Humanism". Baird states:

"Indeed, Rowe's and Wittkower's publications can be seen in retrospect as a starting point af the phenomenon that became known both in Europe and North America, as neo-Palladianism. With the advent of the new interest in symmetry, centrality, and elementary volume, which was increasingly evident in the American work of Mies van der Rohe from that period, neo-Palladianism quickly became linked with a putative neo-classicism. As Rawe put it:

"Neo-Pallodianism ...has inherited – particularly from Mies- a sense af propriety.
It has adapted particularly from him an ordinance of the building envelope.
It has been led by him to accept os sufficient the statement of elementory volume.
Its preferred textures, its taste far big scale and immaculote finish are largely
Miesian, while it has enjoyed the same sanctian for its symmetrical salutions."" (Boird, 1995: poge149)

When Bernard Brown, one of the original designers of the Winnipeg airport olong with David Thordarson of the office of Green Blankstein and Russell, was asked where the inspiration for the design concept came from, his answer was one word, "Mies". *(Brown, 2000: interview)*

This monumental, symmetrical, minimalist form of modernism would be used to create a nationalist Canadian identity in the Jet Age. To quote Deyan Sudjec:

"... early airports, represented an era in which flying was a gentlemanly recreation.. ..What followed them was the baroque phase of airport building, characterized by the outward show af luxury... This was the modern world in its Dolce Vita incarnation: Cuban heels, Dacron, midnight-blue suits, and silver metal aircraft waiting to whisk the masters of the universe away." (Sudjic, 1992: page153)

The photographs depict an amazing consistency of approach. The details varied, but it is obvious that there was a guiding force behind the creation of these civic spaces. Department of Transport architect, Stanley White, was instrumental in coordinating the overall image. Educated at the University of Toronto, he served as the secretary of the fine art committee and went on to work on Expo 67 immediately after the airport terminal projects. Quoted in a popular magazine of the day:

"There was no catering to popular taste ... We were trying to ochieve for Canada the most sophisticated image we possibly could." There was no regional favouritism. He felt that it would be a service to Conodian culture to expose a Vancouver artist in Edmonton, Montreal artists in Toronto, Toronto artists in Winnipeg." (Lowe, 1964: pp.144-5)

Nationalism vs. Regionalism

The "popular toste" referred to was perhaps linked with a Canadian self-image of a country dominated by nature as depicted by the Group of Seven and Emily Carr. The sophisticated image promoted by White on behalf of the Federal Government created a dramatic and urbane image of nature stripped down and abstracted into colour and form.

Evan H. Turner, the director of the Montreal Museum of Art, in his 1964 review of the airport art project olluded to the tensions that had been, to this point simmering under the surface, but are still discernable todoy upon reading the minutes of the art committee meetings. The battle lines seemed clearly drawn between those who promoted a national or international perspective and those who preferred to project a regionalist image.

Turner's review of the project states that:

"... the Department of Tronsport's selection has been exemplary for selecting outstanding artists ond not sacrificing standards to the undue pressures of regionalism that might have been feored." (Turner, 1964: page131)

Here, Bernard Brown recollects discussions concerning the selection of two sculptures by artists Richard Williams and Jack Harman that were considered too regional and too provincial. The report prepored by his firm in 1963 gives o clue as to where the regionol pressures that Turner feared stemmed from:

"The Winnipeg International terminal is primarily serving connecting flight passengers, and as such an art program should be concerned with establishing a cultural image of the prairies." (Fine Art Program report, 1964)

In the midst of this notionalistic atmosphere, the Winnipeg terminal moved through many schemes. The critique of each scheme is unknown today, but studying the drawings seems to point to several concerns that focus on image, passenger flow and budget. The initial designs display an overtly Frank Lloyd Wright character, in keeping with a self-image of Winnipeg as Chicago of the north. By scheme 7, the Miesian Neo-Palladianism that would give the Winnipeg terminal a stylistic affinity with Edmonton and Toronto is fully developed. In this scheme, we see a hotel and carpark that define a central axis and a terminal that spreads across the flat open landscape with seporate arrivals and departures buildings on one level and large open courtyards. If we take Kenneth Framptons definition of critical regionalism as a dialogue between tectonics and topography, *(Framptan, 1988: pp. 4-7)* this scheme must be considered to be strongly regionalist in the way it captures ond orders the expansive landscape.

As the design moved through subsequent iterations, ending finally with scheme 13r, the regional essence and modernist style remain as the terminal becomes consolidated and more compact responding to the realities of the budget. The courtyards are still evident, but are radically reduced in size; the administration building has been separated from the terminal and takes the axial position of the deleted hotel and carpark.

The terminal was finally designed with a single level raadway, with the ability to expand to separate departures and arrivals levels. A second level mezzanine planned as a future ticketing concourse overlooked the main level, where ticket counters filled the centre portion, flanked by luggage carousels at either end.

This almost accidental space, vast and awaiting its function, became a link with topography of the Winnipeg area. Floating above the main level, it was as expansive and filled with light, as the prairie itself and beautifully framed by the previously discussed structurist murals that engage the space, both literally and with colour.

Fig.3 – Winnipeg Mezzanine

A third mural by Alfred Pelan, combined his surrealist style with a startling colour scheme. Entitled, "The Prairie", it formed the entrance from the mezzanine to the dining area.

During a 1996 lecture, George Baird spoke of "visibility, overlook, spaciality, focality, inclusiveness and atherness" as necessary elements of a fully constituted public realm. The embodiment of these elements within the Winnipeg airport transcended nationalistic goals to create a civic space of unparalleled power; a regionalist expression within the tenants of modernism.

Conclusion

The completed spaces caused a sensation and received mixed reviews from the public. The artworks, in particular became a target of criticism related to their cost and abstract meaning. With $250,000 spent on abstract art, the program was ridiculed and lampooned.

Modernistic blobs, paint smears, welder's experiments and carpenter's leftovers are some of the terms that appeared in the popular press. The few that survive in their original locations are the last pieces of the airport interiors that have been radically changed over the past 35 years.

Canada is in the midst of another airport building boom caused by the shift from government to private ownership. The building shells are modern and there is a concerted effort to evoke a regional flavour, mainly through the design of retail areas that simulate parts of the city or region where the airport is located. The design of these areas has become a prime concern of airport authorities as most modern airports derive a substantial portion of their income from retail sales.

Now crowded, as air travel has become commonplace, the airport public realm has merged with the shopping mall and the amusement park. The "airport as City Square" now derives its excitement and vibrancy from the sheer number of people that move through it rather than from the power of the space itself.

James Twitchell, in his book *Lead Us Into Temptation* writes:

> *"High culture has pretty much disappeared, desperately needing such infusions of life-preserving monies from taxpayer-supported endowments and tax-free foundations to keep it from gasping away. One might wonder if there's anything more to American life than shopping." (Stackhouse, 1999:A15)*

This trend is highly evident in the current state of the Winnipeg airport, where two murals, of the three that are still intact, are almost obliteroted by advertising and retail kiosks. A regionalist connection is attempted, with palpable irony, in the design of the national brand shops by copying details from the restored warehouse district in downtown Winnipeg.

The progression from the cool, minimalist "high culture" atmosphere of the original spaces to the revenue driven themed retail of the current interiors was encapsulated last fall in the second part of the "American Century" exhibition at the Whitney Museum in New York.

The exhibition began with paintings by Jackson Pollock and ended with advertisements for "The Gap". It is perhaps a question of quality. Perhaps "khakis rock, khakis groove and khakis swing", express the spirit of our time, especially when displayed on Sony plasma screen monitors, as well and with as much controversy as Pollock's abstract expressionist drip paintings of the early 1950's.

In Winnipeg, however, the current retail design fails to respond to the essence of the mezzanine space that so brilliantly evoked the atmosphere of the Canadian prairie and has replaced it with a literal regionalism that collapses into confusion and kitsch.

The airport as a building type is perhaps ill suited to historic preservation as it embodies the rapid pace of technological and social change in the last half of the twentieth century. These buildings survive best in the form of photographic documentation that depicts a moment in this fast paced and disposable time period. The photographs presented here serve as a record of the collective cultural aspirations of a nation and a visual representation of a country clambering for a place on the world stage in the post-war era. It was a world accustomed to seeing the landscape of Canada represented through the eyes of the Group of Seven. The artworks and the architecture of the Toronto, Winnipeg and Edmonton airports combined to created spaces that were inspired by the natural landscape of Canada, but brilliantly reinterpreted it in the modernist idiom.

These spaces offered a new look that challenged the traditional representation of Canada, depicting

a level of modernity that the public was not yet quite ready for.

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KEYWORDS

Regionalism, Public art, Public space, Canadian airports, Modernism

Bernard Flaman. Born in 1959, Bernard Flaman was raised on a farm in Saskatchewan, Canada. He studied Art History at the University of Saskatchewan, receiving a Bachelor of Arts degree in 1981 and studied architecture at the University of Toronto, receiving a Bachelor of Architecture degree in 1987. He spent time as a visiting student with the University of Toronto in Paris France and at the Southern Califonlia Institutte of Architecture in Los Angeles, California. Bernard has worked in the USA, Germany and Canada. Some of the projects he has been involved with include a competition for the National Theatre in Tokyo Japan with the office of Eric Owen Moss and a wood research facility for the University of British Columbia. He has acted as project architect for the new airport terminal in Moncton, New Brunswick, the design of retail renovations for the San Antonio Airport and a health clinic for the aboriginal community of Bella Bella in northern British Columbia, He became interested in the history of modernist architecture at Canadian airports while part of the design team working on the expansion of the Edmonton Airport. Bernard is currently engaged in private practise in Saskatoon, Canada.

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Silvia Hernández de Lasala

In search of the sublime Villanueva and the central university campus in Caracas

Abstract

Throughout his career Carlos Raul Villanueva pursued a dream of integration and synthesis. He wanted to fuse the two different worlds to which he belonged: the enlightened world of European culture and the American world, exotic and provincial but full of that hybrid and tropical attraction which the sensibility of the foreigner in his own country catches better than anyone else. Both worlds were of equal value to him. The desire for integration and synthesis which drove Villanueva on, implied a complex process because European architectonic culture in the first half of the twentieth century by no means constituted a monolithic block, while that of the Americas was largely composed of a mixture of contrasting traditions. What to choose? How to create that particular alchemy which would yield aesthetically significant results, authentic architectonic jewels? The persistent search for an ideal of synthesis led Villanueva, after many explorations, to an approximation to the sublime, an encounter with a foretold American space which paid its respects both to the art and architectonic ideas of the European vanguard and to the creations of artists from Ve-nezuela and other Latin American countries. This new setting, atmospheric and inspiring, full of memories and avont-gardism, bringing together all that was irreconcilable at the time, was constructed by local labor working alongside the experienced artisans which the European wars had blessed with, and our young engineers who were absorbing new techniques with acute creativity. Villanueva dreamed up his own mestizo discourse. ambiguous and complex, individual and collective, mingling with the tropical vegetation and heading towards sublimity. Nowadays, when we revisit the spaces of the Central University campus, we are obliged to ask ourselves if it is possible to perpetuate so many notable achievements. Why should it be so difficult to preserve this eminently successful search for the sublime?

***Silvia Hernández de Lasala**, was born in Margarita Island. She studied architecture ot the Universidad Central de Venezuela, where she also received her doctorate with the dissertation: En busca de lo sublime. Villanueva y la Ciudad Universitaria de Caracas. She is the author of several books and she is also, at the present, an Associate Professor at the same University.*

Miles Glendinning

Clone city: modernism, landscape and the crisis of the European conurbation

The 'old' countries of Europe have, in the past decade or so, fallen into a disorientating process of spatial and social fragmentation, with everything increasingly dissolving into a mosaic of islands of specialised uses. This process is already well established in lower density urban areas in America and elsewhere, but it takes a different form in Europe. Here the mosaic is made up of 'inner' areas, dominated by imagery of the 'traditional dense city' and 'mixed use community', and 'outer' areas dominated by an anarchic proliferation of mass produced low density environments and privatised transport infrastructure. Through the pervasiveness of this loosely flexible formula, once highly variegated places across the whole continent are subtly homogenised into one uniform 'Clone City', with its standardised urban villages, heritage areas and business parks. The result is a loss of 'identity', and a growing socio-spatial division and injustice. These images of Clone City in Scotland could equally apply to this recent text about the state of historic Italian cities, which argued that 'shopping malls, discotheques, row houses, little single-family villas, warehouses and small industries, car parks and multi-screen cinemas constitute the distinguishing features of an unprecedented territory, that has until now remained disconcertingly invisible to traditional Italian architectural culture'.

What is the role of the Modern heritage in all this? Well once, as we know, to speak of a 'Modern heritage' would have seemed an oxymoron, as the two words were actually polarised against each other - in a way typical of the violent, disciplined modernity of the late 19th and early/mid 20th centuries. On the one hand, there was the aggressive historical materialism of the 'high' Modern Movement, demonstrating its confident drive for social Progress spatially in an open-ended concept of landscape, which embraced the design not just of individual buildings but also, through 'planning', of entire regions. On the other hand, set against that, was the early conservation movement, a typical example of fundamentalism, static, appealing to a past order and community in reaction to the dynamism of modernity. To people like William Morris, what was important was to preserve the actual old fabric at all costs. The absolute new was set against the absolute old: a harshly confrontational framework for a harshly confrontational age. Both extremes replaced aspects of religion with utopian social visions - in the case of conservation, to the point of idolatry in its presumption that human works could be preserved for all time. But at the same time, their peaceful clash left its traces of life and vigour across our continent.

What we have now is quite different, and resembles the longstanding position in North America, a society 'modern' from the start, where that sharp polarisation never existed. Now, the Modern Movement heritage is integrated into a polycentric setting in which 'historic landmarks' are studded like countless Colonial Williamsburg theme parks in the dynamic, but directionless spread of Clone City, an environment dedicated as a whole to marketing and capitalist growth. MoMo relics, shorn of their dynamic social and spatial context, have been absorbed into the static heritage zones, where the Morris-style insistence on preserving actual old fabric is applied to them as if they were medieval cathedrals. And the meaning of these relics has radically changed, too. They have been stripped of Modernism's radical ideals of social reconstruction, leaving only a meaningless stylistic shell of 'heroic form' that can be commodified and plundered by today's signature-designers in creating image-buildings for cities to compete with each other in the global marketplace. What is valued is not the essence of the Modernist programme - the mass social building, the planning concepts - but marketable individual buildings and designers. For example, in Scotland, the cult of C R Mackintosh is seen as providing a precedent for the meretricious image-making of Enric Miralles's design for the new Scottish parliament building, like a theme-park pavilion in its attempt to 'symbolise Scotland' through 'upturned boats'. In this context, the researches of DOCOMOMO into the heroic age of Modernism have arguably helped feed the mounting capitalis-

tic frenzy. The Modern Movement always presented itself as an internationalist, universalising movement, but it was assumed that what was meant was socialist, not capitalist globalisation.

What escape is there from this seemingly relentless march of international homogeneity? It's too strong and pervasive for any outright fundamentalist opposition to be effective. Equally, traditional critical regionalism provides no way out, as it is just as concerned with images - indeed, you could almost argue that Miralles's boats and leaves, for all their obvious opportunism, are exemplary critical regionalist objects. What I want to do is to point, in the context of this session, to a possibility that the designing of landscape space, as opposed to single object-buildings, could perhaps be an means of regeneration. The High MoMo era would have referred to this kind of landscape overview as 'planning'. But that doesn't mean we're talking about the dirigiste *tabula rasa* plans, universal abstract prescriptions and authoritarian openness of CIAM Modernism, with *Zeilenbau* slabs marching to the horizon, and the state as the executor and guarantor of Progress. Nor do I mean what today is called 'planning': the bureaucratic control mechanism, especially in the heritage field, that reinforces the static subdivisions of Clone City.

What I mean by 'planning' and landscape space is openness as a spatial frame of mind; an insistence on looking outwards beyond the specific and the commodifiable to the built environment overall. I want to suggest that we can use the modern heritage to help build a new critical regionalism in Europe by concentrating not on MoMo architectural style but on the composite legacies left by the different, longer trajectories of modernisation in different places.

In other words, we can make 20th century MoMo space mean something by putting it in the context of earlier modernising spatial concepts: because, as I say, unlike North America, historic Europe is built up of many layers of modern visions. That heritage of modern spaces and landscapes goes, of course, right back to ancient Greece, but that is a general heritage for all of us. Within individual countries, it is most highly developed in places like Scotland and England where social and economic modernisation came early, in the 18th century, in a revolution of rationalised agriculture, rapidly followed by the building of planned settlements and the industrialisation of the urban built environment.

In such countries, the historic built landscape is a landscape of pervasive planned modernity, and any talk of a pre-industrial golden age of 'traditional' life is meaningless. 'Modern landscape' can mean something of the late 18th as well as of the 20th century, and we today in turn can add our own kind of modernity to that layering. That, at any rate, was the belief of a grouping of late 19th and 20th century critics and planners, stemming from the work of the Edinburgh-based social thinker Patrick Geddes, and inspired especially by the close, symbiotic juxtaposition of Edinburgh's medieval Old Town and the planned classical New Town. I'd like to spend the last few minutes of my talk outlining their ideas. Geddes was provoked by a very similar capitalist crisis of fragmentation to our own. His remedy for this 'Palaeotechnic Age' was 'Neotechnic planning'. By 'planning' he meant not command planning dedicated to materialist Progress, but what he called the creation of 'Centres of Life', which would form part of a constant cyclical process of renewal: the *Arbor Saeculorum* (Tree of the Epochs). As to what this meant in spatial terms, Geddes set out to reconcile the traditional identity of dense urban form and urban culture with the openness and freedom of the modern urban area, for which he coined the name 'conurbation'. The key aim was to keep the market from breaking down the sharpness of that landscape relationship, but instead to intensify it by coordinating the city with the rural hinterland, on the explicit model of the ancient Greek *polis*. Geddes called for 'a rebuilding of analysis into Synthesis, an integration of the narrow window of the individual outlook for the open tower which overlooks college and city'. Within the city itself, while the spirit of place was important, the actual old fabric was secondary: old buildings could readily be demolished for practical or symbolic improvements.

Despite his opposition to state socialism, Geddes's concept of place-specific modernity greatly influenced the mid 20th century era of Modernist grand plans, when a range of Scottish city and regional planners, led by architect Robert Matthew, built their proposals on the 18th-20th century legacy of agricultural improvement and new-town building. They shared Geddes's contempt for the free market as regulator of landscape quality. And they were all highly sensitive to the particular trajectory of modernity in the region concerned. The main contrast was between 'historic' Edinburgh and the East and the more industrial, frankly modern Glasgow and the West. Their contrast became like that of the Edinburgh Old and New Towns writ large.

In the Clyde Valley, the essence of modern planning seemed to be the radical policy of planting new industrial communities in dramatic landscape - epitomised by the 18th-century mill village of New Lanark. So the Clyde Valley Regional Plan of 1946, co-authored by Matthew with Patrick Abercrombie, proposed a vast programme of population 'overspill' from Glasgow slums to new towns in landscape, and a green belt around Glasgow to check periph-

eral sprawl. In the East Coast around Edinburgh, on the other hand, the strategy adopted was to modernise the mony historic towns in a respectful way, intensifying existing settlements rother than building new ones. In the work of Scottish government chief plonner Robert Grieve, the Geddesion *polis*-in-hinterland regional planning ethos was also prominent.

Robert Matthew's own personal interventions mirrored this east-west contrast: in the Gorbals slum redevelopment in Glasgow (1958-64), for example, he designed a ruthlessly daylight-aligned pattern of towers, while in the Edinburgh University redevelopment (1960-8) he inserted a tower block group tactfully on one side of a classical square; and in 1970, he instigated an immensely important project to rescue the 18th-century Edinburgh New Town: the New Town Conservation Committee. Matthew made strenuous efforts to keep these initiatives in an international context, through constant collaborations with like minded thinkers - for example, he was a close friend of the Greek polymath architect Dinos Doxiadis, a mid-century equivalent to Geddes who devised an entire science of human settlement, or 'Ekistics', based on a complex theoretical framework of spatial-social patterns, ultimately inspired by the rationalistic planning of the ancient Greek *polis*.

If Matthew's socialistic age could make use of these Geddesian ideas, how much more relevant are they to us today, facing a new 'Palaeotechnic Age' of global capitalistic chaos! In the relations between people like Matthew and Doxiadis, we witness a kind of international regionalism which can help us to fight the international juggernaut of Clone City. The struggle over landscape, whether in Scotland, Greece or Finland, is just a fragment of the pan-European struggle between identity and savage capitalism. So far, the contribution of the Modernist heritage interest to this struggle, in its emphasis on heroic form, has merely been to fuel a free-trade in empty images, in instant identities dressed up like marketing brands. But it's through the inspiration not of the works of heroic artists like Aalto, Corbusier or Mackintosh, but of the more complex landscape visions of people like Geddes and his disciples that the Modern Movement can help us today build a real critical regionalism, a real identity, in historic Europe today.

NOTES

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KEYWORDS

plannillg; globalisation; Patrick Geddes; urbanism

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Kenji Watanabe
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Rethinking the Core of the City: beyond functionalism in the Hiroshima Peace Center by Kenzo Tange

Introduction

The evidence which I have based is the articles and illustrations in the Japanese architectural journal; Shin-kenchiku (New Architecture) and Kokusai-kenchiku (International Architecture). These were published after the CIAM 8 Congress as reports, and simultaneously completing the Peace Center in January 1955.

Those materials of were recorded as the first documents for the CIAM activities by Japanese architects. Therefore, this investigation should imply the historiographical signification of modern movement in Japan concerning to the CIAM.

First attendance to the CIAM

According to the articles relating to the CIAM 8 Congress in the architectural journals in Japan, three architects, Kunio Mayekawa (1905-1986), Kenzo Tange (1913-) and Takamasa Yoshizaka (1917-1980) attended to the congress. The former two architects were as representative of the CIAM Japan, and Yoshizaka as an observer from France during when he had worked at the atelier of Le Corbusier. Mayekawa had actually participated to the CIAM 2 Congress in 1929 to propose a minimum dwelling with Le Corbusier. CIAM 8 was the second time for him to experience the CIAM Congress and to meet European modernists.

The attendance to the CIAM 8 was, however, the first chance for Japanese architects to intraduce their works to the international domain. The speech concerning to the main theme; The Core of the City was done by Tange with referring to a topic with which his Hiroshima plan was intimately related.

Peace Center as beyond functionalism

Tange's presentation, even though a difficult of language, succeeded to show not only the central urban issue of the modern movement based on CIAM principles, like that of the Athens Charter, but also highlight philosophical and architectural differences between Europe and Japan.

Hiroshima Peace Center was initially planned in 1949 as a national-wide competition to create a memorial in remembrance of 200,000 victims of the A-bomb. Tange proposed a long, rectangular history museum raised on piers, with a central view along the axis connecting the plaza, monument, and atomic-bomb dome (World Heritage). Planned to create a close relationship between buildings and the environmental landscape, this project was designed to commemorate the importance of peace and to stop war.

Tange named the axis of the plan "Axis for Prayer" and he believed that the concept could associate between reality and vision of functionalism for cities to satisfy four needs; residence, work, recreation and transportation, in the same paint which Team X criticized to the CIAM old generatian afterwards.

Tange contributed an article to the Kokusai-kenchiku (International Architecture, 10. 1951) as a report of the CIAM 8 Congress entitled "European Homesickness". According to the title, Tange seemingly understood the concept of the 'Core' which was resulted from a sort of irritation or homesickness of Europe against the new world, America. Tange also pointed out that European modernism likely tended to be ideological retreat because of lack of their confidence.

Tange, as a result, had proposed and realized a different characteristic of the CIAM's Core, as it were, 'Negative Core (of Void)' did not have closed centrolity but was open to landscape with axis to integrate wish in the world for eternal peace.

Towards a Urbanism

The Hiroshima Peace Center could be said to be a starting point for Tange towards developing the idea of the 'Core and Axis' in his subsequent projects for the city halls in the western part of Japan and the Olympic gymnasium in Tokya in the 1950s and 60s.

Japanese architects were primarily concerned with developing a systematic planning methodology applicable both to building design and construction and to urbanism through the 1960 Tokya Plan by Tange. Subsequently, the Metabolism movement

came farth in Japan in synch with Archigram's activities in England.

At the same time, Tange devoted much effort to educate young architects like Isozaki and Kurokawa at the University of Tokyo and his own office, as is typical of architect-professor in Japan. Tange was the first architect and educator to introduce the notion of 'Urbanism' and 'Space' in the Japanese architectural discourse both through theory and practice.

For Tange, the consideration of urban scale very well could have been one means of integrating Western and Eastern thought by experiencing the primary international discussian on "The Core" in the CIAM8.

As a supplemental task of the historical investigation, it should necessarily attempt ta identify Japanese architects committed to the modern movement of the CIAM before the World War Second and identify what they proposed through the remaining documents. These questions will lead us to a more complete recording the documents of the CIAM, especially in the postwar period.

It is essential that we identify views outside of orthodox European madernism to incorporate the perspectives of Sauth America and Asia including Japan and India. The exploration of Tange's works provide one such lived experience of an architect who sought to form a modern Japanese society.

Fig. 1 – Hiroshima Peace Centre. Ten Yars Ceremony forthe end fo war

Fig. 2 – Hiroshimo Peace Centre. Axis for prayer.

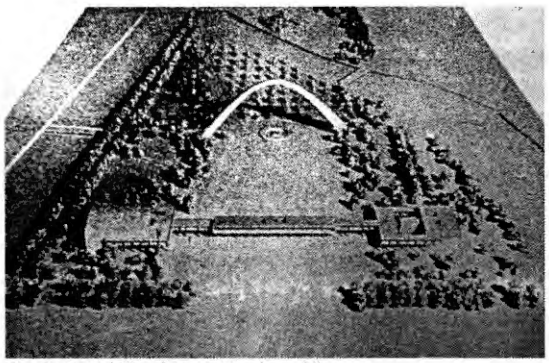

Fig. 3 – Initial Plan (Competition) model.

Fig. 4 – Tange´s Office. Left to second tange

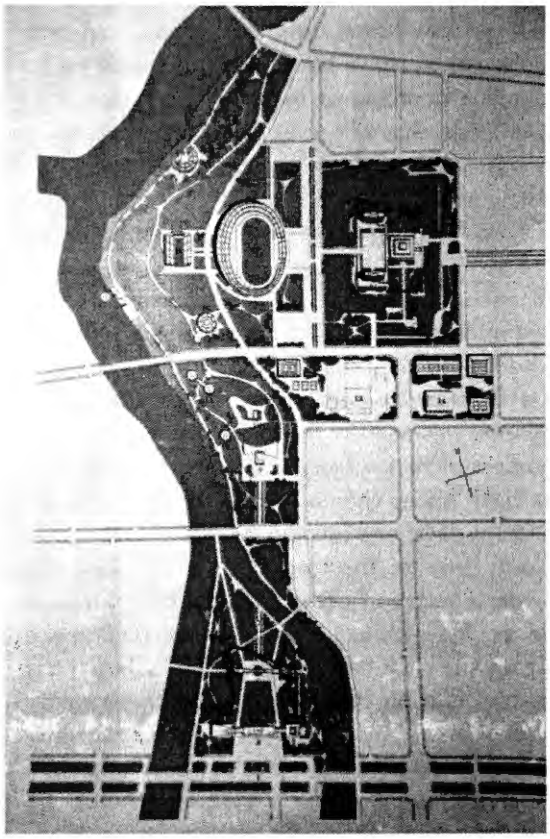

Fig. 5 – Hiroshima Peace Centre. Presentation board. For CIAM 8.

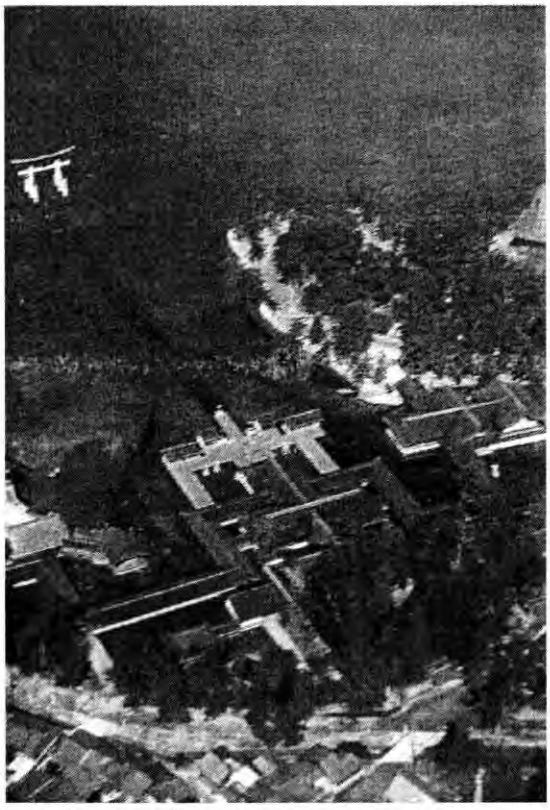

Fig. 5 – Itsukushima Shrine

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Guilherme Mazza Dourado

Public Spaces by Burle Marx

No other landscape architect has been the protagonist of such significant experimentation in the creation of parks, squares and public gardens in Brazil as Roberto Burle Marx (1909-94). One only has to remember that it was Burle Marx who planned the Parque do Flamengo, in Rio de Janeiro, one of the most important – if not the most important – urban green area planned and executed in Latin America in the second half of the twentieth century. It was Burle Marx who renewed these structures in Brazil's cities, giving them a modern content that distanced them from the tradition that had gradually been consolidated in Brazil since the second half of the 19th century.

After 1850, the reflections of social and ecanomic stability began to be felt in the transformation of the features of some of the country's principal cities, beginning with the imperial capital. Rio de Janeiro came to benefit from a progressive transfer of capital accumulated with the slave trade to real estate business and urban infrastructure, an a previously unseen scale. The city experienced euphoria with all the new works and urban improvements, with sumptuous public buildings, broader streets and avenues and cobblestone paving (1853), gas lighting (1854), a sewage disposal system (1862) and many other novelties.

The secand half of the 19th century was also the time when the creation of public and private parks gathered momentum in major Brazilian cities. Changes in the urban standards and lifestyles of the upper and middle classes led to the appreciation of garden spaces in the domestic environment, presenting opportunities for the use of ornamental plants an an unprecedented scale in the country. Remodeling projects and the construction of new avenues and public spaces came to use vegetation as their principal constituent element, ta an extent never seen before. Nevertheless, the choice of botanical specimens was as a rule based on that love of the foreign characterizing so many other activities of the time: preference was given to a limited selection of species imported from Europe, rather than ta endemic plants.

It was left to Auguste François Marie Glaziou (1833-1906) to attempt to minimally reverse this situation. A French botanist, landscape architect and hydraulic engineer who had worked with Jean Charles Adolphe Alphand (1817-91) in designing the Bois de Boulogne and Buttes-Chaumont, Glaziou was head of the department of parks and gardens of the Brazilian Imperial House from 1869 to 1897, taking charge of the remodeling and creation of parks and squares, especially in the city of Rio de Janeiro. The renovation of the Campo de Santana (today's Praça da República) and the gardens of the imperial palace of Quinta da Boa Vista were some of his most important works, based on a re-interpretation of the English landscape garden of the 18th century and pioneering landscaping experiments with Brazilian plants. Nevertheless, between giving preference to the use of native species, according to romantic notions, and creating a model genuinely suited to the Brazilian reality, there was still a large gap to be filled.

Facilitating a positive perceptian of Brazilian nature, unveiling its unique qualities as a point of departure for the preparation of o national culture, was a challenge that gained force among a progressive intellectual circle in Brazil, beginning in the 1920s: a challenge that was shared to a greater or lesser degree by writers, artists and architects seeking the consolidation of modernity in Brazil, working together in the same ideal for a braad socio-economic renewal hitherto unknown in the country. In the arts, in literature and in landscape architecture, the recognition and interpretation of Brazilian flora without the distancing and idealism of the romantics delineated not only esthetic paths in a negation of academic thought. Above all, they expressed the desire to neutralize the backward attitudes and behaviors of the time, synthesized in the mentality of seeing oneself as a foreigner in one's own country, and replacing them through the construction of a culture identified with national values and realities.

Projects in Recife

In landscape architecture, the consolidation and expansion of this effort at renewal occurred with the appearance of the young Burle Marx who in mid-1934 was chosen to head the department of parks and public gardens in Recife, capital of Pernambuco State in the country's Northeast region. In summarizing the implications of this position, suffice it to

say that it was the first concrete opportunity of bringing modern landscape architecture to public works in Brazil, until then restricted to private patronage.

Burle Marx launched a program to rethink public spaces in Recife, combining remodeling several of the principal existing areas of collective leisure, such as the Praço do República, and the creation of new structures, such as the Jardim da Casa Forte, for a total of 15 interventions in different areas of the city.

In this series of projects, Burle Marx initiated a reflection on the modern content that green spaces would take into account, emphasizing four main aspects: the recreational, the artistic, the educational and the environmental. He foresaw the growing impartance that squares, gardens and porks would have in a future city transformed principally by the rise in the height of buildings to accommodate an ever growing number af people, by the reduction in private leisure areas and by the harmful effects of industrialization on the quality of the environment, and absorbing some influences from the urban visians of Le Corbusier.

Burle Marx had a clear idea of the role of modern landscape architecture and its power of transformation in the generation of better living conditions through public green spaces. In an article published in the Recife newspaper *Diária da Manhã*, dated June 22, 1935, he wrote:

> *[...]in large cities the modern park represents a veritable collective lung. It is within it that the urban inhabitant comes to breathe a little pure air, tired of the daily struggle in clased-in offices, asphalt streets and factories.*
> *It is within it that children living in high-rise apartments, houses with cramped backyards or in collective housing can find an open space for their games, enjoying pollution-free air. [...]*
> *The role ployed by trees and park environments in cities is already well known as regards their effect on climatic conditions. [...]*
> *From the educatianal point of view, the purpose of the modern park is to bring a little love of nature, supplying us with the means to distinguish our own flora from the exotic [...]*

Casa Forte garden

Among the most representative of the projects was the Caso Forte Garden. This was one of the first progmatic and programmed alternatives to the excesses of the eclectic public garden, without completely breaking away from the academic principles of symmetry, or from compositional axes and from the axial prospects, although giving up the use of *parterres* and topiaries.

In the same article published in the *Diário da Manhã*, of June 22, 1935, Burle Marx gave the local community a detailed explanation of his plans for Casa Forte:

The garden will be composed of three lakes, obeying geometric forms of the greatest simplicity. Each one of these, as an educational function, will represent a group of aquatic flora isolated by the geographical origin of their elements, subordinate to the idea of the whole.

The central circular lake will have aquatic flora from the Amazon. In the center of this lake, a statue by Celso Antonio is to be placed, portraying an Indian woman bathing. Surrounding the lake will be a row of mulatta calycaphyllum trees, an interesting tree due to its column-like trunk and symmetrical crowns, of great effect in landscaped gardens. Alongside the entrances to the promenade surrounding the lake will be beds of caladia, adding color to the locale. In the four angles will be groups of palms from the Amazon, such as: scheellias, assais, mumbacos, bacabas, urucuris, jouaris etc.

Regarding the two rectangular lakes, ane will be dedicated to American flora, the other to exotics. In the former will be found all the variety af the aquatic plants found in our rivers and riverbanks. Araund the lake will be bordering plants such as philidendra of the Araceae family, the well-known caladia fram the Amazon, with its many-colored leaves; several examples of grasses etc., giving an appearance of tropical exuberance. Walking from the inside to the outside, we will find a lawn and a promenade. And lastly, there will be two avenues with trees such as Bignonia, coral trees, silk-cotton trees etc.

The exotic lake will contain the aquatic flora of the tropical regions of the other continents, such as the lotus, an aquatic plant from the Nile, widely cultivated in India, as well as *Cyperus papirus*, another Egyptian genus. Among the lake's border species will be species of great beauty such as *Canna indica*, *Salla aethiopica*, *Crinum powell*, Strelitzia and several decorative musaceae. Of the larger zinziberoceae we will plant the bastã-do-imperador. And among the trees lining the lake will feature: the pão-teka, red and yellow flowering flamboyants, various ococias etc.

Madalena Cactarium

The most controversial project was certainly the Madalena Cactarium (later renamed Praça Euclides da Cunha). Manipulating the accentuated contrasts between light and shade and of scales of plant mass, Burle Marx planted avenues of trees typical of Brazil's Northeast on the perimeter, such as the umbra tree, joazeiro (*Zizyphus Joazeiro*) and pous-d'arco (*Teconia Heptaphylla*), creating shady areas for rest and permanence, and illuminated the central areas to emphasize several Brazilian genera of cactus and species of euphorbiaceae and bromeliad.

This was a solution that signified not only a cultural act of constructing new values and perceptions concerning elements of the Northeastern landscape, but also and above all an answer suitable to the conditions of the local biota. This scientific dimension in attending to botanical and environmental questions was to soon become one of the trademarks of his work.

In a short article published in the *Diário de Recife* of March 14, 1935, Burle Marx explained the essence of his proposal:

A garden that, in protecting us from the sun, also allows us to see something of the curious flora of the Brazilian Northeast. (...) We have intentionally created a cactarium to bring together in it the greatest number possible of Brazilian genera of the cactus family: Cereus, Melocactus, Opuntia, Pilocereus, blocks of stone and plants from the families of the bromeliads and the euphorbiaceae will complete this Northeastern environment.

Pampulha Casino

It was only in the period 1942 to 1945 that circumstances allowed Burle Marx to continue the experimentation begun with public spaces in Recife. The landscape architect was charged with designing a series of parks, squares and gardens in the state of Minas Gerais, among which the surroundings of the Pampulha Casino in the city of Belo Horizonte. The area consisted of a well-defined antechamber with natural elements, which subtly signaled the transition into the interiors of a fine building designed by Oscar Niemeyer. Redefining the topographical virtues of the locale – an elevated peninsula -, Burle Marx marked strategic areas of the lawns with predominantly herbaceous and shrub species and just one group of palms, drawing lines and visual force fields that led the eyes toward the building.

With qualities imperceptible at a distance, it was the frontal area ordering the accesses to the architecture that was the principal environment of the landscape solution. Its lively grounds contained a small central depression with a lake for the cultivation of aquatic species and of moist soil. This was a space structured according to more elaborate associations of colors than those in the surrounding area, achieving dynamism with the seasonal characteristics of the vegetation.

Parque do Barreiro

Following the Casino gardens, Burle Marx embarked on a seminal experience for the times: the planning of the Parque do Barreia, next to the Grande Hotel and Spa, located around eight kilometers from the city of Araxá in the state of Minas Gerois. The complex was an ambitious landscaping and architectural project of state governor Benedito Valadares, and it soon figured among the biggest government-financed undertakings in Brazil in the forties.

In July 1943, when Burle Marx began designing the landscae project in partnership with botanist Henrique L. de Mello Barreto, the hotel was almost completed and consisted of no less than 320 apartments, with all the infrastructure needed to provide maximum comfort for 600 guests. These included special recreational salons for smoking, a casino, restaurant, cinema-theater etc. The spa too was almost finished, with its 120 bathing rooms and partitioned areas for various types of medicinal treatment.

Burle Marx's access to Valadares led to other work fronts: the Andrade Júnior pavilion with its alkaline sulfur springs and a new architecture project for the sports complex. Burle Marx handed over these projects to Francisco Bolonha (born in 1923), who was an apprentice training in Marx's office at the time. The solution adopted by Bolonha for the thermal spring pavilion was based on a daring curved roof, launched in complete plastic harmony with the landscaping of Burle Marx, in a convergence that had not been possible to estoblish with the two principal buildings planned in Mission style by Luiz Signorelli.

The Parque do Barreiro was the first project in which Burle Marx studied on a large scale the curves in the compositional organization of the landscaped whole, breaking with the previous syntax of the Pernambuco phase and the revisiting of academic principles, in favor of modern plastic concepts, such as asymmetry. It was a project that mainly signaled the introduction of a new focus in his work, which would strengthen over the following years. And this was the ecological interest in flora and the natural environment, with increased appreciation of the potential use in landscaping of plant associations already existing in nature itself. Making gardens, designing parks, constructing landscapes became not only an esthetic-cultural project, but also one that was scientific.

A pioneering project in Brazil, the park comprised 25 environments that sought to creatively reinvent the natural landscapes of Minas Gerais, emphasizing the wide variety of species occurring in the state's flora. The project's presentation drew attention to the fact that this unheard-of solution was not only an objective and suitable alternative, but also represented a critical view of "the monotony which as a rule one sees in the majority of other [parks] in Brazil, derived from the use of a restricted number of elements, mostly exotic species, continually repeated until resulting in a uniform appearance."

The main avenue of access to the hotel and the spa would be formed of rows of wild pines of the

Podocarpus genus. Close to the right flank of the spa there was to be a palm grave with buritys, babassus, inadiás, macoúbas, guarirobas, jerivás, cauldron palms, tucumas, among others, followed by a section associated with extremely dry climates (xerophiles). There would be a cactarium and plants typical of the state's *caatinga* (dry scrub) vegetation, such as barrigudas, embiruçus, jaracatiás and spurge nettles. And following this, a group characteristic of the iron-ore bearing clay soils of the Serra do Curral mountain range, with tree lilies, arnica, orchids, bromeliads and various other plants.

One then crossed an area of semi-xerophyte species, which extended to the bridge to the Ilha dos Amores Island, composed of species of *tabebuia* (ipê), cassias and other dense, leafy plants. In the following stretch, on the higher slopes of the elevation leading to the perimeter avenue, were to be denser woods with various species of Brazilian spider flower. Almost at the sports complex were to be planted hot climate, thorny species from the limestone formation of Bambui. The side of the hotel facing the lake would have gardens of araceae and rocks. At the front face would be plants from the Itacolami series. In this same area, near the canal draining the acidic waters, there would be resistant lavoisieras, microlicias, trembleyas, among others; and in the drier parts, quartzite vegetation.

The official inauguration of the complex took place on April 19, 1944, although the work on the gardens was not totally concluded. The work continued though mid-August of that year, when it was stopped despite appeals to the governor by Burle Marx. Of the 25 sectors originally planned, seven were never realized.

Praça Santa Rosa and Parque Vereda

With the frustrating interruption of work at the Parque do Barreiro, Burle Marx turned his attentions back to Pampulha in Belo Horizonte, aiming to get further state government projects in the residential neighborhood, where he had already worked two years before. Between 1944 and 1945, he managed to convince the mayor, Juscelino Kubitschek, who would later become president of Brazil and initiate the construction of Brasília, to equip the region with a further series of public areas for recreation and leisure. In this series of projects, there were two that took up and continued the studies at Araxá. These were the Praça Santa Rosa and the Parque Vereda.

The Praça Santa Rosa was based on the use of a vast range of xerophylite plants (191), that is, adapted to stony desert environments, brought together in three large groups – one following ecological criteria and the others according to geological and phyto-geological characteristics.

The Vereda Park consisted of a systemic approach to the role of water, riverbanks and the relationship between flora and fauna in the creation of public green spaces for recreation. This was at a time when the presence of open rivers or badly drained or filled wetlands was synonymous with unsanitary conditions and backwardness in the country's urban environment.

These were proposals that sought not only an immediate answer suited to the conditions of the land in which they would be implemented, or even the use of pre-existing plant formations, but also signaled the consolidation of an ecological and conservationist approach completely unheard of in terms of landscaping in the Brazil of the forties. This was at a time when there was virtually no social awareness over the need for rational management and preservation of the natural heritage. Nevertheless, the innovative nature of the two proposals ended up not seeing the light of day.

Praça Salgado Filho

Two years after the proposals for the Praça Santa Rosa and the Vereda Park, in 1947, Burle Marx began the planning of his first public park in Rio de Janeiro: the Praça Salgado Filho. This consisted of a green reception area for travelers landing at the city's Santos Dumont airport.

The landscaping proposal was based on the idea of producing a beautiful showcase of tropical Brazilian vegetation, offering the visitor principally native species seldom seen in the country's public spaces, nor even in urban landscaping projects. The space was organized taking as its center point a lake for aquatic species, exploring accentuated formal chromatic contrasts and textures between the groups of trees and palms, asymmetrical balances of scale of the vegetation groups and contrasting arrangements between the areas paved with Portuguese mosaics, lawns, flower beds and groups of rocks.

Undertaking this showcase for the city was a task with several specific conditions. The ground for the project was reclaimed landfill, with sandy or rocky soil. Jutting into the sea, the area was at times swept by strong winds and the soil highly saline.

These conditions gave Burle Marx the idea of using a selection of resistant and already adapted vegetation, such as several species from sandy tropical coastline vegetation (*restinga*), as well as the possibility of testing the behavior of other plants, taking into account the associations and symbioses that could become established in the project, in a clear desire to continue the ecological approach used in Minas Gerais.

Various species were introduced for the first time in a Brazilian urban public space, which soon adapted and thrived in the environment, such as *Clusia*

fluminensis Planch. & Triana (abaneiro), *Cecropia lyratiloba* Miq., *Triplaris surinamensis* Cham. (ant-tree), *Ceiba erianthus* (silk-cotton tree), *Bactris setosa* (tucum-do-brejo palm tree). Gradually, the Praça Salgado Filho became a successful test balloon for the more complex project to come: the Parque do Flamengo.

Parque do Flamengo

Carlos Lacerda, the recently inaugurated governor of the state of Guanabara, created after the transfer of the federal capital to Brasília, charged Maria Carlota de Macedo Soares (Lota) with continuing a project that had dragged on through various city governments, namely the conclusion of the urbanization of the reclaimed land along the shoreline of the neighborhoods of Glória and Flamengo. Lota accepted the challenge, although with conditions. She was not in agreement with the original use previous administrations had planned for this unique area reclaimed at such cost from the sea: namely express traffic lanes to solve the problem of communication between the north and south zones of the city. Her plan differed greatly: to create a gigantic park that would preserve some of the city's most singular landscapes, at the same time furnishing improved leisure space for its inhabitants.

To carry the project forward, Lota brought together some of the most respected professionals of the time. Toward the end of 1961, she formed the Work Group for the Urbanization of the Landfill with Affonso Eduardo Reidy, Jorge Machado Moreira, Roberto Burle Marx, Luiz Emygdio de Mello Filho, Hélio Mamede, Sérgio Bernardes and Berta Leitchic. Reidy was charged with the general coordination of the team and the conception and development of the necessary buildings and equipment, together with Moreiro, Mamede, Bernardes and Leitchic; Burle Marx was made responsible for the landscaping, assisted by Mello Filho and Maria Augusta Costa Ribeiro.

In February 1962, the group presented the governor with a preliminary study for the park. The occupation of the reclaimed area of around 120 hectares was based on the premise of not creating focuses of interest, but rather implementing the groups of plants and various equipment and buildings along the whole extent of shoreline. There were to be restaurants, sports courts, playgrounds, an area for flying model airplanes, a theater, an aquarium, a bicycle path and a network of paved walkways, in addition to the redevelopment of the beaches for bathing. Pedestrian access would be by overhead walkways and subterranean passages, circumventing the problems posed by the expressway; there would be various parking lots for access by automobile.

The landscaping project was the most complex and ambitious part of the intervention. Dividing the park into 11 sectors, Burle Marx aimed to formalize the green spaces through the use of a vast selection of shrubs, tress and palms, - 240 species from Brazil and the tropics in general -, making for an experiment unprecedented in his career. The trees and palms were planted in homogenous groups, following landscaping and botanical criteria. Except for the grass areas, there were to be no herbaceous plants in general defining the horizontal planes and volumes of low stature.

The feasibility of realizing a project of this size over a relatively short period naturally presupposes the organization of various simultaneous work fronts. What fled control, however, was the difficulty in harmonizing the objectives and idiosyncrasies at ploy within these fronts. The method of proceeding with the landfill was one of the first impasses, in 1962. Several of the engineers in charge of the landfill proved adamant in refusing the request of the landscape architect and his assistants to not bury the best soil, leaving only sand on top.

Getting vegetation in sufficient quantity and variety to plant an area of over 1 million square meters had to be planned as if on a war footing, such was the amount of employees and effort involved. First, a nursery for seedlings was set up on a one-hectare site on the landfill itself. This was located on purpose facing the entrance to the bay, so that the behavior of the plants and their adaptation to the environment's salinity and high winds could be tested before their transferal to a permanent site. Nothing previously done was able to serve as an example.

The nursery was supplied with samples collected from the natural environments surrounding the city, furnished by the city's department of parks and gardens and by the Botanical Gardens of Rio de Janeiro, and also taken from the Parque Laje (abandoned at the time) and from old country estates, as well as being brought from outside the state and even the country. Many seedlings were bought from horticulturists and nursery owners in São Paulo and brought to Rio by truck. Seeds were ordered from abroad.

The vast area of the park was planted between 1963 and 1965, requiring around 16,250 samples selected from 240 different species. For many of them, it was their first appearance in Brazilian urban landscaping. This was so with the trees: *Acacia seyal* (pique-de-gazela), *Bauhinia blakeana* (pata-de-vaca), *Bombax malabarium* (imbiri), *Bumelia obtusifolia* (Ibiraniro bumelio), *Calophyllum inophyllum* (apricot), *Chorisia insignis* (a type of silk-cotton tree)), *Coccolaba uvifera* (beach berry tree), *Cordia myxo*, *Cordia superba* (a shrub of the Boraginicae family), *Dillenia indica* (árvore-da-pataca), *Enterolobim contortisiliquum* (tamboril), *Erythrina fluminenis* (coral tree), *Erythrina* sp. (caral tree), *Erythrina velutina* (coral tree), *Ficus*

Fig. 1 – Madalena Cactarium (Praça Euclides da Cunha), 1935-37, Recife.

clusiaefolia (red fig tree), *Hura crepitans*, *Joannesia principes* (anda-açu), *Parkinsonia aculeata* (Jerusalem thorn), *Peltophorum dubium* (farinha-seca shrub), *Pithecellobium tortum* (jacaré), *Pseudobombox ellipticum*, *Schinus terebinthifolis* (pepper tree), *Vitex megapotamica*, among others. And the palms: *Allagop-tera arenaria* (guriri), *Butia capitata* (bitiá-da-serra), *Carypha umbraculifera* (talipot-palm) *Dictyosperma album* (palmeira-furação), *Veitchia joannis*, among others.

Even as the planting of the park progressed, political pressures from real estate developers wanting a piece of the cake did not entirely abate. Seeing this, Lota took precautions. In 1964, she consulted Rodrigo de Mello Franco and made a formal request to the Historic and Artistic Heritage Service for the project to be listed. This was the first case in the history of the conservation of national heritage assets that a landscaping and architectural complex became listed as a protected site before it was even finished. However, Lota did not stop there. Seeking to also guarantee a future free of political injunctions and intrigue for the park, in 1965 she set up a foundation charged with its administration, with the backing of various intellectual figures and personalities in the city.

Burle Marx was able to transform an area of landfill that could have easily gone disastrously wrong into one of the most stunningly beautiful locations in the city of Rio de Janeiro. He also created one of the most important symbols of the optimism of a generation that put its faith in its capacity to transform the Brazilian city, making it a better place to live.

Fig. 2 – Parque do Barreiro, 1943-44, Araxá.

Fig. 3 – Parque do Flamengo, 1961-1965, Rio de Janeiro.

KEYWORDS

Roberto Burle Marx, public spaces, urban landscape, landscape design

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Franco Panzini

The "Ville Verte": rethinking city landscape

The "Ville Verte"

Within the development of twentieth-century city, architects and town planners have conceived the presence of green features under two facets: on one side they are tools to ameliorate the spatial quality of neighbourhoods and specific areas, on the other side they are strategic elements by which it is possible to elaborate a profound re-thinking of the identity of the modern city in itself.

The end of nineteenth century saw the birth of Ebenezer Howard's theory whose results produced the garden cities of early twentieth century. By means of the "harmonious wedding" between city and country the garden city was to become a real alternative to the unresolved growth of the towns produced by the industrial revolution. More than two decades after Howard's experiments, Le Corbusier was the first to elaborate a new urban model, which could represent a strategic alternative to the existing city, though still influenced by Howard's theory. Through his design Le Corbusier was able to rethink the role of green features within the built areas; he conceived naturalness as a tool to reshape the urban environment. In the corbusian vision, the modern city was to be planned in all its aspects, elements and functions; within them a diffused green network would play the role of connective tissue, to recall the metaphor of the human organism.

Le Corbusier was deeply convinced that any solution to the crisis of the city would necessitate of a pact between architecture and nature. By 1922 his proposal for the "Ville contemporaine pour 3 milions d'habitants" was fully formulated. The "Ville contemporaine" is a city of skyscrapers two hundred meters high, where the geometric forms of the buildings emerge from an uninterrupted green plane shaped as a landscape garden, crossed by a grid of elevated highways. The green spaces, which penetrate the interstices among the buildings become the tool to create the relationship among the urban parts; they allow building a new environmental unity under the mark of the nature into the city.

In the following years Le Corbusier developed his thoughts in a new project of ideal city, to which he gave publicity at the III CIAM Conference, held in Brussels in November 1930. Epitomized "Ville Radieuse", it is a proposal for a green city with high residential density. On the drawings, which represent his project, Le Corbusier introduced the new slogan, which will characterise his new city: "Ville Verte".

The uninterrupted green plane becomes the continuous surface, which holds large residential blocks, while strips of parklands separate the functional parts of the city.

The strongly fascinating image of the corbusian city differs from all the others anti-urban ideologies of his time. His project clearly shows that the new green city is not a rarefied city, with few inhabitants dispersed into green areas. It is a large metropolis for vast quantity of inhabitants with a density, which could be even bigger than the one in the existing city. Nature, sunlight, and air break into the urban scene.

These aspects redefine the characters of the new modern planning, though their enforcement sees a random diffusion and some of the most brilliant results are achieved quite far away from Europe, its land of origin.

Le Corbusier himself has had one single opportunity to apply his principles at large scale; this is the case of Chandigarh, the new capital of Punjab in north-eastern India, whose plan Le Corbusier designed from 1951 onward, explicitly referring to the "Ville Radieuse" model, the city of modern times. Many scholars have discussed the qualities and the deficiencies of Le Corbusier's design for the three major buildings, which form the "Capitol" of the new city. Instead, very few have given relevance to the fact that Chandigarh offers a unique example of a green city of the twentieth century.

Recalling the masterly designed plan of the seven V, a hierarchical grid of green spaces intersects the city. The Leisure Valley Park, a major fluvial park crosses the entire urban area; a system of linear green spaces, equipped with school facilities and sport fields, goes across the residential sectors; parkways and green streets inside the sectors mark this urban strategy. They set up the backbone of the complete urban structure. Furthermore they connect the structure of the city to the morphological pat-

tern of the encircling rural territory by means of an intersecting linear system of water and green features and the large use of tree-plantations and parks.

In his plan Le Corbusier introduced elements taken from nature as architectonic material with the objective to give shape to a the new urban landscape. He has entered each detail of this global planning and studied the relationships between vegetation and form and type of tree-plantation.

Their selection received much accuracy. In 1953, with the birth of the "Landscape Advisory Committee" Le Corbusier began to collaborate with a group of experts, and among them with doctor M.S. Randhawa, a renown Indian botanist who assisted him with the choices and the modalities of grouping.

A similar concept of fusion between the characters of the cityscape and those of the natural space has inspired some projects developed in Brazil. It was applied by Costa and Niemeyer in their plan for Brasilia (1956 onward) and was the matrix in the planning of the Flamengo Park along the edges of Guanabara Bay, in Rio de Janeiro. This magnificent waterfront was built between 1954 and 1964 by a group of designers led by Mario Carlata de Macedo Soares; Roberto Burle Marx designed the landscaping. Gardens, beaches, sport fields, public buildings, such as the Museum of Modern Art, a major urban highway, all fused in a planned continuum make this area a remarkable example of a new town heart conceived within the theory of the modern movement city.

In Europe, the accomplishment of Le Corbusier's principles has mainly resulted in the diffusion of planning techniques based on the introduction of parameters which regulate the criteria for the explaitation of the ground and the relationship between built space and green space. Town-planners call these parameters planning standards. In many countries the introduction of these standards has been the only guarantee of a diffuse presence of green spaces inside the new expansion areas.

This process did not led to the realization of the "Ville Radieuse" rather to a partial surrogate. In the years ofter the end of Secand World War and mainly in the countries where the modern movement has had a strong impact, many new neighbourhoods and satellite towns were designed showing a high percentage of diffused green features.

Convincing projects of this highly rationalized planning featuring a strong presence of diffused green spaces can be found, for example, in the Netherlands. The rationalized planning of the territory according to diverse scales has produced very remarkable results and true manifestos of a new enviranmental aesthetic. In the small rural town of Nagele, build at the end of the '40s on the new reclaimed land of the Noord-Oostpolder, the functionalist architects of the groups "de 8" and "Opbouw" have achieved paradigmatic results. In Nagele the model of the functional planning has been integrated into the historical tradition of the construction of the rural landscape. The architects were able to develop a project, which ended in the affirmation of a new environment with no breaks between architecture and man-made nature, between solid built and green built. The global rationality of the construction assumes aesthetic values and meanings.

From the '70s onward this model of glabal plonning passed through a crisis, whose reasons are various. On one hand, the focus an large-scale design has diminished the discourse on the quality of architecture per se and deprived the value of the urban environment. On the other hand, the attention of architects and planners has drastically moved from the new city to the rehabilitation of the existing districts.

This retreat toward the built fabric of the historical city finds a well-known example in Barcelona. The Catalan designers have put in practice a strategy of urban renewal which has put less efforts directed to the planning of the city as global entity. Rather, they have privileged a leopard skin strategy, selecting single interventions and acting on specific strong knots, which would originate a process of transformation and renewal of the already existing city. The results are of great interest, though they seem to weak the significance of the integration between architectonic canstruction and nature so strongly evoked by Le Corbusier's models. Instead, they seem inspired by nineteenth-century concepts, which go back to Haussmann and his Parisian plan, and to the principles of aesthetic and hygienic betterment achieved thraugh inserting green spaces and tree-plantations along the streets of the city.

Nevertheless Barcelona has become an exemplary case study. The Catalan architects have proved that it was still possible to include green elements within the existing urban fabric even when it seemed that no empty spaces were available. As a consequence these new green spaces have become effective tools of the municipal policy toward urban renewal.

In more recent years, the corbusian principle of ample natural spaces integrated within the urban environment is regaining a certain vitality. This change of approach has proved to be fruitful under various aspects. The technological developments are indeed offering to architects and planners the chance for a new interpretation of those visionary models. By the same token a widely spread critical concern toward urban environments in which all traces of naturalness have been cancelled has favoured the conception of new buildings where green spaces, vegeta-

tion and trees are not decorative accessories applied to architecture. They join architecture in a way that eliminates the distinction between landscape and building as separate entities. The improvement of the technical know-how has facilitated the infilling of large green spaces inside or on the roof of existing buildings, transforming the construction into a hybrid between building and green features.

At the end of the '60s a pioneering example of integrating a residential complex into a semi-public park, covering the entire building, was designed by Roberto Gabetti and Aimaro Oreglia d'Isola, with Luciano Re at Ivrea (Italy). The half-circle shaped "Unità residenziale ovest", promoted by Olivetti shows a conscious approach of the designers toward the encircling natural environment, blending the building with the park.

In the '70s another innovative example was offered by Hans Hollein, who designed the Abeitberg Musem in Mönchengladbach, Germany. Here the museum and the public garden become a new unity significantly conceived. The whole building smoothly lies down along the slope of a hill. At the bottom is the public garden, at the top the museum entrance, which is the only piece where the architecture gains its authority. In between the two entities --nature and architecture, the garden and the museum— are intertwined. The contamination is emphasised by the substance given to the design of the contour lines of the hill, creating an imaginary landscape both artificial and natural. The garden extends upon the museum building that develops underneath. Therefore the whole roof surface is left free to become the public garden. The light penetrates the museum rooms through large domed windows. The process of contamination is made explicit by the way of the global composition.

In the Palais Omnisport, a sport palace built in Paris between 1979 and 1983, and designed by M.Andrault, P.Parat, A.Guvan, the external walls have been completely greenified to simulate vertical lawns. This project goes far beyond the search for a new technological skill. It is rather a new way of conceiving the landscape design. In fact the Palais Omnisport is the terminal point of the new public Parc de Bercy. It offers to the green feature of the park a three-dimensional connotation. Even more it has a strong iconic meaning in representing the possibility for the green feature of breaking the closed boundaries of the park, and starting attacking the built city.

In the campus of Delft university in the Netherlands, the architect group Mecanoo has proposed a similar solution. The green space surrounds the building of the new library and climbs its roof. The building appears as generated from the ground in a strong symbiosis between earth and sky and with the elements that constitute the surrounding urban landscape. The internal space gives a deep sense of protection and tranquillity to the users, mostly due to the strong naturalness of the architecture.

Quite opposite in its features the Umeda skyscraper in Osaka seems to celebrate the myth of the most advanced technologies, a recurrent issue in contemporary Japanese culture. Unexpectedly the building raises from a large garden underneath, which is the replica of a wooden environment with tall trees, intersected by clear streams. In this case the technological achievements and the essence of the primeval nature are deeply intertwined.

The Jardin Atlantique in Paris offers a series of different environments: forest trees, playgrounds, and open lawns. The appearance is very much close to the many public gardens of the recent years. Yet what is exceptional in this case is the site, the location of the garden. The Jardin Atlantique is indeed realised upon the extended canopy that covers the railroad tracks of the Montparnasse station. The two and half hectares of the Jardin Atlantique are a hanging garden, more than twenty meters high, over the tracks the fast trains to the Atlantic coast are leaving from. The garden in itself, conceived as a sequence of quite different areas, embodies the idea of the travel. The many different species that are included are closely related to the coastal environment of the Atlantic Ocean, the final destination of all the trains leaving the station underneath the garden.

The following is another project realized in Paris. A dismissed train track, which reached the edge of the city centre at Place de la Bastille, has been transformed in a green promenade, the Promenade Plantée. What is exceptional in this case, beside the length of five kilometres, is the location of the promenade in relationship to the street section. The train track run on a high viaduct supported by brick arches; the Promenade Plantée runs at the same level, which is the height of the upper floors of the buildings or of the roofs. It even extends its course into small gardens, which have been realized on the top floors of pre-existing multi-storey buildings.

In Stuttgart, Germany, a new plan for the city centre is presently facing its initial phase. The plan's goal is to redesign the core of the city around the central station designed by Paul Bonatz in the '30s as a terminal station. The most innovative and qualifying feature of the plan is given by the relocation of the tracks' network under the street level, which will also convert the station into a transit station. This transformation allows the clearance of large areas in the most inner part of the city; these areas, where new buildings will also arise, will be mainly treated as open green spaces, which will create the new centre of the city of the future.

The concept of the interplay between architecture and green elements does no longer concern one individual garden or one individual building; this kind of contamination extends its effects to the whole urban environment. In this specific case, taking advantage from the possibilities derived from the relocation of tronsport infrostructures under the soil, unexpected perspectives are open to a creative use.

All these examples show a high degree of invention with the objective of introducing green spaces in those neighbourhoods where the lack of free ground would make impossible to realize new gardens. What was few years ago the future has become the daily reality. At the present the deteriorated urban environment can be effectively reshaped through the insert of new connecting elements and green channels.

Other interesting examples of this rethinking of the urban environment in the direction of major core for naturalness are more and more frequently offered by cities grown along river banks.

In New York city, the whole western edge of downtown Manhattan has been totally reconfigured by inserting a linear park, the Battery Park, which skirts the urban fabric along the Hudson river. In this case, the area is the result of the reclamation project of part of the bay. The lineor park meanders inside the very dense construction of the financial district and breaks the continuity of the riverfront creating small harbours and green squares.

Similarly in Tokyo, the reclamation of one part of the bay area where the old harbour was located, has resulted in the construction of a new neighbourhood, called Tokyo Bay. The complexity of existing urban fabric, crossed by large infrastructures, is retained in the new planning. The lovely beach, which forms the edge af the new park, can induce to an optimistic sense af naiveté. In fact the whole Takyo Bay is a new landscape integrally invented in the heart of the metropolis. It is the result of a new vision, which mixes up the rules of the traditional urban planning. Looking around one is attracted by apparently natural features, which intertwined with highly sophisticated buildings and technological infrastructures.

The traditional concept of the green space within city, initially expressed by the nineteenth-century concept af public garden, is slowly loosing its authority. It is vanishing at the advantage of a complex network of green fragments, which are constantly eroding the concrete materiality of the existing city, slowly creeping into its anfractuosities, rising on the roofs, ond occupying its open spaces and emptiness.

Recently, in Italy, a successful series of commercial TV spots, advertising naturally produced cookies, showed how historical cities would look like, if open spoces, for instance worldwide known squares, would be filled up with wheat fields and more generically with fragments of countryside. Though advertising and TV play with virtual urban landscapes, these evocative images could show, even if from the point of view of the commercial media, a new operational approach to landscape architecture. Nowadays the process of beautification of the city could enlarge its boundaries to the point af considering among its task the redesign of the whole urban environment as a new entity.

The "Ville Verte", conceived by Le Corbusier as a concrete alternative to the existing city, has been probably dismissed too quickly under the pressure of the technocratic planning of the '60s and early '70s, simplistically enlisted among the utopias of the past. The values of that conception have being recently revitalized by some successful projects and, not least, by the present ecological issues. It is very much so that these values will eventually become the model of the new city of the twenty-first century.

Fig. 1 – Le Corbusier, "La Ville Verte", from *Précision sur une état présent de l'architecture et de l'urbanisme*, Paris 1930.

Fig. 2 – The new village of Nagele in North-east polder (the Netherlands). The groups of architects "de 8" and "Opbouw" designed the village in 1947; the construction started in 1954. The design of the site shows a remarkable arrangement af natural and artificial features.

Fig. 3 – View of the Leisure Valley Park in Chandigarh, the main linear park crossing the city.

Fig. 4 – R. Burle-Marx, Flamengo Park, Rio de Janeiro 1952-1964. View of the gardens of the Museum of Modern Art.

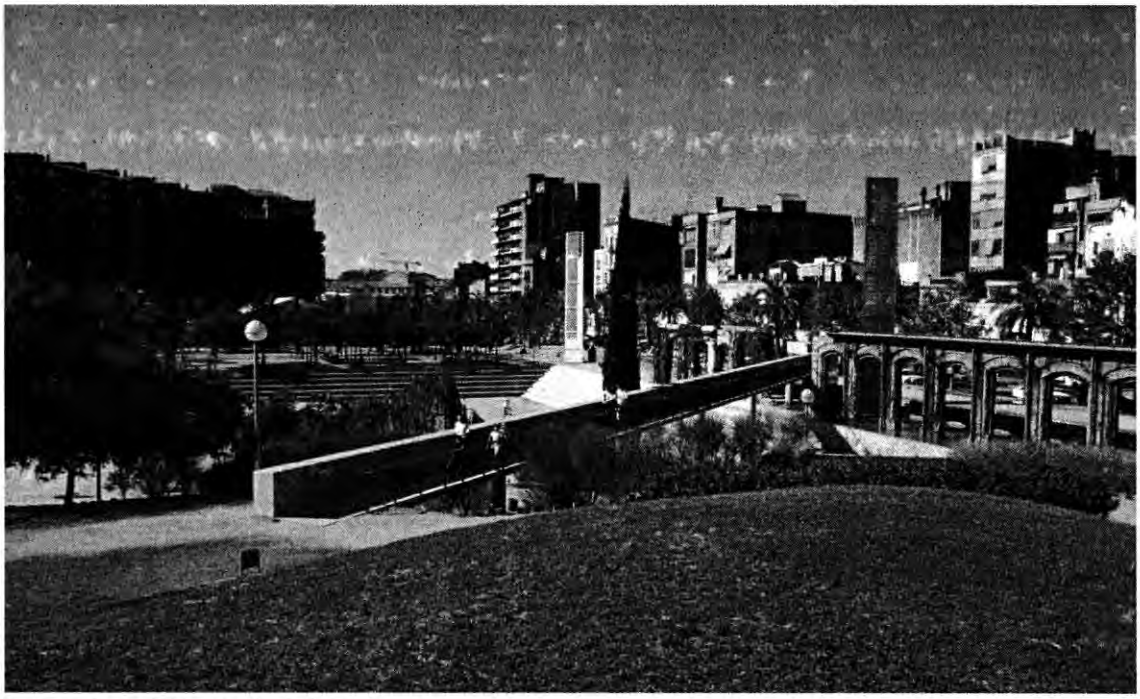

Fig. 5 – D. Freixes, V. Miranda, Clot Park, Barcelona 1982-1986. During the '80s public gardens became tools to rethink the urban scene in Barcelona.

Fig. 6 – S.Child, S.Eckstut, Battery Park, Downtown Manhattan, New York 1982-1988. The garden, reclaimed from the Hudson river, reshaped the waterfront of the Financial District.

Fig. 7 – R.Gabetti, A.Oreglia d'Isola, with L.Re, "Unità residenziale Ovest", Ivrea (Italy) 1968-1971. The project is a pioneering example of overlapping of a park and a residential complex.

Fig. 8 – H.Hollein, Abeitberg Musem, Mönchengladbach 1972-1982. View of the garden superimposed to the roof of the museum

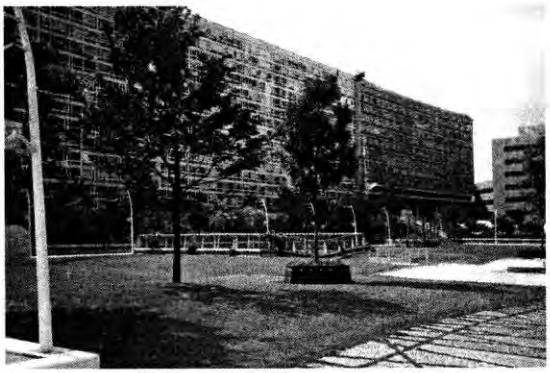

Fig. 9 – F. Brun, M.Péno, Jardin Atlantique, Paris 1992-1994. The garden hangs over the tracks of the Montparnasse station.

Fig. 10 – Pantheon square in Rome transformed as a green grass field in a TV advertisement.

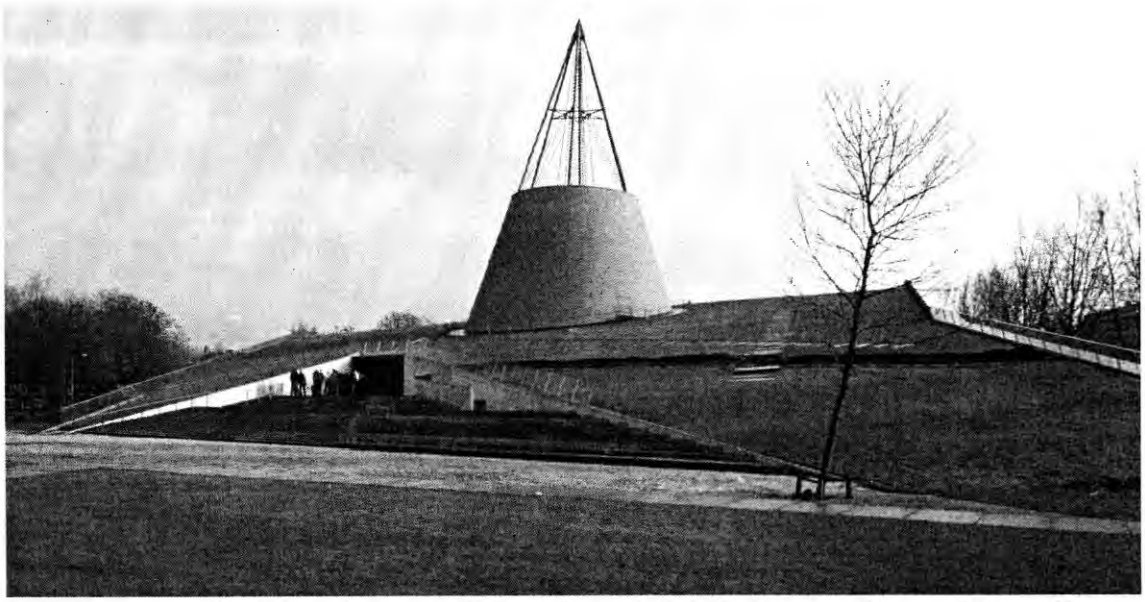

Fig. 11 – Mecanoo, Library of Delft University of Technology, Delft1997. The slope covering the building becomes part of the surrounding green public square.

KEYWORDS

Landscape, Le Corbusier, Public parks, Open Space, Urban environment

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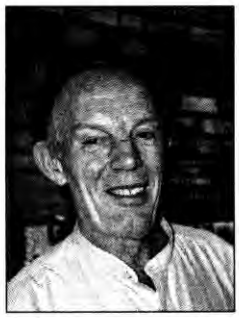
All illustrations are photographs by Franco Panzini, Fig. 1 is from the book credit.

URBAN CONSERVATION SESSION



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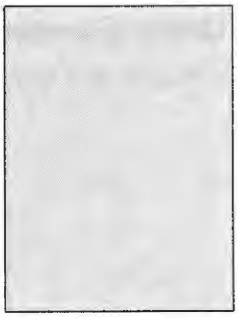

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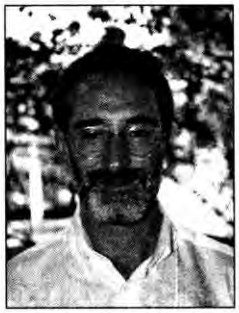

David Fixler

Sarah Moutury

Urban Conservation Session Report

by the chair, Paul Meurs

It is tempting to start the session on urban conservation with some observations on Brasília, our host city and also one of the best and most complete examples of the Modern City in the world. Its historic value is out of discussion. The city also marks an important moment in the Brazilian history and embodies the quest for a national destiny and identity. Before the *Plano Piloto* was completely realized, the city was already included on the World Heritage List of UNESCO. Even though this recognition is obvious, the question how Brasília should be prepared for the future has many answers.

What actually makes up the quality of the city, or even better: what can be dismissed? How can changes occur without damaging the concept?

One can say that the essence of Brasília lies in the original buildings or in the zoning regulations that came along with the *Plano Piloto*. Another option is to consider the un-built spaces of the green areas and the surrounding landscapes as crucial for the preservation of the concept. A fourth possibility may be to redesign the city completely, for instance by preserving certain areas, like the *Superquadras*, and re-inventing other parts of the city, like the city-core which can improve by mixing uses (to start in this terrible hotel c.q. prostitution sector) and caring about the faith of pedestrians. Eventually, the challenge to prepare Brasília for the 21st century can also be considered in a much broader scale, by looking at the real city that spread out even beyond the limits of the Federal District, with all its satellites and dynamics, and picture the *Plano Piloto* as one of the pieces of a regional metropolitan puzzle.

The debate on the future of Brasília has nothing to do with the question if the project was a success; the city is as real as Paris, Rome or New York. Yet there is something that makes Brasília unique. The city is, in certain ways, a manifest, a symbol of rapture with urban traditions (even if Costa compared his design with certain parts of Paris and Beijing). The challenge of today's planners is to find ways of continuity in use and physical appearance, respecting Brasília as 'manifest' of the Modern Movement, and at the same time adjusting its environment to the conditions of a postmodern society, to the dynamic Brazilian reality.

In Brasília, the tension between continuity and change is brought to an extreme, and it is our task as planners and architects to deal with this kind of tension. No matter how much we respect Costa's magnificent Plano Piloto - Brasília is a city that has to be re-invented again and again, to adjust it to changes within the Brazilian society and to the strong dynamics of the Federal District in particular. Poor planners of Brasília – their task seems to be impossible and unique, as unique as the city of Brasília itself.

At a more modest scale, many cities and countries face similar dilemmas of how to deal with continuity and change in a modernist urban environment. Many of these cases are less complex in the size of the modern intervention and the speed of the development, but by far more complex because they bear the mark of a century-long history of continuity and change. Five of these experiences will be presented and discussed in the session on urban conversation: Boston, Brussels, Dublin, Lübeck and the cities of constructivism in the Russian provinces. A paper on Mussolini's Rome will be included in the proceedings.

The Modern Movement helped shaping many cities throughout the world, all through the 20th century. In some cases, like in Boston, Brussels or Dublin, these innovations meant a certain tension with the existing urban fabric. Unlike the Plan Voisin of Le Corbusier for Paris, these cases also showed respect for the traditional city, as can be seen in Boston: the old city stayed almost intact, as the renewal focused on former rail and road constructions. In other cases, the planners could design on a tabula rasa: Lübeck had to be reconstructed after the city was bombed during World War II, and the Soviets planned numerous new towns shortly after the revolution in 1917. Nowadays, all these modernist schemes need certain re-adjustments: the towns gain new uses, need densification and mingled functions; the buildings might face repairs and the urban context brings about new raptures or continuities. How does the modernistic urban plans meet the changing circumstances? Should the cities be frozen in their modern features like Brasília? Or should the clock be turned backwards, as seems to be the tendency in Belgium, according to Sarah Moutury in her abstract on the skyscrapers of Brussels. Perhaps there is a third option in which the traditional and the modernistic cities can harmoniously coexist and melt together in brand-new urban schemes of the 21st century? The session on Urban Conversation will present the cases and try to discuss if any general remarks on how to 'overcome' or 're-enforce' the Modern City and modernism in the Historic City.

Jan Molema
Ivan V. Nevzgodine

The Modern Movement city planning in the Russian provinces

Introduction

Urban planners'duty is aiways to make a step forward, to the future. Planners must rnake designs, which wili lead to the improvement of a given situation. They usually can do this on the basis of an anaiysis of the needs of the existíng society. Soviet city-pianners had a more complicated task: design for a completely new saciety, a society until now only existing in dreams.

But, even more complicating for them was, that their designs should educate the people, transforming them to lhe new citizens of the Communist Society', That ideological task, initiated by the new, inexperienced politicians, let the Soviet designers great possibilities for experirnents. But, it aiso held them away from reality. The contradiction between Communist ideology and Russian reality became specificaily obvious at the time of the -accelerated-industrialization under the first Five Year Plan, which demanded the construction of complete new towns in the provinces.

The theoretical debate

The nation-wide theoretical debates during two years, 1929-1930, the discussion about Socialist Re-settiement, defined the principies of eariy Soviet city planning. They showed faith in progress. Within 10-15 years new ways of communication and information, such as the telephone and the radio, and the developrnent of transport would bring an end ta the city as the cultural center. Increase of energy and transport should bring a halt to the concentration of industry, concei out A. Webers theory of the scientific locaiízation of industry ond realize the ideos of F.Engeis - V.Lenin about the allocation of the population. The technical progress should make the industry absolutely sane. This would allow the allocation of industrial buildings in the center of the city, forming the Industdal Kremlin. As a result of these debates two groups emerged: the 'urbanists' and the 'disurbanists'. Three 'ali-union' urban competitions, for Magnitogorsk, Nizhniy Novgorod and Kuznetsk, gove the 'urbanists' the possibilite to work out their principies in practical adaptations. The concepts of the leader of the 'urbonists', Leonid M. Sabsovitch, were interpretei in urban designs for the Urais and for Siberio. In these desígns cities of a 'consístent socía/ist'type were presented 'wíth gradual inculcotion of the elernents of socializátion of everyday life'.

The experiments

Thus, from 1930 on, a period of practical experirnents began with the construetion of the Uralsiberian towns, where the 'urbanist' concepts were tested. In these projects the Socialist urban designers calculated a much lower density than in capitalist cities. It resulted in large open spaces and long distances. The absence of adequate transportation and the rigorous clirnate led consequentiy to temporal 'dwellings' near by the factories, as the workers preferred living in siurns 'around the comer to residing in houses with modern conveniences at 3-5 kilometers waiking distance.

The failutes

On the other hand some of the proposed designs could sirnply not be reolized because of their schematie geodesie boses, that had littie to do with the real conditions of the area to be developed and the absence of precise calculations of any sort. Calculations were based on the elear idea that the whole adult population of the city would be involved in the industry, but the Soviet planning system was unabie ta provide urban planners with precise perspectives of the developing industry. It led to continuous changes in the population estimation. The rodicol ideas of the 'urbonists' were soon rejected. And, as a result of so many practical mistakes in eariy Soviet town planning and the change in the socio-economic and political situation, the town planners, around 1935, turned from Madernism to Traditionolism.

Rebirth of modernity

In the sixties, after the long period of damnation of the modern movement by the Stalin regime, the Thow brought the revival of progressive urbanism. The Siberian City of Science -Akademgorodok, a

purpose built academie town, which may be compared with the Administrative Center of Brasilia, is the latest and as an experiment probably elearest realization of Soviet Modernism (iii. 1,2). It is an application of ali re-discovered progressive achievements of Soviet urbanism of the 1920-1930s: zoning, optimai transportation and pedestrian links, differentiated system of cultural and daily facilities, free-standing buildings, preservation of the green using the landscape specifios, ete.

At the time of realization the experiment was suffering from political intervention: Cornrade Nikita S. Khrushohev visited the town under construetion and advised architects to make the design more compact and economic, to build four to five story buildings instead of high rise.

The problem today

The weli-meant attempt of the Soviet town planners to include in their designs as much as possibie the new funetions of the Socialist City became, after the fali of Communism, the main problem for the Russian cities@ How to adapt the Socialist system cities to the new reality? The perspectives of the development of the Ural-Siberian cities have actualized Moisei Ia. Ginzburg's words in 1929: 'We should be free ftm ambitíaus dreams about manumental buildíngs and mostly think about maxímaily flexible and changeable forms and methods of construction, which will improve contemporary life of people. We should not create anytaboo'for the men of tomorrow'.

Today regulated densification and intensification seems to be the right option for these cities to pratect them from becoming uniivable. Existing qualities must be secured, new qualities corresponding with the contemporary life of people added and any inconvenience for the men of tomorrow avoided.

The Kemerovol Tsheglovsk Case

While waiking the center of Kemerovo, with its neo-elassical ensembies of streets, squares and prospects, it is difficult to imagine that nat long ago this city was one of the most important objects of urban and architectonie experiments in Russian territory. In the second decade of the 20th C. Kemerovo and the surrounding Kuzbass settiements became a testing ground for new conceptions in living conditions. In one decade several design offices prepared more than a handfui of different urban plans. Some of them were approved, others not. Here is a brief description af these plans:

1. The engineers G. S. Hmel'nitskii and Adrianav of the design office of the SibKrayKomHoz (the Siberian Regional Communal Household department) and the economist N. S. Yurtsovskii, developed in February-October 1930 two variants for a town plan, which after diseussions became the basis for a 'combined variant' (ill.3).
2. In August the design was changed after the critique of the consultants Leonid M. Sabsovitch, Alexander P. Ivanitskii and Viadirnir N. Obraztsov at the June meeting af the GUKH (the Scientifie-technical Council of State Management of the Communal Household) in Mascow. In the redesigned proposal Tsheglovsk was presented as a town of the 'consístent socialista (term defined by Sabsovitch) type for 160.200 inhabitants 'with a gradual introduction of the elements of socialization of everyday life'. The calculation was based on the aiready rnentioned idea that 'the whale adult population of the city wili be involved in industry'. The population would be haused in four to five story cornmunal houses.
3. At the same time the 'sketch for a compound of industrial enterprises for Kemerovo district' and 'a variant with decentralized settlernents, instead of one large complex city', was presented at the meeting of the Presidium of the Regional Planning Commission. According to this decision eight smail towns had to be created within a radius of fifty kilorneters from the center of Tsheglovsk. But, once again, the project was never approved.
4. In 1931 the design office of the Central Communal Bank of the USSR (Tsekobank), headed by Ernst May, made a new plan for a town with a population of 165.000 inhabitants. The town would be partly on the left bank of the Tom (Tsheglovsk) for 130.000 (ill.4), partly on the right bank (Yagunovo) with 35.000. The plan had a elear, rectangular structure of dwelling blocks with a system of green 'corridors' for schools. May's office worked out a detailed scheme of the block and a system for public services (on lhe block levei there were a crèche, a kindergarten, a school, a laundry and a 'club-canteen'). On the basis of this plan some two-story blocks in a frame-fill up system were built in paraliel rows with special orientation, so-called 'Zeilenbau'. But this project soan was stopped. Yet the construetion in later years of several important buildings and communication cable-systems aiong the planned streets indeed fixed this plan in some of the blocks in the center of the city of Kemerovo of today.

S. In 1933 the Moscow branch of StandartProject (Abram S. Smolitskii, Lidia M. Bukalova) designed a new plan for the town at both banks of the Tom for 500.000 peopie. In 1934 the PromStroyProject (Industrial Construetion Design

office), under A. S. Weinzweig, elaboroted the first regional plan for an industrial distriet for 500.000 inhabitants. The same office designed six (!) variants for a Kemerovo plan.

6. In 1935-1936 the Novosibirsk Gor Stroy Project (City Construetion Design) Institute produced a new General Planning Scheme for Kemerovo with a calculated population of 450.000, but
7. in 1939 the Moscow branch of the GorStroiProject Institute (1. 1. Sokolov-Dobrev) re-designed this scheme failawing the directives of NarKomHoz RSFSR (People's Commissariat af Cornmunal Household of the Russian Soviet Federative Socialíst Republie) to rèduce the projected population to 230.000 inhabitants.

Of ali these plans almost nothing was realized. A lot to comment on tbeoretical plans for Kemerovo/Tsheglovsk. But littie or nothing to talk about'real life'results, were it not for the irnpressive work of the Dutch progressive engineer Johannes Bernardus van Loghem (1881-1940). He was the planner and architect of Krasnaia Gorka, the Right Bank settlement of the Kuzbass Mining Company. This was a by origin Franco-Belgian enterpdse with connections with the Hennebique firm. It was re-established as the Autonomous Industrial Colony (AIK) under the protection of Lenin and the leadership of another Dutch engineer, the famous Sebald Rutgers. Van Loghem managed to build, under extremely difficult circumstances, in a harsh climate and within two building seasons, 1 000 dwellings of different (experimental) modei and construction, a schooi building, a fire station and several other buildings in a garden city setting. The Krasnaia Gorka (Littie Red Mountain) settlement is the subject of the 'Uraisky' rehabilitation program, an initiative of the Foundation for Analyses of Buildings in Delft (The Netherlands). The program is carried out in ciose coliaboration with the City of Kemerovo and with important financiar and moral support of the Ministries of Culture and of Foreign Affairs of The Netherlands.

The reasons are elear: More than any other foreign architect, Van Loghem has contributed to the reality that had to emerge frorn the drearn: to build a new society for the new citizens. Building was his dream, which lamentably pretty soon became a nightmare, as the party-bosses became xenophobie and Van Loghem had to go home.

But, today the City of Kemerevo is more aware of the intrinsie cultural-histode value of their heritage, poor and simple as the testimonies may be. Our Foundation is happy to be abie to contribute to its conservation and its future value.

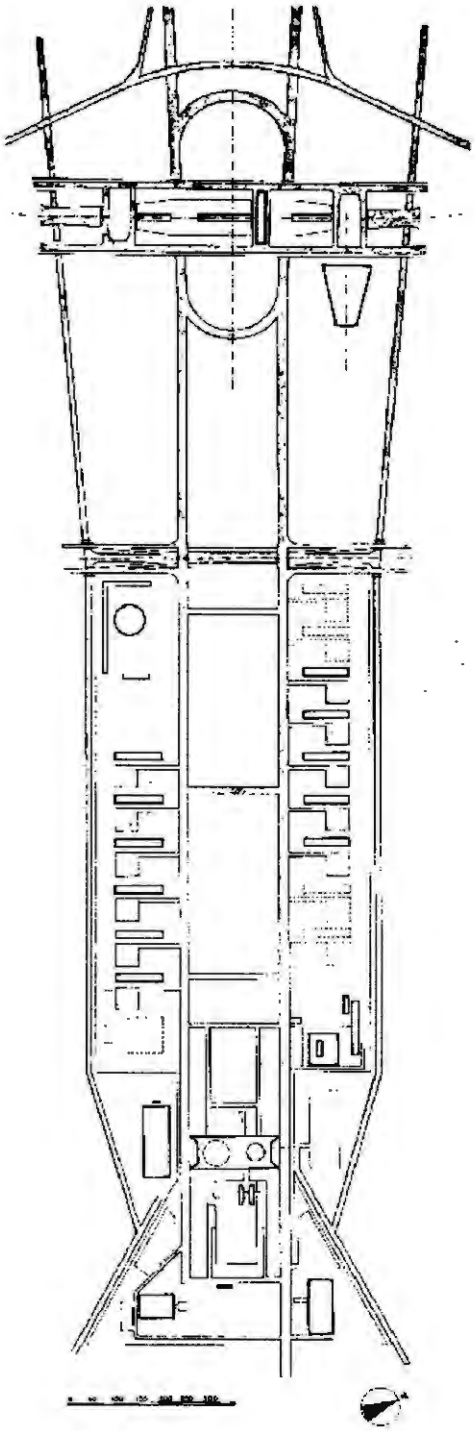

Fig. 1 – Lúcio Costa (plan) and Oscar Niemeyer (buildings), the Administrative center of Brasília - Monumental axis, 1956.

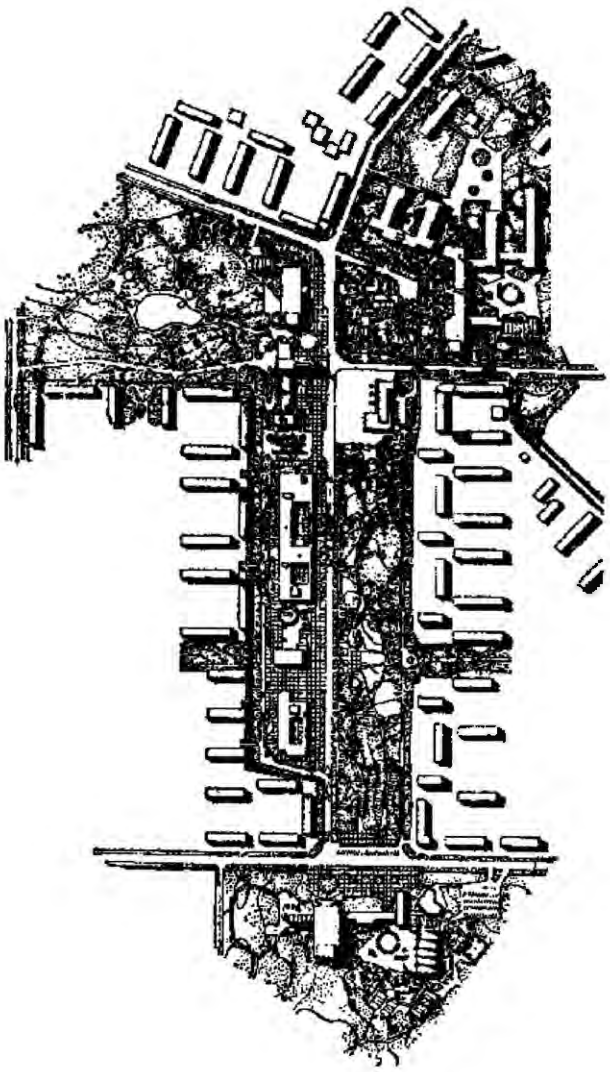

Fig. 2 – M. Belyi, A. Mikhailov, I. Orlov, I. Puteshova, S. Panomareva, A. Popov-Shoman, T. Safonova, A. Simonov, Yu. Ushakov and S. Tseliaritski, the Center of the Akademgotodok near Novosibir-sk, 1959-1967.

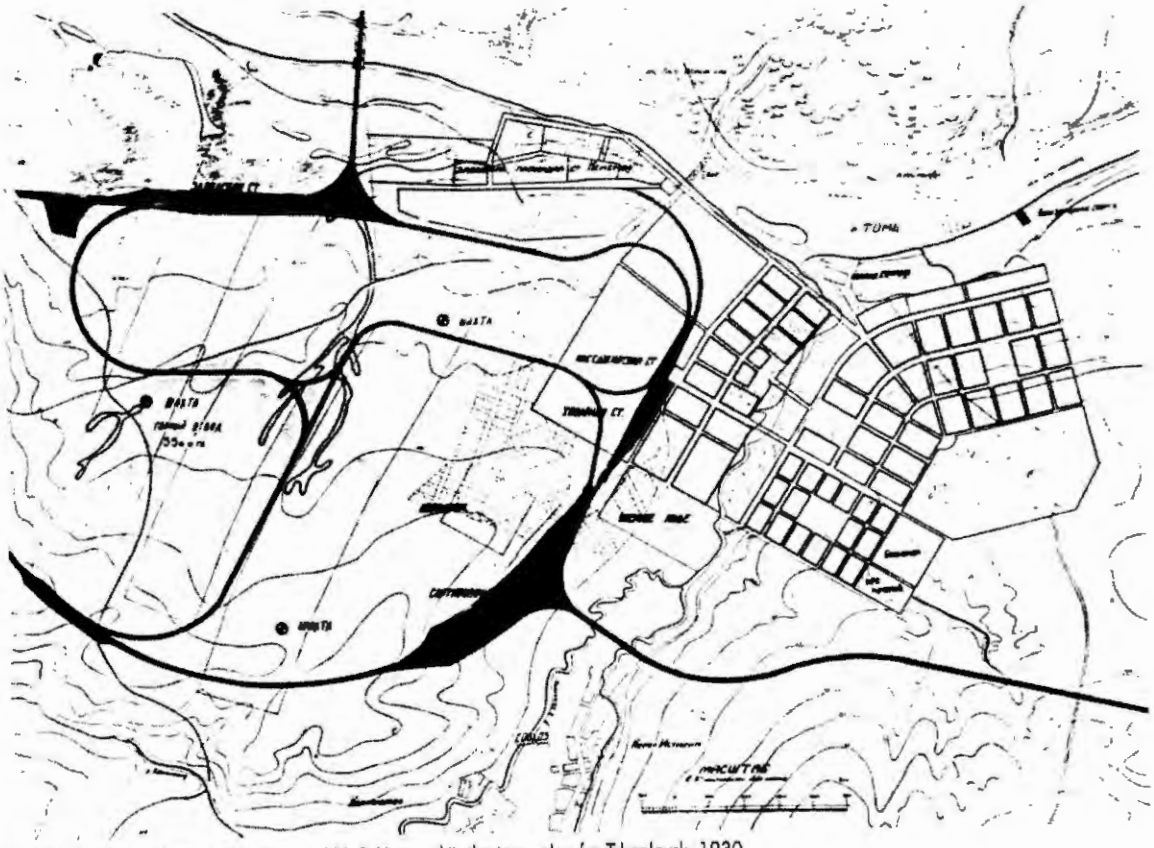

Fig. 3 – G. S. Hmel'nitskii, Adrianov and N. S. Yurtsovskii, the town plan for Tsheglovsk, 1930.

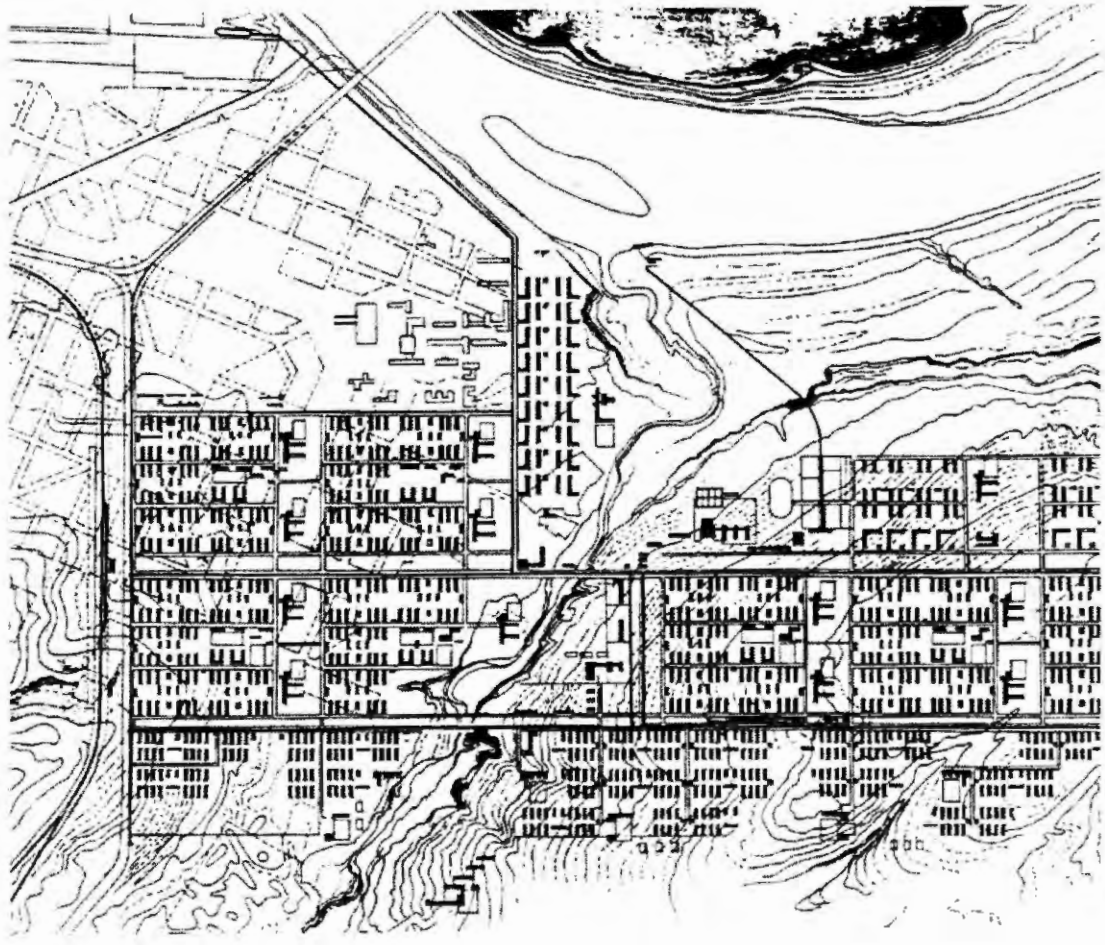

Fig. 4 – The international team of Ernst May, the town plan for Tsheglovsk, 1931

KEYWORDS

Rehabilitation, Constructivism Siberia Netherlands STAG

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Klaus Brendle[1]

Contextualism and rupture. Modernism in the Post-war reconstruction of Lübeck

Introduction

The debate over the reconstruction of bombed German cities, which started still during the war years, was based on two antagonic principles - Wiederaufbau & Neubeginn - the rebuilding of the old cities & a radical modernization of the city structure based on tabula rosa. This was the main point of confrontation between traditionalist[2] and modernist[3] architects. Plans for decentralization and functional zoning of major German cities started to be discussed already in the 1920's (Durth & Gutschow, 1987), aiming at providing better qualities to the cities' built environment. Therefore, the large scale destruction brought about by WWII was seen by many planners and architects as an opportunity to put in practice the 1920-30's planning concepts and as a chance to rebuild the cities according to the doctrine of Modernism. In 1945, Paul Baumgarten overlooking the Brandenburger Tor in Berlin, declared: "I radiate: what an opportunity to plan a new urban landscape here and what a chance to pull down the ruins and to build new modern buildings".[4] Drieschner (2000)

In general, in the post-war reconstruction in South Germany, traditionalism in architecture and town planning was more influential. In East Germany, this conflict did not developed much further because of the strict rules coming from Moscow where Stalin imposed the Socialist Realism architecture based on a monumental new traditionalism combining pseudo neo-classicism (Stalin Allee, in East Berlin) or new-Gothic (Lange Strasse, in Rostock). During the Stalin years, the so-called Stalinist Architecture (Tarchanov & Kawtaradse: 1992), was the idealogical response to the International Modernism, seen as a symbol of the western decadence and capitalism. In North Germany, Modernism was to express the principles and qualities put forward by the *Interbau Berlin* 1957, illustrated by many post-war architectural developments such as in Wolfsburg, Kiel, Hamburg among others.

There were 4 basic planning and architectural policies underlying the reconstruction of German cities:

Reconstruction in Germany = 1950-60	**single buildings**	**building ensembles**	**Examples in East Germany**
historic reconstruction : -**"Total Rebuilding"**	Zeughaus, Braunschweig St.Michaelis, Hamburg *(as an example among many destroyed churches)*	Prinzipalmarkt, Münster Böttgerstrasse, Bremen Siedl. Dulsberg, Hamburg	Rathaus, Leipzig Oper, Berlin (East) Steintor, Rostock
historic reconstruction allowing some changes and new additions: -**"Partial Adaptation"**	Paulskirche, Frankfurt Alte Pinakothek, München St.Martin-Kirche, Kassel	Römerberg, Frankfurt City Center of Fulda City Center of Nürnberg City Center Freudenstadt Martinsviertel, Köln	Messehof, Leipzig Neuer Markt (south),Rostock
reconstruction with changes and/ ar new building types: - **"Alteration"**	Schloss, Kiel Rathaus, Stuttgart Maxburg, München	Marktplatz, Stuttgart City Center,Braunschweig City Center, Hannover	City Center of Neubrandenburg Alter Markt, Magdeburg Krämerstrasse, Rostock
rebuilding according to a entirely new architectural and urban framework: - **"Rupture"**	Liederhalle, Stuttgart Gedächtniskirche, Berlin Haus der Bürgerschaft, Bremen	Treppenstrasse, Kassel Grindelberg, Hamburg Hansaviertel, Berlin Neckarufer, Heilbronn Helgoland	Stalinallee, Berlin (East) Alexanderplatz, Berlin (East) Fischerinsel, Berlin (East) Lange Strasse, Rostock

Table 1

Lübeck

In 1942, the British Air Force squadron flew a heavy air raid on Lübeck. This was the first large-scale systematic bombing of a German city directed to the civil population as a means to weaken the war resistence during WWII, as used by Hitler's terror technique in Guernico, Spain, and Coventry, England. During three hours, 140 tons of bombs were thrown over Lübeck destroying 1/5 of the entire city centre, 1400 buildings, including: the *Gründungsviertel* or the Honseathic building fabric former inhabited by the rich merchants, the *Dombezirk* (Fig.1), a residential area around the cathedral, the east part of the city inhabited by handworkers, the churches of St. Marien and St. Petri, leaving 300 deads and 1000 wounded. In many cases, the heavy damage inflicted upon the city, left only building facades and walls which for security reasons had to be demolished.

The planning for the reconstruction of the devastated city of Lübeck (Fig.2) started immediatelly after the air attack of 1942 (Pieper: 1946) being regarded as a guideline for other German cities. Even Heinrich Tessenow, later participated in this process. Although different in concepts, these plans dealt with the city's urgent needs such as infrastructure, traffic improvement and the basic qualities of urban space embodied in Modernism, such as "light, air, sun", and put forward the clearing of bombed areas, the widening of old streets and the redesign of the block structures, plot subdivisions and building arrangements within large inner courtyards.

Fig. 1 – Bombing raids over Lübeck in 1942 shawing the damaged Cathedral (*Dom*) on the left side.
Source: German Military Archives.

Fig. 2 – Plan of the historic center of Lübeck with the damaged areas resulting from the bombing raids from 28./29.March 1942
zerstört = totally destroyed
beschädigt = portially destroyed areas
Examples discussed in this poper:
1- Krähenstrasse
2- Merchants Quarter
3- Schmiedestrosse
Source: (Beyme: 1992)

In post-war Germany, public discussions between Traditionalism and Modernism took place among architects and planners all over the country. In Lübeck, Modernism was taken as the major urban and architectural concept and it was followed by a strong citizens' reaction and criticism due to the first post-war interventions in the old city spelling out Modern architectural vocabulary - Rathausmarkt (Fig.3) and Breite Strasse - using contemporary design and materials (concret, glass and ceramic), and in some cases mixed with unplastered red bricks. Although Modernism was the main factor underlying the post-war reconstruction of Lübeck's centre (the so-called Gothic town constructed in brick), the resulting built forms show contrasting approaches and attitudes to the problem of fitting new building structures into its historic townscape, as illustrated by some of the three examples here discussed, such as Krähenstrasse, the former *Gründerviertel* (the Merchant's quarter, consisted of Fischstrasse, Alfstrasse and Mengstrasse) and Schmiedestrasse.

Fig. 3 – A detail of the listed buildings comprising the Rathaus ensemble. On the left side, the new building addition spelling out Modernism, an intervention from 1955 by architect Harenburg. On the right side, o detail of the old Rathaus' Renaissance facade.
Foto: klaus brendle

The insertion of new building structures into the outstanding old physical and spatial structure of Lübeck was not an easy task in the post-war reconstruction as Modernist urbanism tenets established by the Athens Charter took barely into account the cities' pre-existing built enviranment. Therefore, Modernism has been strongly criticized as causing further severe losses to the old European city centres, or according to Zahn[5] (1999: 25), even destroying their cultural heritage in order to build a

new urban and architectural order. As stated by Kostof (1992), post-war urban renewal, "seemed to finish the work of the bombs".

How to harmonise the city's new and old fabric and to integrate them into a homogeneous urban context without neglecting its historic ambience, character and without re-producing replicas, repetition or pastiches and even historicist references not tolerated by Modernism?

Modernism took a polemic path in the post-war reconstruction of Lübeck, where the integration of modern buildings into its old urban context did not always take into account the *strict* preservation of the city's morphological pattern. Rather, design solutions favoured changes in its urban block structures, plot subdivisians and the building arrangements within them, bringing about a break with the previous dominant urban tissue.

These changes primarily consisted of new block configurations where the narrow plots were to accommodate new continuos building schemes parallel to the street frontages. Furthermore, the dominant vertical line of the facades with its characteristic pitched roofs and tall gabled houses of the Middle Ages were replaced by new buildings structures with marked horizontality which shaped a completely new streetscape although keeping or adapting some basic elements of Modernism in North Germany such as *flachgeneigte Dächer* (gentle inclined roofs), red bricks, white window frames, etc. (Fig.4).

Fig. 4 – Kohlmarkt / Rathausmarkt Lübeck (in the background the old Rathaus and St.Marien)
Foto: klaus brendle

It can be argued that, **contextualism** was the underlying principle of most of the early Modernist post-war reconstruction of Lübeck, as expressed in the great concern with the new buildings height, size, scale, bulk, massing, materials and design which intended to avoid a stark contrast with the neighbouring pre-existing building ensembles, thus granting a minimal impact upon the historic built environment, with emphasis to the city's skyline dominated by the 7 churches towers of its magnificent medieval temples. On the other hand, even the **deliberate contrast** of the new building structures erected on Schmiedestrasse, whose urban concept refused to restore the area to its earlier conditions shows no indifference to the old city, while established a clear rupture with its traditional building forms.

Krähenstrasse

On Krähenstrasse, the street line was rectified and widened and the building lines set back at the expense of further demolition of living urban tissue in order to establish a direct and better traffic connection with Wahmstrasse which became an important east-west axis in the city's road structure (Fig.5). As in other interventions in the city, the block structure and the narrow plot subdivision were replaced by a continuous street frontage with a remarked horizontality whose building heights and pitched roofs kept in with the surroundings. The buildings display new typological elements such as balconies running along the facades, some of which in curved lines, and a rich variety of wall cladding materials, colours and particular design composition for the shopfronts, some of which are still preserved.

Fig. 5 – Krähenstrasse. On the right side, the postwar reconstruction architetural developments.
Foto: klaus brendle

The Merchants Quarter: Fischstrasse, Alfstrasse and Mengstrasse

Distinct approaches and design solutions were used in the rebuilding of the Merchants quarter (Fig.6), although there was a clear intention to respect its surrounding built environment and the overwhelming presence of the Marienkirche (»1200), one of the most significant examples of Gothic architecture in elaborate brickwork in Northern Europe. On Schüsselbuden, the block facing the Marienkirche shows a contextualism without imitative mimesis, rather with a close association or symbiosis with the

surrounding built form. An interventian which established a historicol reference with Lübeck's local architecture and managed an environmental integration within it without renouncing to the contemporary architectural idiom of Modernism, its materials and techniques. These buildings shows a free typalogical re-interpretation of the area's former architecture as seen in its pitched roofs and in its facade composition blending in stones, concrete, glass and structural elements.

Fig. 6 – Contemporary airview of the Merchants Quarter (Gründerviertel). On the left side between the churches of St.Marien and St. Petri.
Source: Photo by H.Weitzel.

The design of the new dwellings and public schools in Fischstrasse, Alfstrasse and Mengstrasse seemed to reject historic references to the previous urban fabric by replacing the narrow plot patterns and the rich variety of the building heights by uniform rows of buildings shaping a manolithic and continuous street frontage with a remarked horizontality. New architectural elements (galleries) and materials (concrete, coloured ceramic, decorative panels, glass walls, etc.) were introduced in the buildings of the *Dorothea-Schlözer Schule* and the *Hanse Schule für Wirtschaft und Verwaltung*, however their design qualities proved to be very modest[6]. The Merchants quarter greatly lost its essential previous urban and architectural character. However, the new erected buildings[7] show a particular architectural merit, in using the madernist architectural language. On the other hand, the design concept did not ignore the former urban spatial structure of the area as it was carried out in Kassel or Heilbronn - although inserting new building types, by using a number of prominent gabled facades, thus creating a new cityscape.

Schmiedestrasse

Schmiedestrasse is regarded as the most destructive post-war intervention in the old city of Lübeck. An intentional contrast with the surroundings, the buildings an Schmiedestrasse were devised from the outset to be Modern. An unambiguos design chaice avoiding historicist references and supplanting the double-coding combining modern and traditional regional architectural languages. A wholesale development consisting of free-standing buildings which radicolly differed from Lübeck's tall, narrow, street-oriented row houses of the Middle Ages by rejecting the traditional building frontages and inserting on its urban tissue new block structures and single buildings spelling out contemparory forms.

On St. Petri Kirche's adjacent area (Fig.7), the old curving street line generating irregular blocks and an organic pattern was widened. An urban operation that had been planned since 1942, as a means to improve the congested traffic system in Lübeck central area.

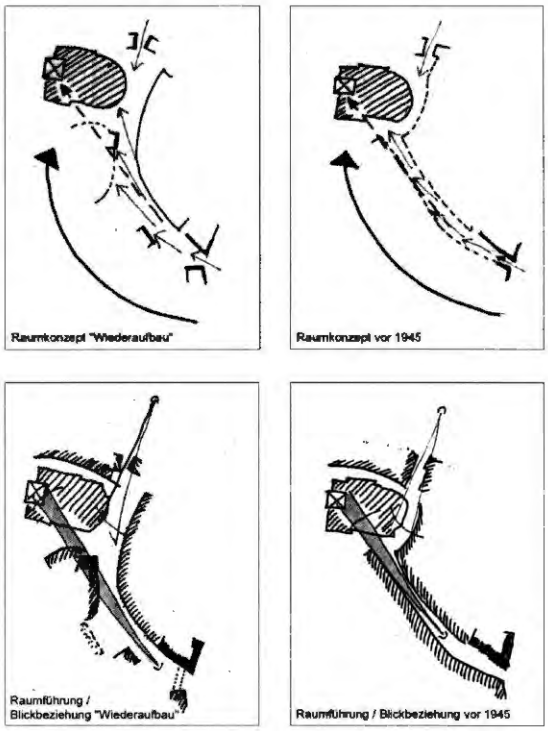

Fig. 7 – Urban space analysis of Schmiedestrasse
right - before the war
left - postwar reconstructian
above - elements of cityscape
below - spatiol structure of space and visual elements
Source: Sketch by klaus brendle

The urban and architectural design concept rejected any accommodation to existing typologies and local building traditions but it shaws some regards to the area's urban scale by establishing a height limit for the new structures, although greatly altering the old urban pattern by modifying the former street line with single building units freely arranged into the building plots.

The new buildings types and spatial organization reflected a concern with exploring the new technical possibilities of the reinforced concrete as well as their aesthetical design qualities. It is interesting to note that the three main large buildings on Schmiedestrasse (the *Parkhaus Mitte*, the *Gesundheitsamt* and the *Schwimmhalle*) made reference to Lübeck's traditional red bricks on their facades but devoid of any stylistic mimesis. The *Parkhaus Mitte*,

a large three-storey building mixing concrete and glass ribbon windows established a high visual impact with its surroundings dominated by the outstanding structure of St. Petri Kirche (Fig.8), while introduced a half-round element which greatly altered the pre-existing surroundings, although making reference to the curved street line. The *Schwimmhalle* is also a massive structure inserted on an entire block which shows a planned distinction with the pre-existing building arrangements, spatial organization, proportions and scale.

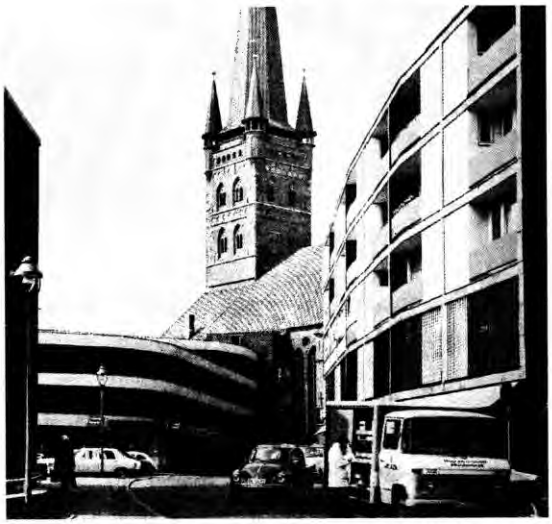

Fig. 8 – New buildings on Schmiedestrasse, with St.Petri Church on the background
Photo: M.Brix 1975

On the other side of the road, new constructions such as the Rieckmonn shop building searched to harmonise with the roof line of a restored department store from the 1930s (a typical elaborate brickwork of North Germany) which closes the street at Klingenberg Platz without making reference to the steep angle of the typical tiled roofs so commom in other post-war developments in Lübeck. The Rieckmann building introduced new typological elements such as balconies and undecorated concrete window frames.

On Schmiedestrasse, the historic continuity of the city was understood as the city's building process itself. A typological contrast with respect to building forms, techniques and materials but which allowed Modern structures to be fitted into the old town. The most conservative and radical conservationists took Schmiedestrasse as a disruptive or intrusive intervention in the old town. However, it is important to understand that there, Modernism was bringing new spatial organizations, forms, ambiences and strongly rejected to practise the stylistic *pastiche* and urban cosmetic and dared to establish a honest dialogue with past.

It can be argued that in many ways, the intervention in Schmiedestrasse was also **responsive** to the city's historic character considering that it did not develop freely as in the *Papageien-Siedlung* by Ernst May or the building of the former *National Versicherungs-Gesellschaften* (Fig.9), both in Lübeck periphery, where there was less historic or environmental restrictions.

Fig. 9 – Air view of the *National Versicherungs-Gesellschaften* headquarter, on Travemünder Allee, Lübeck.
Source: Verkehrsamt der Hansestadt Lübeck, 1967-68.

Final Remarks

Although carried out according to distinct approaches, the examples discussed above sought to grant the preservation of the city's old urban scenography in keeping with its historic ambience. These interventions leave no doubt about the **contextual** response to the historical continuity of the city, which without making a simplistic reproduction, replaced the old built forms by new ones with references to the pre-existing built environment.

In Krähenstrasse the street pattern was changed in order to comply with the city's requirement for modernization such as traffic and infrastructure, and although the buildings erected made clear references in respect to the surrounding historic ambience, they were not just a copy of the old. On the opposite: by exploring the new materials possibilities which concret could offer, the design concept incorporated aesthetics qualities from the 50's and 60's being modern and contemporary. Thus, rejecting the anachronic trend to decorativism and historicism and the easy stylistic concessions to the past which were largely used in the design of many buildings in Germany, such as lintels, windows frames, cornices and so on.

In Alfstrasse and Fischstrasse, the new inserted building structures brought about changes to the old plot configuration. For the new function introduced in the area, (eg. the two new schools: *Dorothea-Schläzer Schule* and the *Hanse Schule für Wirtschaft und Verwaltung*), new building types were designed.The streetline was kept but the streets were widened, although partially keeping its old structure and some building qualities of the past such as the brick facades typical of North German Mod-

ernism. The new ensemble features are clearly recognisable as a post-war intervention which combines contemporary urban and architectural approaches with a great regard with the area historical background.

In Schmiedestrasse, the new buildings are clearly the result of a cubic composition of pure volumes with geometrical forms and the functionalist design of Modernism. New materials and techniques generating new design alternatives with no reference to tradition, establishing a clear rupture with past building arrangements and typologies, etc., but fitting into the old surroundings (Fig.10). It is striking the sharp contrast between St. Petri Kirche and the clear horizontal structure of the flat-roof and curved glass facade of the *Parkhaus Mitte*, but it is also relevant to stress the concern with the building heights, where the absence of high-rise constructions allowed the preservation of the area's urban scale and character.

Fig. 10 – Contemporary airview of the Hansestadt Lübeck. In the middle, the Church of St.Petri and the Schmiedestrasse with *Parkhaus, Gesundheitsamt* and *Schwimmhalle*.
Source: Verlag Schöning & Co.

As shown in Table 2, some of the leading principles underlying the post-war reconstruction in Germany (Table 1), are also found in the reshaping of Lübeck central area:

Reconstruction in Lübeck ≈ 1950-60's	**single buildings**	**building ensembles**
historic reconstruction : **-"Total Rebuilding"**	St.Marien St.Petri	-
historic reconstruction allowing some changes and new additions: **-" Partial Adaptation"**	Buddenbrock-Haus Dom	Mühlenstrasse (infills) Sandstrasse Königstrasse (infills)
reconstruction with changes and/ or new building types: **-"Alteration"**	Dom-Gemeindehaus Rathaus-Hof	**Krähenstrasse** Breite Strasse Holstenstrasse Rathaus-Markt
rebuilding according to o complete new architectural and urban framework: **- "Rupture"**	Haerder-Building BfG-Bank **Schwimmhalle** **Parkhaus Mitte** Landesbank Anny Friede Building	**Fisch-/Alf-/Mengstrasse (Merchant Quarter)** **Schmiedestrasse** Beckergrube

Table 2

The post-war interventions of Lübeck examined in this paper display a number of elements of the Modern architectural vocabulary and principles, such as:

- cubic, geometrical pure forms
- accentuated horizontality
- plain facades
- functianal building arrangements
- visible constructive elements.

In addition, it can also be found elements of the early North-German Modernism:

- *Backsteinarchitektur* (brick architecture)
- saddle roofs (maximum 30% inclination, ceramic tiles and short eaves)
- row of windows
- contrasting red brickwork, light plaster ar concrete elements and white window frames.

And, particular features of the 1950-60's Modernism in Germany such as:

- the use of ornaments such as steel balustrades (stairs, balconies, windows, etc.)
- the use of lively/colourful/bright panels, reliefs, friezes in ceramic and bricks, among other materials
- larger, rowed windows in walls which have no massive character.

Furthermore, it indicates that the historic built environment of Lübeck was taken into account in the architectural design and postures:

- avaiding flat roofs, large scales and curtain walls
- carefull use of steel and glass elements, transparency
- keeping somehaw the historical street patterns
- using bricks (unplastered).

These examples of the post-war reconstruction of Lübeck brings a contribution to city building as it demistifies the so-called "history denial" of Modernism and its impossibility to put together old and new building forms. Its **contextualism** is illustrated in the dialogue with history, which must not be confused with the symplistic and picturesque recreation of figurative elements. Rather, is responsive to the urban and spacial pre-existing city structure, contemporary and without reproducing ald building types (Fig.11).

Unfortunately, these buildings have been considered as potential areas for further redevelopments in the city centre and their demolition have even being proposed by local politicians and architects. *'Architekten-Idee: Haerder weg, Parkhaus weg'* - was the headline of an article published in a local newspaper[8], calling for the demolition of some of these post-war building ensembles to make way for new shopping centres.

Fig. 11 – Plan of the postwar reconstruction of Lübeck from 1957 by the *Bauverwaltung / Planungsamt* (building administration / planning office). The three areas discussed in this paper are highlighted.
Source: (Beyme: 1992)

It is interesting to emphasize that the Rathaus-Hof (Fig.3), one of the buildings comprising the Rathaus Morkt as developed in the 50's, is a listed building, revealing some regards from the Lübeck Conservation Authority with its post-war Modernism. The old Hanseatic centre, has been since 1978, part of the Unesco World Heritage. However, architectural and urban history in Lübeck does not end with the Hanseatic or XIX century periods. It is time to carry out a comprehensive evaluation of the still intact postwor building ensembles of Lübeck designed according to Modernism, their qualities and the extent to which they integrate in the old city fabric. Should the last 50 years of Lübeck architectural and urban developments not be considered as history too? And the *Wiederaufbau*, the reconstruction of Lübeck not to be seen as a genuine part of the Hanseatic city?

NOTES

[1] In collaborotion with Maria de Betânia Uchôa Cavalcanti-Brendle.

[2] This refers to the german traditionalism in architecture os developed before WWII

(Muthesius, Tessenow, Bonatz, Schmitthenner, among others), and not to the vernacular

architecture addopted by the nazis during the III Reich.

[3] (Gropius, Gutschow, Hillebrecht, Meyer, Reichow, Scharoun, etc.)

[4] "Ich strahlte: Welch eine Möglichkeit, hier eine neue Landschaft zu planen, und welch eine Möglichkeit, das Ruinenfeld abzutragen und neue moderne Häuser zu bauen".

[5] *Bausenator* Volker Zahn - Head of *Stadtplanung und Bau* in Lübeck since 1991.

[6] According to Schwarz (1981) and Steffann (1980), this was in line with one of the underlying principles of the early post-war reconstruction in Germany.

[7] Designed by Dietz-Brandi (Göttingen) and by the *Hochbauamt Lübeck* (1954/1957).

[8] Latzel (2000).

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KEYWORDS

post-war reconstruction, Lübeck, contextualism, old & new built forms, Modernism in historic centres.

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David Fixler
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Large scale interventions in Boston's Back Bay/ 1950 - present. A self-correcting Modernist Urbanism

Introduction

1. No American city has a more traditional cultural dynamic, smaller scale, and in the parts of this city planned in the 19th century, greater traditional continuity in its urban programs than Boston. Yet, it merits a place on the agenda of the Modern City Facing the Future, for it was the site of several significant post World War II urban interventions by noted modernists. While the most notorious was the Government Center (Master Plan by I.M. Pei, 1959), a conventional urban renewal project created on a *tabula rasa* leveled for this purpose; between 1963 and 1972 there were also two successive, independently conceived, interventions in Boston's Back Bay. If taken together, they present an excellent example of what we call an ameliorative, self-correcting modernist urbanism. In the Back Boy, we will argue, little built 19th century fabric was disturbed, relatively few people were displaced, and most importantly for our argument, modernists replanned the traditional city while recognizing the necessity of taking that city into account. In an interesting reversal of the typical post-war American pattern, they departed from 20th Century urban models to follow a strategy of urban intervention that was adaptive and aggregative. Each project responded not only to predecessors, but also to the existing urban tissue, following a strategy that led to moderation and accommodation, and thus, to a form of urbon conservation.

2. The Prudential Center (original plan under the title of Back Bay Center, Walter Gropius and TAC; 1956; expanded by Luckman, Pereira, and Belluschi, 1959-1965), or as its 52 - storey tower is known in Boston, the Pru, served as the catalyst far the subsequent projects, the Christian Science Center (I.M. Pei and Araldo Cossutta, 1963-1972, which we will call the CSC) and the John Honcock Tower (Henry Cobb of I. M. Pei and Partners, 1967-1973).

The architects of the CSC and Hancock sought to respond to the pre-existing conditions and to the disruptions in scale introduced by the Prudential Center. Although they kept to fundamental modernist principles, Cossuta and Cobb both resisted ond corrected the fundamentally anti-urban modernist forms that the Pru had introduced. The overall result was, to coin a neologism, a *re-conceptualized modernism*, that is, an ameliorative modernist intervention that conserved Boston's traditional urbanity in a rare instance of a successful adjustment of modern urbanism to the needs of a city with deep historical associations and a specific regional identity.

Our analysis will proceed chronologicolly. We will describe the self-correcting strategies, show how they were successfully employed in the development of this area, and how the modernism employed disploy *extraordinary generasity and responsiveness* in responding to a highly particular urban condition.

3. The site for all three projects is a triangular zone between the Back Bay and the South End, bath cohesively planned 19th century neighborhoods. Its eastern, downtown-facing apex is Copley Square, home to the national architectural treasures of Trinity Church (H. H. Richardson, 1873-1879), the Beaux-Arts Boston Public Library (McKim, Mead, and White, 1881-1888; Charles McKim, designer) and other prestigious buildings. Its western base on Massachusetts Avenue was the complex of building surrounding the Mother Church of the Church of Christ Scientist, a Protestant sect founded in Boston in the 19th Century. Its dome had long defined the low, mainly domestic, Back Bay skyline. The interstitial triangle between the two disconnected street grids wos primarily filled with railroad yards, and these were surrounded by a relatively small number of streets of housing and shops.

4. Although the triangle is defined at its extremes by twa groups of monumental buildings, for the Mother Church has twa important civic neighbors (Symphony and Horticultural Halls), neither the eastern apex nor the western base constituted fully resolved monumental public spaces. This situation was far more serious in the case of Copley Square, home to several of the cultural and religious institutions that had defined the city's identity when it was the famed "Athens of America."

5. The railroad yards were the first area targeted for new developments by Boston's city planners when the city sought to revive its economically stagnant fortunes through the initiation of the large-scale urban interventions officially entitled the "New Boston." To this area was assigned a new headquarters for the Prudential Insurance Company, a major local financial institution and employer, along with apartment buildings and shopping facilities. The Christian Science Church subsequently planned its expansion on the substantial land holdings it possessed to the south and west of the Pru tower; and finally the John Hancock Insurance Company planned a tower to be sited on the lot abutting the southeast corner of Copley Square.

The Prudential Center

1. The original Gropius plan for the Back Bay Center, already a project for a fully modernist city within the city, was expanded into the Prudential Center, composed of the Pru tower, a secondary office tower, four mid-rise slab residential blocks, a hotel, two major department stores and a gallery of smaller shops. Separated by a boundary access road that completely divorced it from the Back Bay grid, the Pru Center exacerbated the separateness of the original interstitial zone and added other elements of urban isolation. Its designer, Charles Luckman, acted in conformity with that part of the modernist ethos that was fundamentally anti-urban at heart.

2. Even before its construction was complete, the Pru provoked several inter-related reactions in the local design community, thereby inadvertently initiating the subsequent self-correcting impulse that, we argue, came to characterize the subsequent large-scale architectural interventions in this area. The design community demanded that any future development create a dialogue with the existing, mainly 19th century city, in which the very few high-rise buildings were clustered in the financial district to the east (Sturgis, cited by Cobb, 2000)[1] Recognizing that the Prudential Center had failed to engage its context, either urbanistically or architecturally, they turned to Kevin Lynch's *The Image of the City* (Lynch, 1959)[2] and to Lynch, himself, who was a professor at MIT. They argued that legibility was needed if a city was to be both recognizable by its inhabitants, as Lynch had shown in his book. They proposed that all future high-rise buildings projected for the Back Bay be placed along what they called the "high spine," a jagged line that would connect the Pru to the old financial core of the city to the east, where new towers were being planned. Thus, the acceptance in Boston of the "high spine" idea as a guiding principle meant that the still undeveloped parts of the interstitial zone of the former rail yards would henceforth be developed in keeping with Lynch's ideas of a legible image of the city. The foundations for the self-correcting process were laid.

Christian Science Center

1. The design for the CSC to the south and west of the Prudential Center was the next step in the self-correcting process. The original Christian Science Church buildings consisted of a Romanesque revival Mother Church (1904, Franklin J. Welch) with Neo-Renaissance additions, including the signature dome (1908, Brigham and Beman), and the Publishing House (idem, 1930). Executed entirely in gray granite and a buff-colored Indiana limestone, the buildings have a monumental presence unlike that of the more traditional Bostonian limestone trimmed brick architecture, such as that of the adjacent Beaux-Arts Symphony and Horticultural Halls.

2. In 1963, Araldo Cossutta, who, in association with I. M. Pei and Partners, was engaged as the principal architect and master planner for the new Church complex, concluded that the most effective way for the Church to assert its physical presence within a vertically expanding city was to effectively command the horizontal plane. Making the one gesture that no profit-driven privately-financed project could afford, he planned the new buildings around a vast, but well-defined and accessible, plaza, with a reflecting pool at its center (Cossutta, 2000).[3] His master plan grouped a Sunday School, a colonnaded library, and a 28-story administration tower around this space. The tower was counterpoised to the dome of the church building across the open space and was designed to be of sufficient dimension to continue to clearly mark the position and importance of the Church within the physical fabric of the city. The placement of the elements of the complex conformed to the principles advocated by Lynch, with the location of the tower following the jagged line advocated by the proponents of the High Spine.

In sum, self-correction was realized: the CSC plaza made a compensatory gesture for the urban and spatial disruptions caused by the Prudential Center, even as the monumentality of the new ensemble created a new representation of the Church in relation to Boston. Moreover, the CSC retained its position in the 'image of the city,' creating resistance and balance to the incursion of the Pru.

3. Each of the elements of the CSC is composed in a classically modernist, balanced, asymmetrical fashion, and each element is dependent upon the others to render the composition whole. At its southern edge, the plaza opens on to and begins to engage the South End across Huntington Avenue, while the northern edge (which faces the precinct of the

Pru) is defined by the most architecturally distinctive element of the complex, a linear, colonnaded structure bosed loosely upon Le Corbusier's High Court at Chandigarh.

The colonnade functions as a visual screen between the Pru and the heart of the CSC, extending the lang block of the 1930's Beaux-Arts Publishing Hause to effectively define the great space between the Mother Church and its focus on the distant Copley Square. At the center of the plaza is a lang reflecting pool between the colonnade and the street. This space connects the tower, at its southeast corner, with the Mother Church and the Publishing House, which anchors the northwest corner of the site. The eastern end of the pool opens toward the edge of the Prudential Center and Copley Square, while the western end terminates in the Sunday School building that, by presenting a curved elevation to the pool, redirects the space into the forecourt of the Mother Church in true modernist fashion. Acrass the southern and western boundaries af the site, Cossutta and the Church sought to extend their vision into the community through the construction of both linear and mid-rise tower apartment blacks, and a hotel. The most effective of these is the Church Park Apartments (TAC, 1965), animated at street level with an arcade of shops. They form a 1,000 foot linear foil to the highly articulated west front of the Mather Church and its extended forecourt and draw the earlier Beaux-Arts civic monuments of Symphony and Horticultural Hall into the composition.

4. As a result, the monumental statement of CSC reaches out at its edges to engage the neighborhoods by selectively defining the perimeter through its placement of its objects (Tower and Sunday School), wall (Colonnade) and the empty landscaped plane (Plaza – the void at its heart). The image-making intention and scale of it elements notwithstanding, the CSC remains a non-assertive, quietly monumental, precinct of distinguished, but ultimately non-polemical, architecture. Self-correction created a significant reconceptualization of the classic modernist urban madel.

5. Moreover, Cossuta picked up the original palette of materials and made it contemporary through his use of a vocabulory af the refined cast-in-place concrete that was already becoming the hallmark material of the Pei office. We conclude that the introduction of a sympathetic, coherent, contemporary monumentality in an asymmetrical, harmoniausly colored, anti-historicist compositian clearly signaled a willingness on the part of the architect to recognize that his engagement with the surrounding areas demanded a new approach to modernist urbanism. It is significant for the contemporary trajectory of American architecture that Cossutta, an Italion born in Yugoslavia, would critically overlay his modernism with a sensitivity to context similar to that which Colin Rowe was beginning to articulate in his writings and to his students at Cornell University. Like Rowe, he would have been familiar with the graphic patterning af the traditional European city. He certainly appears to have been ready to incarporate this sensibility into his work. His strategy foreshadows the grawth af interest in contextualism in the 1970's.

The John Hancock Tower

1. While the Pei office was still completing the designs for the Christian Science Center, partner Henry Cabb was engaged by the John Hancock Mutual Insurance Company to design a new headquarters on land directly adjacent to Copley Square. The Hancock tower was a highly controversial project, both within the city and in architectural circles across the United States. Unlike the Pru, which had been constructed on an virtually barren urban site, the Hancock, a building of great height and bulk, was planned to be constructed immediately adjacent to the great nineteenth and early twentieth century monuments of Copley Square –a gesture that even in this time of the relative acceptance of tall buildings in the context of older cities was initially seen as an affront to its urban setting. Hancock essentially had the zoning laws of the City of Boston rewritten to accommodate their needs for this project and their intention to build taller (and with a larger floor plate) than the Prudential tower.[4] Cobb, a native Bostonian who was highly sensitive to the history, problems and constraints of this site, developed a strategy that negotiated between these inflexible demands and the historic architecture of Copley Square in the immediate proximity and that took into account the fact that these civic monuments are commanding but delicate in scale and articulation. He sought to create an architecture with urban consequences, ar a kind of virtual urbanism, that achieved self-correction by at least partially acknowledging the context without, however, deferring to it.

2. He approached the difference between new and old and between building and context through a series of inversians that ultimately came to define the building. He gave the 60 – storey skyscraper the shape of a rhombus and clad it in undifferentiated flat-plate mirrared glass of maximum dimension, thereby creating a skin with minimal articulatian and maximal reflectivity. The rhombus inflects towards the apse of Trinity Church, and the geometry of the Back Bay is therefore reflected on its narrow face. This façade is in turn further dematerialized by a full-height notch cleaving the elevation that reduces the apparent bulk of the building relative to the Back

Bay. The broad elevation is placed perpendicular to the hypotenuse of the interstitial triangle. It thus reflects the brutality of the neighboring incursions into this zone formed by a depressed 8 lane regional highway, the Prudential Center, and finally the Hancock itself, while bluntly acknowledging the old grid of the South End.

3. Modernist in its single mindedness, relentlessness, scalelessness and unapologetic autonomy, the Hancock also embraces minimalism, as Raphael Moneo has pointed out (Moneo, 1989, p.177).[5] This move, very much of its time, dematerializes the behemoth and makes it stark and simple). Yet, because its sheer mass unequivocally announces the power and anonymity of corporate wealth, its *modernism* nonetheless overwhelms and displaces Trinity Church, the representation of the culture of traditional Boston and becomes, through reflectivity, a literal enactment of *modernization*.

4. Cobb's initial design sought fuller self-correction. He foresaw a substantial addition to the public realm through the construction of a low-rise cultural center on Hancock property opposite the tower site. This center would have made a programmatic and formal contribution to the public realm by opening onto a new public plaza. This would have established a relationship with Trinity Church and Copley Square. The existing apse of Trinity Church, which Cobb perceives as the true intended focus of Richardson's design, would have created a pivot point between the old and new plazas (Cobb, 2000).[6]

5. Not only did the failure to execute this design compromise the nonetheless still considerable power of the architectural gesture of the tower, it blunted Cobb's ameliorative intentions. The resulting urban form would have interwoven the new and old in a manner similar to that of CSC's plaza's response to the forecourt of the Mother Church. The rotation of the public square relative to the normative geometry of the Back Bay and to the inflection of the tower would have heightened the legibility of the plaza as it develops off of the geometry of Copley Square and Trinity Church, thus making the setting of the tower itself more legible. The building would have been seen as a keystone, presenting the minimum possible exposure to the historic space, while absorbing, reflecting and reconciling the considerable architectural tensions that converge on this site. Thus Cobb would have successfully reconceptualized, on the urban scale, the modernist approach to the problematic design of this site.

6. Today, the tower is a stunning presence on the Boston skyline, seeming to dematerialize and to reform with every change in the light. At a distance, it calls attention to its own *mutability* and, in doing so, to the fundamental intrusiveness of the Prudential Center. At street level, however, it continues to make evident the *immutability* of the concentration of contemporary financial power and the ambiguity inherent in the relationship of the corporation to the city. Neither the 1960's landscaping of Copley Square by Hideo Sasaki nor any of the several subsequent landscape designs in a more post-modern mode have mitigated this fact. But aside from this disclosure of the nature of modernization, itself an inevitable fact of any tall building, the Hancock generates an antidote to its own generic universalism through the use of void, dematerialization and difference.

Conclusion

1. The CSC and the Hancock were at least in part generated as contextual responses to both the 19th century city and to the major mid-century interventions of the "island" of the Prudential Center but without renouncing the essential modernism of their urban and architectural qualities. In turn, these interventions have had a sanguine effect upon subsequent development in the area. The CSC enters into direct and vibrant dialogue with the major cultural buildings and residential blocks along the Massachusetts Avenue edge. The Hancock Tower has had a catalytic effect by inspiring the largely successful effort to make Copley Square a truly public space, and, as we have shown, continues to attenuate the overwhelming presence of the Pru and the other more recent smaller towers implanted in its precinct. The effect of this self-correction is a reconceptualized modernism and a form of modernist urban conservation.

2. This area continues to evolve: development pressures, many accompanied by a nostalgic desire for "traditional" appearances, are enormous and have prompted interventions of questionable merit. However, the strength of the initial impulse—the power of Hancock's dematerialized solid and the great void and the deferent, yet monumental, modernist aesthetic of the CSC; with its ability to catalyze the successful transformation of the surrounding neighborhoods—form an ameliorative approach to modernism that merits attention as an urban model for the modernist city facing the future.

Fig. 1 – Aerial View of Boston, 1986. The Back Bay and "High Spine" development are visible on the right moving toward downtown in the center.
Photo: Alex MacLean for Landslides,1986.

Fig. 2 – Aerial Detail of Back Bay with Christian Science Center, Prudential Center and Hancok from right to center, respectively.
Photo: Alex MacLean for Landslides,1986.

Fig. 3 – Christian Science Center, with Prudential Center to the upper right.
Photo: Alex MacLean for Landslides,1981.

Fig. 4 – Christian Science Center from the east: From the left - Administration Tower, Sunday School, Mother Church and Colonnade,1976.
Photo: Pei,Cobb, Freed and Partners

Fig. 5 – Christian Science Center: Plaza looking.
Photo: David Fixler

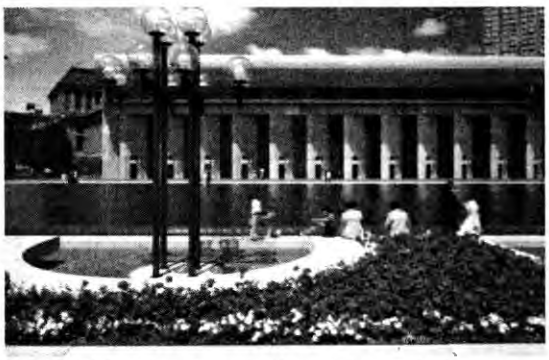

Fig. 6 – Christian Science Center: Colonnade from south, 1976.
Photo: Pei Cobb, Freed and Partners

Fig. 7 – Christian Science Center and Church Park Apartments (linear block at bottom), 1986.
Photo: Alex MacLean for Landslides

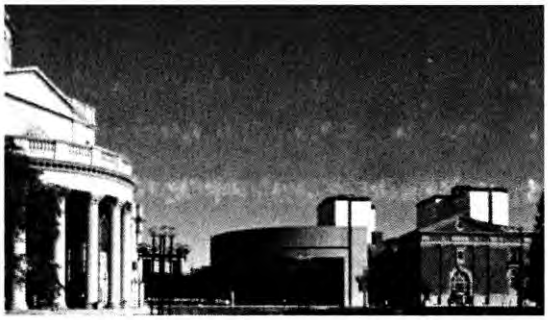

Fig. 8 – Christian Science Center. Forecourt of Mother Church with Sunday School and Horticultural Hall, 2000.
Photo: David Fixler

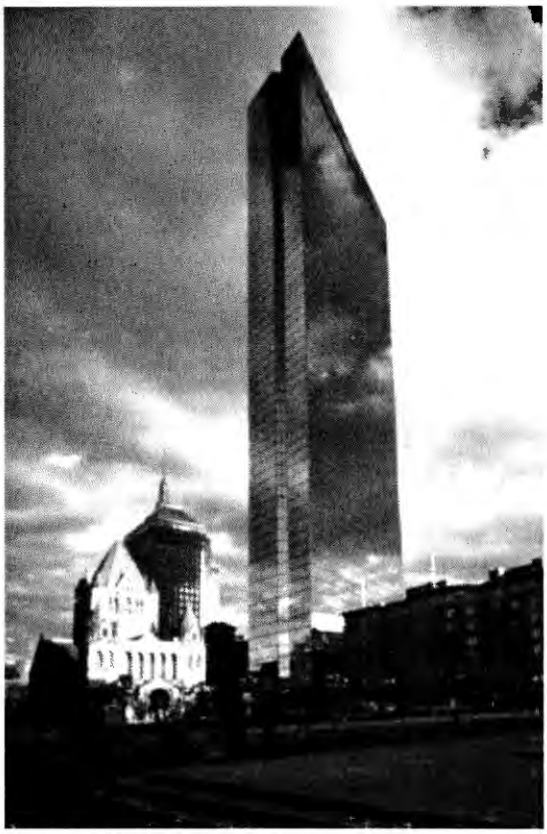

Fig. 9 – John Hancock Tower, 1976.
Photo: Pei Cobb, Freed and Partners

Fig. 10 – Hancock Tower site relative to Copley Square, 1976.
Photo: Pei Cobb, Freed and Partners

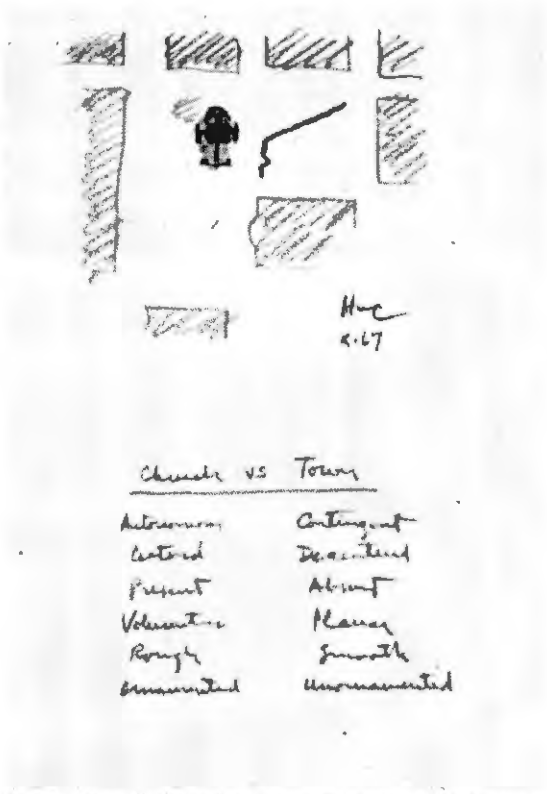

Fig. 11 – Henry Cobb sketch and notes on the siting of the Hancock Tower, 1967.
Photo: Pei Cobb, Freed and Partners

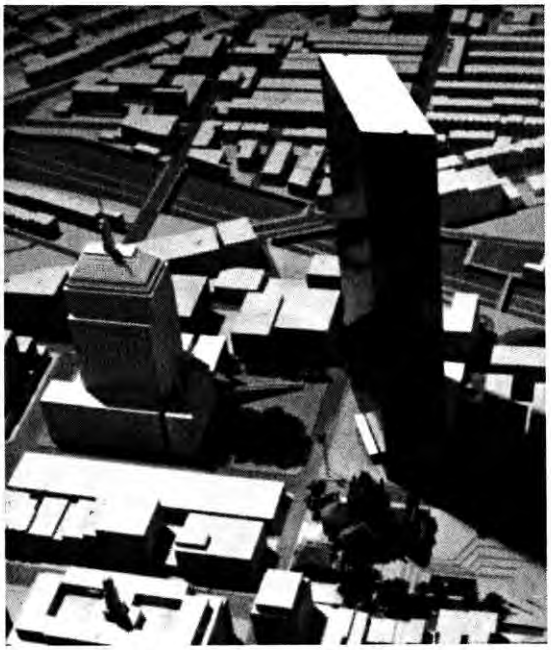

Fig. 12 – Model of the Hancock Tower with proposed plaza to the east, 1967.
Model and Photo: Pei Cobb, Freed and Partners

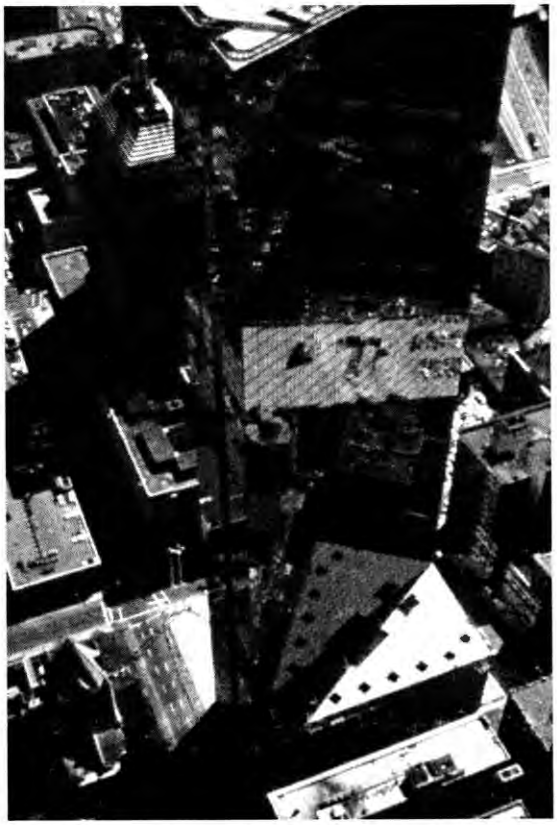

Fig. 13 – Hancock from west displaying the property of self reflection, 1976.
Photo: Alex MacLean for Landslides

Fig. 14 – Hancock Tower from the 19th Century Back Bay.
Photo: Pei Cobb, Freed and Partners

Fig. 15 – Hancock Tower in context from across the Charles River, 1976
Photo: Pei Cobb, Freed and Partners

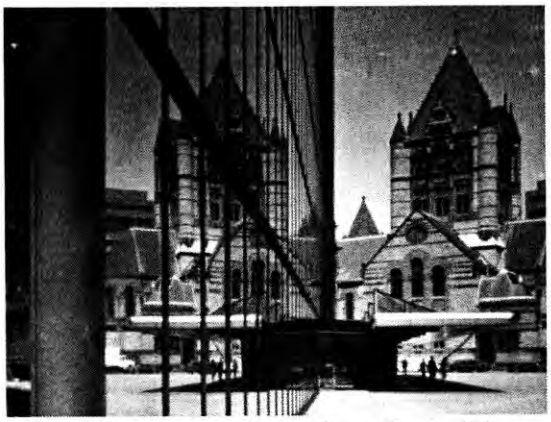

Fig. 15 – Hancock Tower with reflection of Trinity Church, 1976
Photo: Pei Cobb, Freed and Partners

NOTES

[1] Interviews with Henry Cobb of Pei, Cobb, Freed and Partners, March 16, 2000 and Robert Sturgis, May 23, 2000. Robert Sturgis is an architect who chaired a committee of the Boston Society of Architects that proposed the ideo of the High Spine.

[2] Lynch, Kevin (1959): *The Image of the City*, Cambridge, MIT Press

[3] Interview with Araldo Cossutta, March 16, 2000

[4] Hancock threatened to move their operations to Chicago if the City would not comply with their request.

[5] Moneo,Raphael (1989): 'Concerning the Hancock Tower'. *Harvard Architecture Review* 7 Cambridge.

[6] Interview with Henry Cobb,op.cit.

KEYWORDS

Boston, BackBay: Christian Science Center, John Hancack Towter M. Pei & Partners, Post-War American Architecture and Urbanism, Cobb, Henry, Cossutta, Araldo

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Sarah Moutury

Brussels skyscrapers: problems of identity. destroying in the name of protection

Introduction

In order to reach a better understanding of current policies as regards high-rise buildings, we need to be fully aware of the historical context in which these buildings emerged. Brussels is more than a thousand years old. The medieval urban fabric expanded continuously over nearly eight centuries. Though it underwent a few small-scale alterations with the erection of some neoclassical ensembles, it was not affected by large-scale urban mutations until the nineteenth century. Wide boulevards à la Haussmann were laid out in order to clean up specific neighbourhoods and make Brussels into a credible metropolis. This work (1867-1871) required covering the Senne all along its South-to-North run through the Pentagon[1], and pulling down several colourful working-class neighbourhoods.

At a later stage, as railway traffic kept increasing, there arose the idea of linking the South Station with the North Station (until then railway termini), with intermediate stations in the town centre. To carry out this junction, a broad swathe was cut through built-up areas in the centre (1901-1952). This once again meant razing entire neighbourhoods (1500 buildings were torn down, 12830 residents evicted). Apart from some general technical concerns, there was no overall master plan for rebuilding: the scars are still visible today: some plots remain unoccupied and those parts that have been rebuilt lack unity.

The tower to which we shall devote our attention below, the Lotto Tower, was built along the South-North junction in 1963 by the architect R. Goffaux, on the site where the d'Ursel mansion had once stood.

'50s and '60s: Megalomania

A series of major public works are again carried out in Brussels in the fifties and sixties. For the first time, skyscrapers rise against the Brussels skyline.

The delayed influence of CIAM, which had gathered in Brussels in 1930, is palpable in the language of urbanists, developers and policy-makers. It seems evident that, if it is to live up to its newly-acquired status of Capital of Europe, the city must be cleaned up, i.e. largely razed then rebuilt on rational principles. The belief in technological progress, the American myth and economic euphoria are to be at the root of oversized projects.

The authorities' chief goals are to maximize accessibility to cars, develop the tertiary sector and clear slums:

1. Genuine urban motorways, complete with tunnels and viaducts, provide access to the city centre. Work gets under way in the fifties, the prospect of the 1958 World Fair offering a temporary justification for the magnitude of the scheme. However, the construction works continue well beyond that date. Soon, residents begin protesting because of the damage done to their neighbourhoods and the resulting isolation from the rest of the city. Their grievances will go almost unheard. Parallel to road works, a great number of public car parks, covered or not, are built in the city centre. The urbanisation plan commissioned by the municipal authorities ('City of Brussels') in 1955 and executed by Tekhnè consultancy in 1962 conforms to the tendencies outlined above. The study's main concern was to improve traffic flow.

2. The tertiary sector is booming and the town centre soon abounds in office blocks. Several large-scale projects underpin this change.

• In 1937, the government decided to bring together into a modern and functional headquarters all the administrative services that were formerly accommodated in dilapidated buildings all over town. In 1955, it was decided that this giant headquarters for 20,000 civil servants was to be erected near the new Central Station, in a working-class neighbourhood already cruelly affected by the railway junction. Expropriations were carried out in a rush as early as 1956 because the authorities wanted most of the complex to be completed before the 1958 World Fair. The residents were offered scarcely any damages or social support. Due to technical problems, only the car park was completed in time, an sites cleared in a hurry. Not only was construction slowed down by financial troubles, but it also proved very difficult owing to the nature of the sail and to the heavy infrastructures required, so much so that it was to

continue until 1983. Ironically, the colossal Cité Administrative de l'Etat was never used to its full capacity. With the accomplishment of devolution in 1989, it was to be deprived of its main raison d'être, and is now gradually emptying.

• From 1962, the architects for the Structures planning office devised a master plan for redesigning the Quartier Nord (North District, 53 ha). This project, known as the Manhattan Plan, provided for some 80 office blocks (from 23 to 162 m tall) to be erected at the junction of several urban motorways. The Brussels World Trade Center, with its eight 102m towers, was to be the nerve centre of the neighbourhood. Between 10,000 and 11,000 residents had to go.[2] A promise had been made to build council houses to accommodate expropriated residents in the neighbourhood, but these were erected too late. The economic slump of the '70s put an end to this megalomaniac venture and only three WTC-towers were built. It was not until the '80s that new edifices started sprouting up again, along a prestigious axis entirely devoted to office blocks.

• From the 1950s the North-South junction undergoes rebuilding. The old neighbourhoods erected on a medieval street pattern were replaced by large monofunctional buildings occupying a full block, strewn along a wide boulevard that deepens the gap between uptown and downtown. These edifices, which are isolated, uncoordinated endeavours, make up a heterogeneous collection of architectural objects in various styles.

• From 1958, the European institutions expand rapidly in three nearby neighbourhoods East of the Pentagon. There too, nondescript mammoths (except, perhaps, for L. De Vestel's Berlaymont, on the site of a neoclassical convent) are erected, whose architecture is severely criticised and whose size also generates conspicuous discontinuities in the urban fabric.

3. Slum clearance, which had been a recurrent problem since industrialisation and the demographic thrust of the 19th century, was instituted by a 1953 law. The favoured solution was to replace the existing buildings with high-rise housing projects in conformity to the Athens Charter. Unfortunately, the numerous endeavours were too piecemeal, and forced upon the existing fabric in a brutal way[3].

'70s and '80s: Reaction

Within the context of the May '68 commotion and the '70s oil crisis, the urbanistic options and realisations of the '50s and '60s are being questioned. Living in the city has become unbearable owing to never-ending construction works, traffic congestion, the runaway expansion of office buildings. As a result, residents fled en masse to the suburbs[4]. The large-scale destruction of older neighbourhoods usually replaced with rather forbidding over-sized constructions is in part responsible for the city's loss of identity. The authorities' murky decision-making processes and their disregard for the residents would eventually spark off reactions from local residents' committees and pressure groups promoting a quality urban environment and heritage protection. The following are notable events:

• The early intervention (1967) of the non-profit organisation Quartier des Arts in order to defend and smarten up the high-standing uptown neighbourhoods.

• The famous 'battle of the Marolles' (1969), in which the vehement protests of the Comité des Marolles both stopped an extension of the Palace of Justice and obtained that this working-class neighbourhood be rehabilitated.

• The relentless activity of the Atelier de Recherche et d'Action Urbaine (Workshop for urban research and action) from 1968 onwards for more democratic decision-making in urbanistic matters, and for the defense of housing and industry against the spread of office space.

• The unifying action of Inter-Environnement Bruxelles (founded in 1971), which brings together more than 80 associations defending neighbourhoods and the environment.

Belgium's political institutions were modified in 1972. A new level of power was created, the 'Agglomération de Bruxelles', presiding over 19 municipalities. Until then, Brussels' affairs had been handled by the central government. Setting up an urban planning department within the Agglomération was a welcome development because the new administration was better prepared to pay attention to the inhabitants' demands. The Agglomération was deprived of its authority in 1987, but, in the wake of the federalisation process, Brussels' Capital Region was created in 1989 and was granted similar powers in urbanistic matters.

These political developments together with the tenacity of the residents' committees and other pressure groups were at the origin of improvements in:

• the decision-making process: a 1991 edict provides that requests for building permissions be made public and be subject to consultations;

• environmental protection: the Institut Bruxellois de Gestion de l'Environnement (Brussels Institute for Environment Management) is set up;

• heritage preservation: the Service des Monu-

ments et Sites (Department for Monuments and Sites) is set up, and a 1993 edict organizes preservation;
• the quality of public spaces, social aid, cultural development.

'90 and '00: Results

It is natural that many problems should remain, considering the inherent complexity of any large city's administration, especially in a country like Belgium with its many levels of power. However, the demands for a city that respects its inhabitants, its environment and its heritage have largely been taken into account by the City and the Capital Region since the '70s and more recently by the Federal State; witness the agreement for cooperation between the State and the Region for the year 2,000.

Attitudes have changed: decisions to pull down old buildings can no longer be taken lightly. Whereas in the Tekhnè plan of 1962 most of the Pentagon's buildings were regarded as 'unimprovable' or as slums, and therefore earmarked for demolition, in the 1979 zoning plan ('Plan de Secteur') most of the Pentagon has become worthy of preservation (in 'zones d'intérêt culturel, historique et esthétique'), and in the 1995 Regional Development Plan, the whole of the Pentagon is protected as a 'périmètre d'intérêt culturel, historique et esthétique'.

Heritage destruction has become taboo, and yet the municipal authorities support the demolition of Brussels' skyscrapers. This is a contradiction that is understandable in the light of the context outlined above. But it is also a contradiction that should be resolved. To that end, I shall now briefly introduce the towers located within the Pentagon and in neighbouring areas, and review the recent projects for them.

Most are found in the heart of the Pentagon, on its uptown borders, or in the North District.

• Lotto Tower, 1963, R. Goffaux and C. Heywang, 80 m Demolition and rebuilding project, H. Montois and Art & Build, 2000
• Stevens Tower, 1965-1966, A. Vanderauwera, 86 m
• Monnaie Tower, 1967-1971, J. Cuisinier, J. Gilson, A. & J. Polak, R. Schuiten, 63 m
• Philips Tower, 1967-1969, Structures, 63 m Demolition foreseen on expiration of 99-year lease (2066)
• South Tower, 1962-1967, R. Aerts & P. Ramon, Y. Blomme, JF. Petit, A. Bressers, A. Van Acker, M. Lambrichs, A. Van Doosselaere, J. Hendrickx, 149 m Revamped facades with addition of geometric patterns
• Hilton Tower, 1967, H. Montois, 94 m
• Bastion Tower, 1967, R. Goffaux, 90 m Renovated
• Madou Tower, 1965, R. Goffaux, 112 m
• Astro Tower, 1976, A.J. De Doncker, 107 m
• P&V Tower, 1957 and 1965-1971, H. Van Kuyck Facades revamped in Art Nouveau style, Atelier d'Art Urbain, 2000
• Treasury Tower, 1968-1983, Groupe Alpha, M. Lambrichs, G. Ricquier, H. Van Kuyck, 141 m Projects for covering the outdoors service spine containing the elevators, originally meant to be marble-clad, with a vertical garden (H. Wieser, 1992, L. Schuiten, 1995)
• IBM Tower, 1978, Bresseleers, 80 m
• 'Rogier' International Centre (Martini Tower), 1958-1961, J. Cuisinier, 112 m, Demolition and rebuilding project, KohnPedersen-Fox
• Manhattan Center (Sheraton Tower), 1968-1973, Structures, 96 m
• World Trade Center, 1970-1974, Structures, 102 m
• Berlaymont, 1960-1970, L. De Vestel, A. & J. Polak, J. Gilsan, 55 m
Revamping project 1999-2000, P. Lallemand
• Charlemagne, 1967, J. Cuisinier

Facades refurbished in 1998 by Murphy & Jahn and Arias

Most of the towers were erected between the late fifties and early seventies. With the exception of the taller South Tower (149 m) and Treasury Tower (141 m), they are of moderate height, between 50 and 112 metres. Most are office towers, sometimes with shops on the ground floor (City's Administrative Centre, Rogier Centre, Madou Tower). The Lotto Tower (now empty), the Hilton and Sheraton are multi-use buildings incorporating hotels, offices and shops.[5] They are scattered over town, except in the North District, where there is a concentration of towers.

From a technical point of view, most are curtain-wall structures, some of which only are genuine technical achievements (South Tower). >From an architectural point of view, functionalism is paramount. If some towers are exceedingly banal (Stevens Tower) or betray inadequate composition of the various volumes (City's Administrative Centre), some others achieve high-quality design and elegant proportions (Lotto Tower, Rogier Centre, P&V Building), or successful urban integration (Lotto Tower, Rogier Centre). However, same towers were erected regardless of their surroundings and caused discontinuities to emerge in the urban fabric (Treasury Tower, IBM Tower).

In the past few years, various projects to transform towers have seen the light of day. It is clear that functionalism is out of fashion, judging from the number of buildings due to be revamped in a postmodernist or high-tech style (South Tower, Berlaymont, Charlemagne, P&V Building, Cité Ad-

ministrative de l'Etat). One tower, AG's 'Blue Tower', was torn down in 1992 to make room for a cluster of buildings of traditional proportions inspired by historical classicism (Laeken Street). As to the Rogier Centre, it is to be demolished then built anew.

The City of Brussels has now defined a genuine urban policy: in its Municipal Development Plan (1999), high buildings have been found incompatible with urban morphology:

> *"Numerous office blocks are obsolete (1960s) (...). These are large monofunctional blocks whose aesthetics and setting do not fit well into a historic centre: towers, curtain walls, plots brought together... These create discontinuities in the urban fabric which are all the more undesirable because they are concentrated in one section of the Pentagon.*
> *In the past few years, renovation has consisted either in rebuilding behind facades (Royale Belge, Josi, Le Continental), in restoring or updating buildings (SABENA, AG on the corner of Rue Royale and Rue du Gouvernement Provisoire), or in demolishing then rebuilding high-quality properties (AG's 'Blue Tower' on rue du Pont-Neuf). Though these three types of initiatives improve the image of the Centre, only the last one highlights and makes use of the quality of the building as a whole".*[6] *(PCD, 1999, vol. 2a, p. 55).*

The Philips Tower is to be razed on expiry of the leose in 2066. The PCD also mentions the possibility of rebuilding housing on the location of the Cité Administrative de l'Etat. The war against towers broke out in the wake of a renovotion scheme for the Lotto Tower, the outcome of a contest in which close to 60 candidates had taken part. Three doys before the winning projects were due to be displayed publicly, the Moyor declored thot, from the Town Hall's balcony, the sight of this structure towering above the baroque houses on the Grand-Ploce was intoleroble. As a result, investors were talked into lowering the tower by 30 metres. It then came out in the press that, far from being a mere whim of the Mayor's, a reduction of the tower was port and parcel of Brussels general urban policy.

Whereas high-rise structures were considered a panacea in the '50s and '60s, they hove now fallen out of favour. It is os if they were responsible for all of Brussels' urban ills. Yet, they account for only a minor proportion of the town centre's office spoce. It is a bit facile to single out these landmarks in order to expose the inconsistencies of the cityscope. As often, architecture is burdened with the task of solving problems which in effect are essentiolly economic, political and sociol.

No doubt, against the background sketched above, the dislike for towers makes sense. From the outset, skyscrapers were associated with:

- heritage destruction;
- the megalomaniac joint projects of a few politicians and big developers;
- the dehumanisation of the city centre largely due to Brussels becoming a third-sector hub;
- a feeling of insecurity resulting from the building of large housing projects.

Besides, some specialists in urban and heritage matters have been at the forefront of the struggle ogoinst towers which, by their very presence, mar certain historic sites. Witness a 1982 paper[7] in which eminent heritoge experts point o domning picture of towers, bloming them for the decreose in population in the town centre. After listing the various towers, the authors write:

> *"one wonders if there are any inhabitants left in this city. Where are they? Who are they? How do they live?"*

The Lotto Tower is then singled out: "Not only did the building of this tower require the destruction of the mansion of the Dukes of Ursel, a precious historic edifice, but the tower enjoys the dubious privilege of being visible from the Grond-Place".

Questions

This condemnotion of skyscrapers is endorsed by many within the intellectual élite who fought with determination for the rehabilitotion of Brussels from the 1970s onwords. As o result of their action, these people enjoy a well-deserved recognition. But is it not a mistake to devote so much energy to the demolition of buildings which, after all, are part of today's heritage as well? Is there no way to preserve them while at the same time devising solutions to the problems of the city? Should one focus exclusively on those negotive ospects of the generol context at the expense of the manifest architectural qualities of some of the buildings?

It is eosy to see that this hostility results from circumstances and not reolly from the buildings themselves. As I will tentotively try to show, Brussels' urban policy is aimed ot the wrong torgets.

The Lotto Tower is a case in point. Rather than rehashing the same old grievonces against post-WWII buildings in general, it would make more sense to emphasise the Lotto Tower's numerous ossets. Its volumes interploy subtly with the constraints of its immediate environment. Its quasi-triangulor base covers the whole plot ond adjusts to the straight lines or curvature of the streets around. The tower is thinner and also curved, but whereas the base is

curved outwards, the main facade of the tower is curved inwards. Thus, it harmonizes with the slope and with the streets facing it. In particular, Ravenstein Street, which makes a downwards bend as it widens towards the building whose hollow face seems to be made to contain space. Therefore, it causes no discontinuity with its surroundings. Moreover, its fairly modest proportions together with the lightness and transparency of its structure definitely keep it from becoming an overwhelming presence. The ground floor, with its large display windows, could accommodate shops and contribute to a busy street life. Unfortunately, continuity is broken by the adjacent building, whose structure is more heavy and closed-in, and is set back from the building line.

The municipal and regional authorities would like to attract a more affluent population to the centre. With a few minor changes, the tower, ideally located between the Grand-Place, the Central Station, the Fine Arts Centre, and Brussels' Royal Park, could provide quality housing with panoramic views. This could offset the much reviled impact of office blocks. The tower could also house a skydeck restaurant. However trivial the idea may seem, Brussels lacks panoramic viewpoints from which to admire the cityscape. A last point: the Lotto Tower is criticised for being visible from the Grand-Place and for standing on a site previously occupied by a wealthy mansion. Needless to say, the destruction of the tower will not bring back the mansion. Besides, I believe this scheme to be a symptom of the authorities' inability to take account fully of Brussels' inherent complexity, a hypacritical attempt to divert the public's attention from the real issues. The scheme testifies to Brussels' discomfort with modern architecture. Note that this is a city where the modern art wing of the Museum of Fine Arts (R. Bastin, 1973-84) was built underground for fear that it should clash with a neoclassical ensemble. This discomfort, however understandable, must be overcome. Otherwise, the risk is that few valuable testimonies of our period will be handed down to the future generations.

As a matter of fact, a change seems to be getting under way in some circles. Witness several punctual attempts to reclaim the city in its most unwelcoming quarters. For example, open-air parties and film projections were recently put on in the gardens of the Cité Administrative de l'Etat and along the North-South Junction viaduct. As part of the opening ceremonies for Brussels 2,000 (Cultural Capital of Europe), words were displayed at night on the facades of Brussels skyscrapers in huge letters made up of lit-up or occluded windows. Passersby were given a playful opportunity to rediscover these buildings. Some artists took pictures of the city from the top of its towers, notably Marie-Françoise Plissart, who published a superb book of photographs in 1998. A 1999 exhibition set up by the Foundation for Architecture displayed impressive scale models and pictures of the capital's office blocks.

The pleasure of city life depends a great deal on how one looks at it, on the attitudes, positive or negative, one has towards it. It is paradoxical, and also deplorable, that urban heritage specialists should ignore an important period in the city's history. Such dispositions seem to nourish a policy aimed at reconstructing an ideal image of a historic centre untouched by modernity. Efforts to homogenize the cityscape appear to me to be misguided, all the more because they impair the ability to stand back and take in the full complexity and richness of the city.

As I am writing these lines, the request to demolish the Lotto Tower is being examined by the competent municipal services. It is likely to be granted approval soon, since it is in conformity with current urban policy and meets the Liberal Party Mayor's wishes.

NOTES

[1] This term denotes the historic town centre as determined by the fourteenth-century ramparts, whose layout is reminiscent of this geometrical form.

[2] Figures vary wildly according to the sources: the City has 4,400 persons.

[3] Meiboom (1954-1964), Radis (1961), Potiers (1958-1965), Querelle (1971-1974), Brigittines (1964-1968), Minimes (1960-1964), Rempart des Moines (1961).

[4] Number of residents in the Pentagon in 1890: 159,000; 1996: 39,687.

[5] Housing projects in the Pentagon are usually smaller and rarely exceed fifteen storeys.

[6] This distinction made in the PCD could do with a clearer formulation.

[7] *Pierres et Rues* (1982: 94-100), which is the catalogue of an exhibition about urbanistic developments in Brussels over the past two centuries.

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22.10.1998: 'De Donnéa décapite la tour du Lotto. "Ce qui est petit est beau". Le nouveau credo urbanistique de la Ville vient de faire sa première victime', p. 21.

16.03.1999: 'Première décapitation dans le Pentagone. La tour du Lotto rabotée de 12 étages'.

09.04.1999: 'C'est dans le PCD... D'autres tours à raboter, dans le Pentagone?', p. 21.

28.10.1999: 'Un milliard pour un nouvel hôtel, des bureaux et un "Health Center". Les Manhattan cowboys de la place Rogier'.

29.01.2000: 'Artesia apporte les sous, l'ARAU retire son recours au Conseil d'Etat. La tour Rogier reconstruite en 2001'.

KEYWORDS

Skyscraper, Brussels, urban policy, heritage preservation

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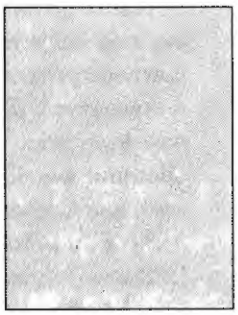

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Coming of age: Scottish new towns in the 21st century

Introduction: The Scottish initiative

Planning throughout the 20th century was an important element in Scotland=s political culture. Scottish burghs, founded by charter from the 12th century onwards, had historic importance in the national constitution. Many of them were planned towns and all were guardians of their civic responsibilities and civic dignity. When, in 1903, Andrew Carnegie presented his home town with a gift of two and a half-million dollars, >to bring into the lives of the toiling masses of Dunfermline more of sweetness and light=, the reaction of the city fathers was to commission a survey and plan from Patrick Geddes and subsequently to establish a planning section in the burgh surveyor=s department.

By 1900 the environmental and social problems that beset central Scotland, dependent on coal, steel and heavy engineering, were obvious. Aggravated by economic depression, housing and industrial reconstruction demanded massive investment by public agencies and the consensual view of planning, shared by the major political parties, was pursued by the devolved Scottish Office after its move to Edinburgh in 1939. The wartime Secretary of State, Tom Johnston, inspired by the example of the Tennessee Valley Authority, proposed regeneration of the Highlands by a hydro-electric authority which commenced immediately after the second World War, and set up regional planning teams to examine the problems of central Scotland.

The Clyde Valley Regional Plan

The planning team directed by Patrick Abercrombie and Robert Matthew reported in 1946. The problems of west central Scotland were concentrated in Glasgow and the congested coal-mining areas to its south. The region contained over one-third of Scotland=s population, with 22% in Glasgow alone.

The major concerns of the plan were to secure the containment of Glasgow=s growth and dispersal of its population, and reconstruction of the region as an economic whole. The prescription included imposing a green belt around Glasgow and its surrounding towns to prevent merging and to preserve high amenity open land, to establish new towns and to expand some existing settlements as dispersal and growth points. Apart from green belt requirements, criteria for possible new town sites were strict, avoiding land liable to subsidence due to coal mining, and minimising use of high-quality agricultural land. A >negative building map= revealed four possible new town sites, at East Kilbride, to the south of Glasgow; two alternative sites near Renfrew to the west, and Cumbernauld, to the north-east.

These proposals were at first bitterly opposed by Glasgow. The proposed green belt included some 5,400 hectares of land within the city boundaries on which the council proposed to build. A plan by the city engineer claimed that the existing population could be rehoused, mainly in low-rise tenements at high density, and a powerful faction was intent on retaining the magic million population of the >second city=.

Within a few weeks of the Clyde Valley plan=s publication the government commenced implementation of the decentralisation strategy and the designation of East Kilbride as a new town, to be managed by an appointed development corporation, forced confrontation with Glasgow. At a public enquiry the assumptions of the >second city= plan were refuted and designation was confirmed. East Kilbride was followed by Scotland=s second new town, Glenrothes, a growth point in Fife, which, though far from the Clyde valley, would attract population from the declining coal mining areas south of Glasgow.

Development at East Kilbride began in June 1948, and despite continued opposition from Glasgow the first new town proved a great success. Glasgow residents began to apply for houses before any were built and within five years a modern industrial base was established, including the principal government engineering research establishment and Rolls-Royce aero engines division.

Cumbernauld, seven years later, represented a second generation of British new towns. Based on an existing community of 3,000 its location, 24 km from Glasgow centre, was an important node in the national road network. Cumbernauld conformed to the dispersal policy of the Clyde Valley plan, by then accepted by Glasgow, but was also seen as a

potential growth point to attract industrial and commercial development in central Scotland. Subsequent policy emphasised the >growth point= strategy in locating the fourth and fifth new towns at Livingston, 20 km west of Edinburgh, in 1962 and at Irvine, on the Ayrshire coast, in 1966. Irvine represented a break from previous location policy by expanding a well-established seaport town with a population of 34,500 at the time of designation. After 20 years of developing planning policy the five new towns, rather than clustering around the Glasgow conurbation, formed a chain through Scotland=s central belt.

Cumbernauld

As it is impossible here to discuss the character and fortunes of all five towns we will now concentrate on Cumbernauld, designated in 1955 to accommodate a self-contained town for 50,000 people.

The chief architect and planner Hugh Wilson=s approach represented a reaction to the >neighbourhood= principle adopted at East Kilbride and Glenrothes. Wilson wanted a compact urban area seeing zoning also as a negative approach: he had >no objection, for instance, to the placing of suitable industrial buildings .. to produce a more lively atmosphere in the town=; traffic should be segregated and parking problems called for fresh study. The master plan should not be specific but a brief to guide development.

We have an opportunity to design a cellular town, the houses within walking distance of the centre, with planting used as an integral part of the development and with levels that can be exploited to provide interest in the grouping of buildings. My office will be organised on a group basis with planners, architects, landscape architects and engineers working side by side= (Wilson, 1957, quoted by Lyddon).

In this ground-breaking approach lay the successes of Cumbernauld, its international fame and also some of its subsequent problems.

The principal objectives of the Cumbernauld plan were; circulation designed for 100% car ownership with separate road and footpath systems, housing to be largely in 1 and 2-storey cottages, with gardens for shelter and privacy and concentration of principal shopping, services and administration in a town centre with local shops, meeting rooms and small industrial units in residential areas.

Not only did the planning principles break the mould of earlier new towns; they were to be applied on a particularly challenging site, centred on a hilltop ridge on the watershed of central Scotland with valleys to north and south. The designated area was small and not all of it was buildable. The north-facing slope was particularly steep, the south side more gentle.

Firm planning proposals evolved between 1958 and 1962 but initial development began at once. Glasgow was pressing for housing and an industrial site for up to 4000 employees had been allocated before the development corporation was set up. Wilson=s multi-disciplinary design teams were engaged on the three stated problems; high-density low-rise housing on sloping sites within strict cost limits, the hilltop town centre and the segregated road and footpath systems. The integration of those three elements, designed and refined as the town was being built, was the achievement of Cumbernauld. By 1967, after ten years, 5600 houses had been built and 6102 jobs provided. The achievement was recognised by the RS Reynolds Memorial Award, gained in competition with Vallingby, Stockholm and Tapiola in Finland, the jury commenting,

>... The town, though only partly complete, has already a real sense of community and place endearing it to both residents and visitors... The architects have achieved townscape on a shoestring ... effective urban design has been gained at moderate cost with a limited palette .. the dreams of the 1920s and 1930s are being built on a hill near Glasgow.=

The Town Centre

Within the integrated urban development of Cumbernauld the town centre attracted most acclaim: to many observers it was the image of the town, to many users it proved a disappointment and to all involved in its development and management an endless source of new problems.

The character of the town centre was inherent in Wilson=s concept of Cumbernauld as a compact development with most of the town=s commercial, social and administrative facilities concentrated in one central complex, accessible by footways from the residential areas, by private car and by public transport with complete separation of vehicles and pedestrians.

In the 1950s the multi-outlet shopping mall was almost unknown in Europe. Important precedents were Ralph Erskine=s shopping centre at Luleå in northern Sweden and his imaginative schemes for enclosed urban developments in arctic cities. And in 1956 a series of advertisements by Pilkington Brothers, glass manufacturers, described a >High Market= project, a hilltop megastructure near Dudley, in the English west midlands, to serve regional shopping and recreational needs.

Like the road system, the town centre programme was researched from basic principles. A team from Glasgow University and corporation staff sought a

more reliable measure of retail requirements than a crude estimate of numbers of shops. From available statistics, sales were assessed for the likely local and catchment area populations, and flaor area requirements for each trade group, numbers of employees in retail and related activities and likely car parking requirements were calculated. At the same time commercial reactions were sought and a firm of estate surveyars engaged as consultants and subsequently as letting agents. It was realised that both leasing arrangements and building structure should be flexible and allow for changing and unforseen patterns of retail distribution to avoid obsolescence.

The design revealed in 1962, and presented with almost evangelical fervour by the team leader, Geaffrey Copcutt was heroic; an eight-level structure containing shops, housing, offices, restaurants, pubs, theatre, library, hotel and local government, more than one kilometre in length when completed, would crown the hilltop, straddling a dual-carriageway central way.

Such a leviathan could not be built at once and the decision to begin phase I in 1963, when the new town was barely five years old, was itself a heroic act of faith. There had been debate whether the first phase should be a complete deck, or a >slice= through the megastructure. The decision to construct a slice, though later seeming a recipe for near-disaster, forged the image of Cumbernauld and secured the remarkable skyline which in some views seems a man-made extension of the hill-top.

Phase I, completed in 1968, comprised two principal elements, the main commercial, administrative and housing block, a tiered 7-storey agglomoration crowned by a row of penthouses, and a spur to the north, bridging the central way. Phase II, above and adjoining the northern spur, comprised a single 3-storey block af offices and shops with car parking below. Since completion of phase II in 1972 these buildings have formed the core of the town centre, to which other components were added and some removed in successive phases, the rooftop penthouses being converted to offices in 1985.

The centre=s fortunes have risen and fallen over the years and decommissianing in 1996 found it in rather a sorry state. The outgoing development corporation succeeded however in appointing developers to undertake a, 75 million modernisation and extension programme to create more than 11,000 sq m of new shopping. Extension to the south will be achieved by demolishing the lower southern section of phase I to form a new entrance area with shopping malls extending towards a new department store to the west. Meanwhile modernisation of the older shopping levels is well advanced though plans to restore the penthouse level to housing have been impeded by fire regulations.

The new buildings will not exceed two storeys, will embrace a town square, lacking in Cumbernauld, and provide entrance areas more welcoming than the present, sometimes puzzling, tunnels and ramps. The through route of the central way will be lost - it never achieved its intended expression anyway because of failure to complete the western sector - but a new bus station under the building will retain the principle of direct, sheltered access. Gone is integral car parking, attempted below the shopping areas in phases I to III and on a supermarket roof in phase IV but too costly and inflexible for modern shopping developments. The heroic hill-top profile will survive as a solid core contrasting with the fussy decar of a new shopping mall. We must hope that the town centre will remain both commercially viable and a recognisable memorial to the designers of Cumbernauld, responding, in Hugh Wilson=s words, to the >changing conditions and demands= of the 21st century.

"Through-composed" planning

An expression from opera might explain Cumbernauld=s approach to layout, enabled by the development corporation=s status as, in effect, sole landowner. Developers and designers of individual elements, such as churches and schools, were not presented with sites defined by pegs in the ground but worked with the town design team to relate their buildings to surrounding development before site boundaries, access arrangements and intermediate planting were fixed. The success of this approach to townscape, the spaces between being as important as the buildings themselves, can be seen still by the visitor walking through Cumbernauld. Ideally boundaries need no physical reinforcement; public and private spaces should be apparent, but that principle has not everywhere survived fragmentation of ownership and concerns with >security=. For example, Kildrum primary school (1960), by Gillespie Kidd & Coia is now separated by 2m high palisade fencing from the adjoining sheltered playing field.

Central area housing

The first housing areas, in an elongated >doughnut= layout round the hilltop, were high-density, mainly family houses with private gardens, planned on modified >Radburn= principles. Historically important, they signalled in Scotland a departure from apen-space post-war housing layouts to denser, more complex, patterns strongly influenced by Scandinavian examples. Though designed for collective ownership and management, most areas have survived the trend to owner-occupation. But after 40

years low-cost housing needs, at least, extensive servicing, and Corbrain, south of the town centre, is by general agreement, due for renewal and deck-access flats there have already been demolished. The remaining low-rise housing, though ingenious in design and cherished by some of its occuponts, is not something that conservationists would die for, but it is important in its location on the southern approach to the town centre; for visitors arriving by train Carbrain is the entrance to Cumbernauld.

Redevelopment at Carbrain will be overseen by a partnership of housing agencies ond a residents= organisation, ond a development brief, intended to retain the high-density, low-rise character of the hill-top housing areas is being prepared. But no part of Cumbernauld has any statutory protection and the official valuers, obliged to apply a monetary test on disposal of publicly-owned assets, might favour the standard pattern of speculotive development prevalent to the north of the town.

The future of Cumbernauld

Cumbernauld is not completely at the mercy of market forces; the district planning department and concerned residents= organisations are aware of the value of their legacy, but commercial interest is hard to resist. A study by the Conservation Unit of Edinburgh College of Art in 1998, while identifying the values of Cumbernauld as a unique planned environment and, while recognising the difficulties of protection, recommended that the central housing areas and the town centre should be designated as a conservation area of outstanding status and that application should be made to UNESCO for Cumbernauld to be included in the World Heritage List.

World Heritage List nomination was considered by DOCOMOMO Scotland at the time of the Registers Committee=s WHL report. Guidelines require local protection of the monument and assurance of its future maintenance, neither of which was in place for the town centre. The hilltop housing conservation area could and should be supported. Conservation area submissions normally adopt a street by street approach. At Cumbernauld quality is in the integrity of the whole and even consideration by housing areas must be resisted. The area would be large, but not so large as Edinburgh=s 18th century New Town.

Conclusion: the Scottish new towns

In 1995 East Kilbride was said to be the sixth largest town in Scotland, Cumbernauld the ninth, and all five new towns must rank among the largest twelve or so. Their achievements are undeniable; Glenrothes, Irvine and Livingston are local administrative capitals, virtually county towns; East Kilbride an industrial centre of international status; Cumbernauld, the most famous, curiously something of a Cinde-rella, still attracting hi-tech industrial investment, still, as house sales confirm, a desirable place to live but subordinate to Motherwell, the established centre of North Lonarkshire.

The urban design charocteristics of [Cumbernauld=s] eorly phases sound like a shopping list of desiderata for the twenty-first-century urban periphery: compact planning and split level flexibility, ... private gardens, spatial openness, ... sharp perimeter definition of the urban area, ... respect for the *genius loci* and immediacy of contact with nature, through a predominotely grey-and-white built image and flowing, forest-like landscaping. (Glendinning & Page, 1999)

That initial rigour, though relaxed in Cumbernauld=s loter phases, was reflected in different ways in the other four new towns. Their continued ottraction to private housing developers, now at commercial land values, and the identificatian of Livingston, by an academic study in 1997, as the second most desiroble town to live in Britain support that assessment.

Yet living in one of the new towns can still produce reactions of amused surprise. They are not yet realised, culturally or historically, as even are Helensburgh or Port Glasgow, both planned creations of the last two centuries. More serious has been their hasty decommissioning and the dispersal of professional and administrative expertise, the value of which seemed to be accepted in directing the East Kilbride team to support Glosgaw urban renewal in the 1970s.

The Adam Smith Institute, a right-wing think-tank not usually regarded as a friend of planning, discussing the future of the Scottish new towns in 1988, recognised their special identity and commercial success, praising particularly the high quality and professionalism of their staff, concluding;

The new towns stand ready to move to the next stage of their evolution. It is possible to see them as a completely new type of social organization, and to take the opportunity to introduce changes which could serve as models for the rest of Scotland, and to devise arrangements more suited to the special character of the new towns, It could be that the achievements of the new towns could thus be spread more widely than the boundaries within which they have so far taken place.

While suspecting the dirigist style of the development corporations we might see them as counterparts of the early Scottish burghs with their elitist feudal structure. East Kilbride was briefly constituted as a burgh, beginning to transfer centralist management to local democratic control. The tradition of small-town management, developing the local civic dimension, might have retained and enhanced the values of the new towns more securely than by

their absorption into large district authorities and underlined their important role, not only as economic growth points, but as examplars for a structured development of central Scotland.

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[8] David Whitham, October 2000

KEYWORDS

new towns in regional context, history and significance of Cumbernauld; dilemmas of conservation and planning for change; new towns as examplars for future development.

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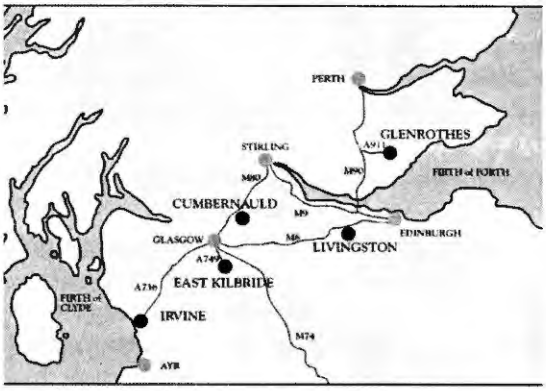

Fig. 1 – Central Scotland: Map showing the five Scottish New Towns.

Fig. 2 – Cumbernauld New Town: air view from east, 1967. Town Centre Phase 1 almost completed; Phase 2 under construction. In background: point blocks and row housing in Seafar and Ravenswood areas. (Cumbernauld New Town Development Corporation)

Fig. 3 – Cumbernauld Town Centre in 1980. The Technical College is on the left. (Philip Opher)

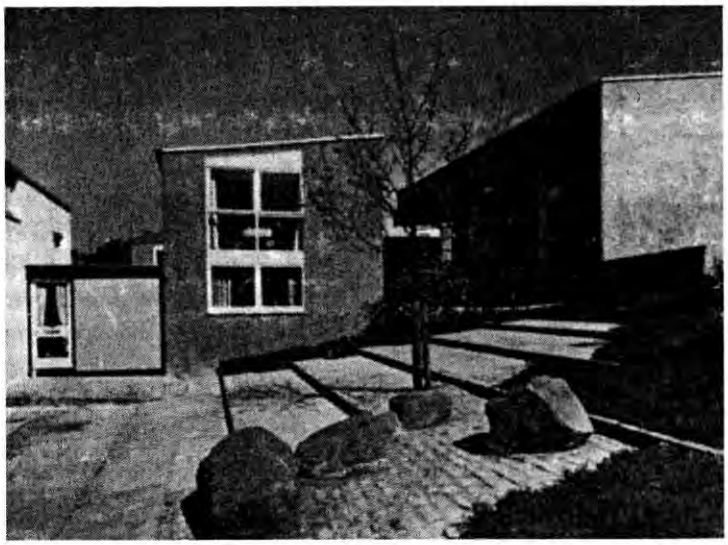

Fig. 4 – Cumbernauld New Town: split-level housing on a north-facing slope in Seafar. (Cumbernauld New Town Development Corporation)

Fig. 5 – Irvine New Town: The Bridgegate development in the historic burgh centre. (Philip Opher) 8 David Whitham, October 2000

Jean-Marc Basyn
Luc Verpoest

The social housing in the 1920'ies: the garden city concept

Introduction

A strong anti-urban feeling appears at the end of the 19th century as a reaction against the chaotic developments of the city mainly due to industri-alisation in and around the city and the unhealthy and undesirable presence of workers in their proximity. The search for a better living environment reflects this anti-urban reaction and finds an alternative in the autonomous, green settlement develaped without any relation to the city: this can be seen as the historical origin of the development of the garden city concept that will have its time of glory in Belgium just after the First World War. (SMETS, 1977: pp. 68-77.)

The concept of garden city is promoted by the *Garden City Association* founded in 1899 by the progressive Sir E. Howard as a remedy against an uncontrolled urban growth and the disintegration of social bonds. In his book *Tomarrow: A Peaceful Path to Real Reform*, he proposes to create economically autonomous communities in green entities following the coaperative ideals of production of John Ruskin's and William Marris' *Arts and Crafts* (ill. 1). The *Garden City Association* permitted to the yaung R. Unwin, in association with B. Parker, to concrete these new social canvictians in the garden city of Letchworth in 1904 and Hampstead in 1905. In the boak he published in 1909 under the title *Town Planning in Practice. An introduction to the art af designing cities and suburbs*, Unwin insists on an urbanism based on the coaperative ideals and the active participatian of the inhabitants in order to achieve a social integratian thanks to the common use of collective equipment (HOWARD, 1970: p. 51).

In its social attainments, the garden city has to be considered as a radical rupture with the repressive and paternalist intentions of the social housing theories of the 19th century. It thus represents a modern and particularly progressive social approach to the needs of social housing inhabitants in terms of hygiene and comfort thanks to a healthy, organised environment with common amenities.

The historical evolution of the garden city concept in Belgium

The concept of the garden city was already present in Belgium before the First World War. Belgian architects and urban planners played an active role during the *7e Congrès international d'architectes* (London, 1906), the *Town-Planning Conference* (Londan, 1910) and the *Premier congrès international et exposition comparée des villes* (Ghent, 1913) where a progressive impulse was given to the renewal of urban concepts expressing the transition from the bourgeois aesthetic urban concept of the 19th to the more social preoccupations present at the beginning of the 20th century, prefiguring the Modern Movement. (VANDENBREEDEN & VANLAETHEM, 1996: pp. 119-121.)

Initially however, the garden city concept will not be adopted in Belgium as solution to ameliorate the conditions of workers housing. It was associated with a suburban quarter of villas following the principles of the Frenchman G. Benoit-Levy published in 1904 under the title *La Cité-Jardin*. M. Benoît-Levy studied the outstanding garden cities of Letchworth, Port Sunlight and Bournville on a trip to Britain, but completely missed the social intentions of those in his description, focusing instead on the idyllic, romantic look of nice little cottages in a green area (BENOIT-LEVY, 1904: pp. 107-108.). This misunderstanding is at the origin of the foundation of the *Association des Cités-jardins en Belgique*, inspired by the *Association des Cités-jardins françaises* under the direction of the same G. Benoit-Levy, which pramated the construction of individual villas in suburban green areas without no attempts at social housing. Because this *Association* didn't build anything it was dissolved after one year and replaced by the *Société des Nouveaux Quartiers Jardins* founded in Brussels in 1906. Its aim was to allow the middle class to attain ownership, and to offer proper common accommodatians to the inhabitants with individualised houses. (SMETS, 1977: pp. 78-80.)

The distinction between the garden city concept for bourgeois or middle class customers represented by the *Société des Nouveaux Quartiers Jardins* and neighbourhoods for the working class in open areas close to their factories existed until the foundation of the industrial village of Winterslag ON the garden city concept.

The first (of 3) industrial village of Winterslag, built for the Limburg coalmines by Adrien Blomme in 1912, is the only garden city realized in Belgium before the First World War. A large avenue with an important amount of common amenities, two schools, a church and a theatre, crosses the neighbourhood and leads from the industrial zone to a park. A loop road encircles the settlement in order to facilitate security control in case of demonstration, and some artificially sinuous roads furrow the settlement. Groups of cottage-like dwellings for workers as well as for employees are built for 2, 4 or more families and have each a small garden. Even if this first realisation appears as a clumsy attempt to marry the advantages of living in a green and healthy environment outside the city with community intentions, it still is an industrial village with paternalist and security intentions. It cannot be said that the garden city social ideals as expressed by Raymond Unwin are adopted in Winterslag. (WILLEMSEN, 1991) (HEYNEN & LOECKX, 1991)

Paradoxically, the First World War catalyzed the emancipation of the garden city concept in Belgium. Massive destructions (about 120.000 dwellings destroyed during the war) are the argument for the organisation of several reconstruction associations in foreign countries where Belgian architects and urban planners lived in exile (SMETS, 1977: pp. 90-92): the *Belgium Town Planning Committee* in London, the *Comité Néerlando-Belge d'Art Civique* in Amsterdam, the committee *Pour la reconstruction des villes* in Switzerland, the *Commission d'étude franco-belge*, a special commission of the *American Society of Landscape architects* and the Danish *Akademisk architect forening*. An important event was the *Reconstruction Conference* organised in London in 1915 by the *International Garden Cities and Town Planning Association* (founded in 1899 by E. Howard) under the direction of the garden city specialist, the architect Raymond Unwin. Many Belgion politicians, urbonists ond orchitects like J.-J. Eggericx, Th. Clément and R. Verwilghen porticipated in this conference that odopted a.o. the principle of the garden city for the reconstruction to come. The *Comité Néerlando-Belge d'Art Civique* unites Dutch personalities like H.P. Berlage and J.Th. Cuypers and Belgian architects like H. Hoste, L. Van der Swaelmen ond the progressive utopian "mundialist" P. Otlet. They were confronted with the progressive ideas of social housing politics in The Netherlands and influenced by the "brick expressionism" of the *School of Amsterdam* ond eorly concrete modernism (VANDENBREEDEN & VANLAETHEM, 1996: p. 117). In this context, the landscape architect L. Van der Swaelmen published his *Préliminaires d'Art Civique* in which he presents a socio-biologicol opproach to urbanism based on a machinist interpretation of the industrial society. In opposition to Unwin, he sees industrialisation as a positive opportunity to more equity and democracy for the working class (SMETS, 1977: pp. 92-94). As he pleads for a rational and functional approach to urbanism, Van der Swaelmen's principles can be considered as an important premise to the *Charte d'Athènes*. He will participate in the elaboration of the most interesting garden cities in Belgium after the First World War.

The Belgian garden cities

Introduction

Unfortunately, after the war, the new generation of primarily young architects and planners influenced by the latest modern developments were little involved in the reconstruction process. The government preferred to focus on temporary dwellings like wooden barracks. Nevertheless, under the impulse of R. Verwilghen, first director of the *Service des Constructions des Régions Dévastées*, some small social garden cities in traditional style were built in Flanders (SMETS, 1977: pp. 98-105): Comines (1920, J.-J. Eggericx), *Batavia* (Roeselare, 1920, R. Verwilghen, A. Pompe and F. Bodson), *Kalfvaart* (Ypres, 1921, R. Acke), *Ligy* (Ypres, 1922, R. Verwilghen).

However, the modernist architects had their opportunity to express their ideals in social housing. In 1919, a new law, inspired by the socialists, extended state intervention in housing to avoid wild real estate speculation; this in turn led to the founding of the *Société Nationale des Habitatians à Bon Marché*. The aim of the *SNHBM* was to build cheap dwellings, thanks to the creation of local cooperatives, in order to allow the working class and the middle class to rent or to buy a decent property. The same year, R. Verwilghen, F. Bodson, L. Von der Swaelmen, E. Van Averbeke, J. De Ligne, H. Hoste, De Bruyne, de Ridder, Thirion, Patris and Van de Voorde found de *Société des Urbanistes Belges* with solid modernist principles expressed in their official revue *La Cité* (1919-1935). The *S.U.B.* became the *Société des Urbanistes et Architectes* Modernistes in 1923 (dismantled in 1970) and its ranks grew toinclude famous members like V. Bourgeois, J.-F. Hoeben and P. Rubbers. The first conference of the *SNHBM* in 1920 established the urban model of the garden city with important social, hygienic and economicol boses. Therefore, a *Comptoir National des Matériaux* was created in 1921 in order to promote and to experiment the use of new materiols ond construction techniques.

In its eorly yeors, the *SNHBM* furnished 25% of the entire production of dwellings; and had built about 55.000 dwellings by 1934.

Stondordisation and industrialisation are now key notions for the construction of social housing, ol-

though formally, only some of the dwellings adopted the modernist aesthetic, while others remained traditional cottage-like dwellings.

Case studies

Among the many garden cities built in the 1920's, let us only mention the most significant ones in order to show their importance in the field of urban development.

1. *Klein Rusland*

This large industrial village built in Zelzate by H. Hoste in 1921-23 along the industrially important channel Ghent-Terneuzen must be considered as the first modernist application of the garden city concept in Belgium. The village was an initiative of the *SNHBM* and 4 important local industrialists. Originally, some of the dwellings were built in a traditional way with brick bearing walls, others with the German "Non-plus" construction system: load bearing walls in cinder concrete, cast in place with reusable wooden formwork one storey high. The use of an industrialised construction technique permits the emergence of a new aesthetic. Indeed, the architect, inspired by H.P. Berlage and *De Stijl*, adopts here sober "cubist" architecture with flat roofs. Functional intentions of economy and not formal means prevail in this realisation. (SMETS, 1977: pp. 114, 125-127)

L. Van der Swaelmen designed the urban plan (ill. 2). His intention was to consider *Klein Rusland* as the starting point of an industrial linear city that was never realised. The central avenue that crosses the neighbourhood was meant to be the axis of this much larger project. The urban divisions and subdivisions follow an orthogonal concept. But each of the streets, blacks, corners and plots is deliberately treated in a different way in order to create a sequence of constantly varying views (VANDENBREEDEN & VAN LAETHEM, 1996: pp. 125-126). The various groups of houses are symmetrically denticulated with this intention; it stresses the global "cubist" impression. The central square is dominated by A hause for unmarried men; it's the only collective dwelling with amenities to serve the inhabitants.

2. *Cité Maderne*

The young and progressive V. Bourgeois is certainly one of the outstanding protagonists of the Modern Movement in Belgium. Together with his brother P. Bourgeois, he founded the weekly revue *7 Arts* (1922-1928), a strong progressive, modernist periodical, with links to both the Belgian and international artistic avant-garde. (BOURGEOIS, 1952: pp. 12-17)

This garden city was constructed in the Brussels suburbs (Berchem-Saint-Agathe) between 1922-1925. This well-known chef d'oeuvre of the *International Style* must be seen as the manifesta of Belgian modernism. G. Rens, V. Bourgeois and his brother P. Bourgeois founded a social cooperative especially for the occasion. The initial project aimed at 500 dwellings together with collective facilities such as a school, a public bathhouse, a meeting hall, a library and shops. Only 274 dwellings and a few shops were built. Bourgeois designed 15 types of minimal houses and apartments of varying size and configuration. After several study trips to France, The Netherlands and especially to Merzeburg in Germany, they decided to utilize the simple, inexpensive "Non-plus" system (VANDENBREEDEN & VAN LAETHEM, 1996: pp. 125, 130-131). This method allowed construction of an average dwelling in only 12 days and reduced the overall budget by 14%.

Unlike *Klein Rusland*, solar orientation is taken into account by V. Bourgeois, who designed the urban plan in collaboration with L. Van der Swaelmen. He organizes groups of dwellings in "cubist" volumes by which he articulated squares, crossings and closed perspectives. The denticulated central avenue has the same intention of creating broken perspectives as in *Klein Rusland* and has also the effect of slowing down traffic. The main square, *Place des Coopérateurs*, has a monumental centrality by the disposition of the surrounding saw-tooth houses and the higher denticulate corner building with stores signifying the hierarchical importance of the square (ill. 3). This building is decorated with abstract *De Stijl*-like stained glass designed by P.-L. Flouquet. (PUTTEMANS, 1974: pp. 123, 136-137)

Victor Bourgeois will be internationally known as a modernist architect upan completion af this project. In 1927, he will be one of the architects invited to build a house at the *Weissenhofsiedlung* in Stuttgart. As vice-president of the *C.I.A.M.*, he will also organize the third *C.I.A.M.* in Brussels in 1930 on the matter of high-rise building. He will participate to the large-scale urban projects for *Le Nouveau Bruxelles*, adopting the principles af the radical urban principles of Le Carbusier. (VAN LOO, 1994: pp. 197-203)

3. *Floréal* and *Le Logis*

These two joint garden cities are built in the green suburb of Watermael-Boitsfort, in the south-east of Brussels, under the direction of architect J.-J. Eggericx and landscape architect L. Van der Swaelmen with the collaboration of R. Moenaert and L. François between 1921-1930 (PUTTEMANS, 1974: pp. 124-126). Formally, the 1600 dwellings with a capacity of about 6000 inhabitants testify of a much more traditionalist cottage-like design. The uneven topography does not permit an orthogonal

organisation of the urban plan with a correct orientation and procures a global picturesque impression (ill. 4). Main avenues, as straight as possible in this difficult relief, are serving furrowed streets with smaller subdivisions like squares of various shapes. Small inner paths testify of the intention to separate the car traffic network from a more private pedestrian set of connections. A 9-storey building on a horseshoe shape square creates the link between the two garden cities. This was the highest apartment building of Brussels and the first time that a high apartment building was integrated into a garden city concept (VANDENBREEDEN & VAN LAETHEM, 1996: pp. 127-129). Stores are located on the street level of that building and the low horseshoe shape buildings around. With its strong urban imprint, the building has an evident symbolic significance as rallying element for the inhabitants and can be seen as a kind of meeting centre. (SMETS, 1977: pp. 111-114, 128-131)

This realisation can be quoted for its exemplary social integration till 1926, when the social housing cooperative was dismantled. From then on already, a gentrification of the neighbourhood took place.

4. *Kapelleveld*

This garden city has been built in Waluwe-Saint-Lambert, in the periphery of Brussels, by the architects A. Pompe, H. Hoste, J.-F. Hoeben, P. Rubbers on the urban plan of L. Van der Swaelmen between 1923-1926. The cubist dwellings built by H. Hoste are in contrast with the more conventional ones built by the other architects. As the social housing cooperative of *Kapelleveld* was aimed AT intellectual workers, a studio is added in the plan between the living room and the kitchen and a bathroom, a luxury for that period, serves the bedrooms (VANDEN-BREEDEN & VAN LAETHEM, 1996: pp. 125-126, 132-133).

All the 225 dwellings are built with the "Celtic" concrete construction system. (VANDAMME, 1998: pp. 100-104, 207-223)

Kapelleveld consists of a flat area and a slope area. The urban plan of the flat area is much simpler and readable than the former analysed garden cities. Three main avenues diverge from an important crossroad; perpendicular streets with grouped dwellings are joining the avenues. A circular "square" breaks the uniformity of each perpendicular intersection. The slope area is laid out with sinuous roads, but maintains the same circular "squares" found in the flats. Amenities for sports are found at the slope limit of the garden city. The original project of H. Hoste aimed to build four apartment towers of four levels situated as transition elements between the residential area and the zone for sport, but these were never executed. (SMETS, 1977: pp. 126, 138-139)

5. *La Roue/Het Rad*

This garden city built in the periphery of Brussels between 1921-1922 is not that relevant for its urban concept but is significant for the importance of the experimental approach of the social housing construction technology at this time. (VANDEN-BREEDEN & VANLAETHEM, 1996: pp. 124-125)

The social building cooperative association of Anderlecht, a suburb of Brussels, called *Le Foyer Anderlechtois* and the *Comptoir National des Matériaux* decided to build an experimental garden city of 67 dwellings divided in 20 blocks. The project was under the direction of the modernist architect J.-J. Eggericx with the collaboration of the architects Pompe, Meckmans, Jonghers and Voets. It was decided to test 21 known concrete construction techniques to have an objective and rational appreciation of their capacity, cost, comfort and durability. The majority of the known concrete construction techniques in Europe are mentioned below; they are divided in four categories. The different experimental techniques used for the construction of the garden city *La Roue/Het Rad* are present among these categories (cf. Annexe 1, VANDAMME, 1998: pp. 60-66, 85-201).

City social housing concept

A secondary parallel to the development of the garden city concept was the interweaving of new social housing into the existing urban tissue. The same concerns of hygiene and comfort were adopted for this urban social housing. Collective amenities were also considered to be necessary to favour community bonds; therefore housing blocks were constructed around a large inner court holding these amenities, although most unfortunately, resumed to a washhouse. The housing blocks were restricted to 3 or 4 levels, essentially for security reasons and to avoid the expensive construction of elevators. When it was established that the common amenities were not used as planned, the typology of the blocks regressed to more traditional ranged joint housing blocks in the existing street structure.

The end of the garden city concept

At the end of the 1920's, modernist architects and town planners broke with the ideal of the garden city because of financial restrictions and lack of interest of the authorities due to the reinstatement of a conservative government after 1926. The new government instituted a policy preferring the construction of individual housing and private ownership, more specifically in rural or suburban areas, through the creation by law in 1935 of the *Société Nationale de la Petite Propriété Terrienne*, an initiative of the Catholic minister Moyersoen. This radi-

cal change can also be explained by the fear of some of creating a concentration of the leftist working class in large-scale social housing entities. People spoke at that time of the danger of "a red belt" around Brussels".

At the same time, the urban ideas of high-rise buildings defended by Le Corbusier in his *Ville Radieuse* and his *Plan Voisin* were expounded during the third *Congrès Internationale d'Architecture Moderne* (C.I.A.M.) in Brussels in 1930 (VANDENBREEDEN & VAN LAETHEM, 1996: pp. 202-204). Most of the modernist architects and town planners proceeded to abandon the garden city concept to pursue research on radical urban large-scale projects with high-rise buildings that would offer artistically beautiful utopian projects. (VAN LOO, 1994: pp. 197-202): *Le Nouveau Bruxelles* by V. Bourgeois (1930), *Projet de cité administrative* by S. Jasinski (1930) (ill. 5), linear city project by G. Herbosch (1933), linear city project by R. Braem (1934), project for the extension of the left bank of Antwerp by Le Corbusier, H. Hoste and Lacquet (1933), ¼ (VANDENBREEDEN & VAN LAETHEM, 1996: pp. 206-209)

The art school of "La Cambre", founded in 1926 by Henry Van de Velde, became an essential tool for the diffusion of modernist ideas in the fields of urban planning, architecture and arts as most of the protagonists of the Modern Movement in Belgium took up teaching posts there.

II. The social housing in the 1950's-1960's: high-rise ensembles

Introduction

The situation after the Second World War was completely different in that there was far less housing destroyed than in the First World War, or had occurred in the surrounding nations, which meant that there was not an acute housing shortage. Therefore, from the moment the economy took off, the government instead decided to promote a general modernization of public services and infrastructure. Government buildings, offices, banks, schools, sports and cultural centres arose while an ambitious infrastructure policy started with the construction of the national airport, the modernization and extension of the commercial harbour of Antwerp, and an unbounded net of highways (BEKAERT, 1996: pp. 7-13). The idea was to enhance through this large-scale investment a completely liberalized free market economy, a unique situation in post-war Europe. In regard to housing, the government continued the 1930's policy of private ownership of individual houses on small privately owned lots. The pre-war Moyersoen-law of 1935 was implanted by the 1948 De Taeye-law on the construction of privately owned low cost houses; once again a Catholic initiative defending the individual family against every form of exaggerated collectivism. By 1954, 100.000 subsided dwellings were already built on this model. This led to a predominance, to this day, of the construction of individual houses, even in the sector of public housing. In the urban context, the debate about high-rise building is now fully opened (BEKAERT & STRAUVEN, 1971: pp. 63-67).

The evolution of the high-rise social housing concept

In 1949 the socialist minister and architect F. Brunfaut, reintroduced a policy of high-density collective housing. High-rise buildings and collective facilities testify to a post-war modern image of social housing expressing a form of pragmatic, planified socialism, reflecting the socio-political and urban principles of the *Charte d'Athènes* are. The formal influence of Le Corbusier was adopted in some of the most significant examples of social ensembles and adapted to the Belgian situation. (PUTTEMANS, 1974: pp. 156-242)

During the 1950's-1960's, the availability of social housing explodes. At the same time, the notion of minimal comfort is redefined: an individual bathroom, an equipped kitchen, an automatic refuse-bin and even sometimes a inner phone are the new norms. Green spaces and collective amenities such as schools, medical, sport and cultural centres, shops etc. are always present in the design of the projects as the symbols of community, modern life and progress. But large open spaces and public facilities were not always completed as initially designed due the financial problems high idealistic aspirations of the projects; spatial coherence and urban character are missing in many cases because of the elimination of the collective amenities. A further lack of interest and maintenance makes these ensembles problematic nowadays.

Among the most relevant examples, one can mention the dwellings designed and built by Ch. Van Nueten in a popular neighbourhood of Brussels for the *Foyer Bruxellois* (social housing cooperative of Brussels) in 1950, first application of the Brunfaut-law in the very centre of a city; the completed *Champ des Manoeuvres* (*Draixhe*) ensemble built by the "Groupe EGAU" (Ch. Carlier, H. Lhoest and J. Mozin) in Liège between 1951-1961; the *Kiel* ensemble built by R. Braem, R Maes and V. Maeremans in Antwerp between 1951-1958; the idealistic *Cité modèle* built by R. Braem, V. Coolens, J. Van Doosselaere, R. Panis, "Groupe L'Equerre" and "Structures" in the suburb of Brussels between 1956-1969. (BEKAERT, 1996: pp. 22-25, 40-46)

Case studies

Kiel (1951-1958)

Kiel is a neighbourhood in the periphery of Antwerp where 3 waves of social housing construction exhibit in a dense area the evolution of the politics of social architecture Belgium from the turn of the century. The third wave was conceived by R. Braem in the spirit of the C.I.A.M. and encouraged by the Brunfaut-law of 1949.

Braem, born in 1910, can be considered as one of the most important protagonists of modern urban and architectural concepts after the Second World War. Strongly left orientated, he defends the idea of architecture as a tool to achieve a better world, "revolution by architecture", and militates for an ordained urban planning against the chaotic evolution of the built environment. He is also the founder of the avant-garde revue "Bouwen en Wonen" in 1952; his writings are still examples of revolutionary engaged principles for a new ordained society. (BRAEM, 1952-1962: *Bauwen en Wonen*.)

The architect worked on the project in collaboration with V. Maeremans and R. Maes from 1947. The project consists of 3 blocks of 12 levels and 6 blocks of 8 stores in zigzag formation with a capacity of 694 apartments, 5 shops and a central heating plant. A cluster with a home for the elderly was built a bit later and gives a specific definition to the big empty space between the buildings. The 4 different types of apartments and duplexes are located along an outside gallery slightly lower than the entrance offering more light and view without the incommodities of curious neighbours. (STRAUVEN, 1985: pp. 60-66) (BEKAERT & Strauven, 1971: pp. 64-66.)

The 3 higher blocks are located around a huge square (ill. 6). Braem projected a socio-cultural centre but it was considered too ambitious and was finally reduced to a small meeting building. The blocks are oriented southeast and southwest in order to maximize sun exposure. All the blocks are built on pilotis as a symbol of the collectivisation of the ground and to offer a horizon to the inhabitants.

Even if the socio-cultural centre and the urban furniture that the architects conceived were never realized, Braem considers this ensemble as his first exemplary attainment of the C.I.A.M. ideals. The concept preaches freedom, space, green and light. The V-shape of the blocks guarantees an open view to the inhabitants without endangering their privacy. Braem considers an open view to the horizon as a "human right" (BRAEM, 1987: 99). The stairs and the elevators are situated in the hinge of the V shaped building. This characteristic and the transparency of technical services are participating in the ornamentation of the architecture and procure a kind of tectonic legibility of the function of the building.

The monumental and transparent central plant with a huge chimney enhances the awareness of community; it can also be seen as a symbol of comfort attainment.

Two anecdotes about the *Kiel* are relevant for the misunderstood project of this revolutionary approach and the personal modernity ideals applied by Braem in this project.

-During the construction, the conservative journal "La Libre Belgique" expressed its indignation that the authorities were subsidizing buildings with empty street levels! (PUTTEMANS, 1974: p. 174). -Le Corbusier, in whose office Braem worked between 1935-1937 CRITIQUED the plan of the apartments; they were too large and not profound enough in his eyes. Braem retorted that Antwerp does not benefit of that much sun as in Marseille and that sun exposure has to be considered as a priority in this case. (STRAUVEN, 1985: pp. 65-66)

Champ des Manoeuvres (Droixhe) (1951-1961)

The competition organized by the housing cooperative *La Maison Liégeoise* in 1950 for the construction of an important social ensemble on the river Meuse was won by Ch. Carlier, H. Lhoest and J. Mazin united in the "Groupe EGAU" (PUTTE-MANS, 1974: p. 218). The urban principle of rationalisation of space was the basis of their approach: the ensemble is divided into neighbourhood units of 2000 dwellings and subdivided into residential units of 500 dwellings. Separation of functions, hygiene, orientation, security and comfort are articulated in the elaboration of the project. At the moment, the ensemble has 1840 dwellings divided into 18 residential units with a total capacity of more than 7000 inhabitants. A circle made by 12-storey buildings creates a protective belt around the public square and the park where the collective amenities are located (ill. 7). *Champ des Manoeuvres* is probably the only large-scale social ensemble in Belgium completed with all its projected equipment (BEKAERT 1996: p. 25.). A church, schools, crèche, libraries, medical centre, cultural centre, shops, police station, parks, public squares and parking providing this social ensemble with an autonomous village atmosphere. In order to break with the monotony of the double range of the highest blocks, some lower buildings of 4 levels have been built in between them to provide appropriate dwellings for large families. (CRAPPE, 1962: pp. 119-143.)

The buildings are embellished by abstract geometry art conceived by local artists such as J. Rets, J. Delahau, P. Bury and G. Collignon. (BOSMANT, 1962: pp. 147-150.)

The ensemble was completed by other buildings in a later construction phase till 1970 and is actually known as *Droixhe*.

Even if nowadays *Droixhe* is considered as a difficult quarter, its undeniable architectural and urban qualities are making from it one of the most significant and achieved examples of large-scale high-rise social housing in Belgium.

***Cité Modèle/Modelwijk* (1956-1969)**

This project was decided by the government to illustrate the advanced policy in social housing in Belgium for the Universal Exhibition of 1958 ("Expo 58"). Braem had to collaborate with V. Coolens, J. Van Dooselaere, R. Panis, the "Groupe Equerre" and the "Groupe Structures" to answer to the difficult political and linguistic equilibrium of a state commission. (BEKAERT, 1996: pp. 40-48) The strongly idealist and leftist architect wanted to build a ordained and clear orthogonal urban plan (ill.8), in contrast with "the chaos of the streets and the incoherent buildings of the next environment" (BRAEM, 1960: p. 16.), with multi-level buildings and public facilities like school, library, cultural centre and church to educate the people to a better and more interesting life (PUTTEMANS, 1974: pp. 222-225). Finally, 942 dwellings in 12 high-rise buildings of different types were built. Unfortunately, as in most cases, most of the public amenities were not built due to financial problems. (STRAUVEN, 1985: pp. 75-78.)

The project of the *Cité Modèle* was the first heavy industrialized wharf of prefabrication building in Belgium, utilizing the French Barets and Cauvet systems (NOVGORODSKY, 1966: pp. 2-18.).

The *Cité modèle* is built on a slaped triangular site of 17 hectares.

The urban concept reflects the idealistic ambitions of Braem. A very long block of 5 stores closes the ensemble from the main street on the side of the expo. The intention of Braem is to protect the inhabitants of the *Cité* from the baneful influence of the expo. A large monumental stair leads the pedestrian from this street side to a small covered open square from which the orthogonal distribution through the ensemble begins (ill. 9). From there, the pedestrian access walks under a building on pilotis to the main square where most of the collective amenities are located: pub, restaurant, cultural centre and social centre. A double flight of stairs leads from this main square to the greenspace and children's areas. Braem voluntarily separates pedestrian and car traffic. The interior of the ensemble, traversed by paths for pedestrians and bicycles, benefits from a beautiful verdure. Cars access to the parkings of the *Cité modèle* by 5 roads. The design of the 2 networks is orthogonal and well ordered, permitting a clear reading and a rapid and easy distribution of the social ensemble. (BRAEM, 1958: pp. 267-289.)

Braem utilizes the technical characteristics of the heavy industrialized prefabrication systems in the architectural expression of his projects. It can be said that his architecture is concerned by a human social ideal translated by a strong and temperate constructive truth.

Conclusion

The development of social housing concepts at the turn of the 19th and 20th century is a decisive step in the evolution of more socially linked and rational urban planning. It generates a rich debate of ideas and permits the emergence of an ordained and well-thought space organisation with community intentions: the garden city. *Préliminaires d'Art Civique*, written by L. Van der Swaelmen during the First World War, will be the theoretical base for the further development of the urban plan of most of the garden cities during the 1920's; Van der Swaelmen will collaborate with most of the urban design of the garden cities in Belgium. The conditions of the FirsT World War attributes to the Belgian situation a unique platform for experiences - technical, formal and urban, in the field of the garden city, with the latest influences from abroad.

Two facts endanger the heritage values and the integrity of the social intentions of the designers. The partial gentrification of these neighbourhoods is not a vain consequence of their living quality. This fashion movement raises prices and tends to foster the loss of social intentions. Another important problem is the lack of a preconceived intervention plan when restoration becomes necessary. Individual embellishment initiatives are perhaps even worse than the lack of attention. Therefore, the listing of the garden cities as a whole and a uniform maintenance and restoration policy must be adopted in order to respect the formal characteristics of the garden city. Some initiatives in that sense are in study at the moment (FRANCHINI, 1999: pp. 138-167).

The high-rise ensembles of the 1950's-1960's are probably the only examples of organized, orthogonal urban planning in a wild and sometimes chaotic urban development. The ideologically engaged personality of R. Braem, as theorist and practitioner, is undeniable for the progress of the concept of large-scale high-rise social ensembles with a strongly implemented urban idealism adopted from the principles of *La Charte d'Athènes*.

Penury of image and bad social reputation are the main problems of the large-scale high-rise social ensembles at the moment. A denser social life could give a new impulse to them. The completion of the projected collective equipments in an actualised answer to the new needs, but still respectful of the original concept, can offer this amelioration. Further, the listing of these social ensembles should be considered to facilitate a coordinated heritage intervention.

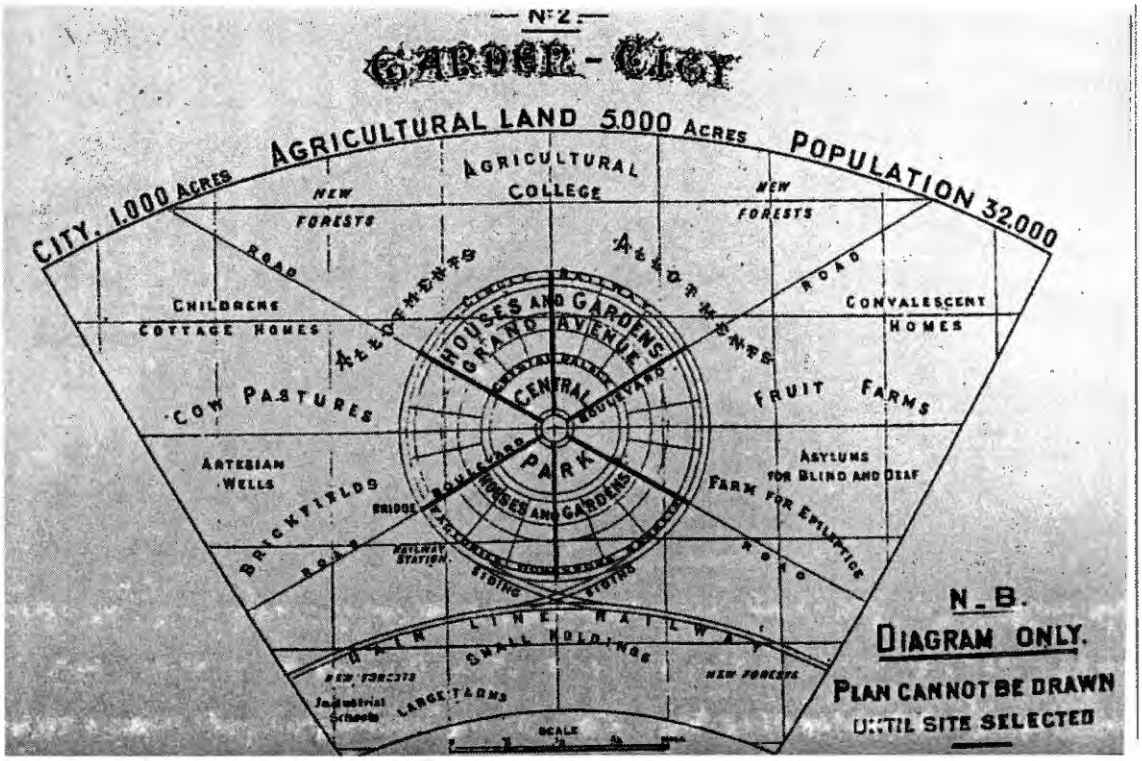

Fig1 – Ebenezer Howard: diagram of a model garden city, 1898.
Source: "Garden-Cities of Tomorrow", London, 1902.

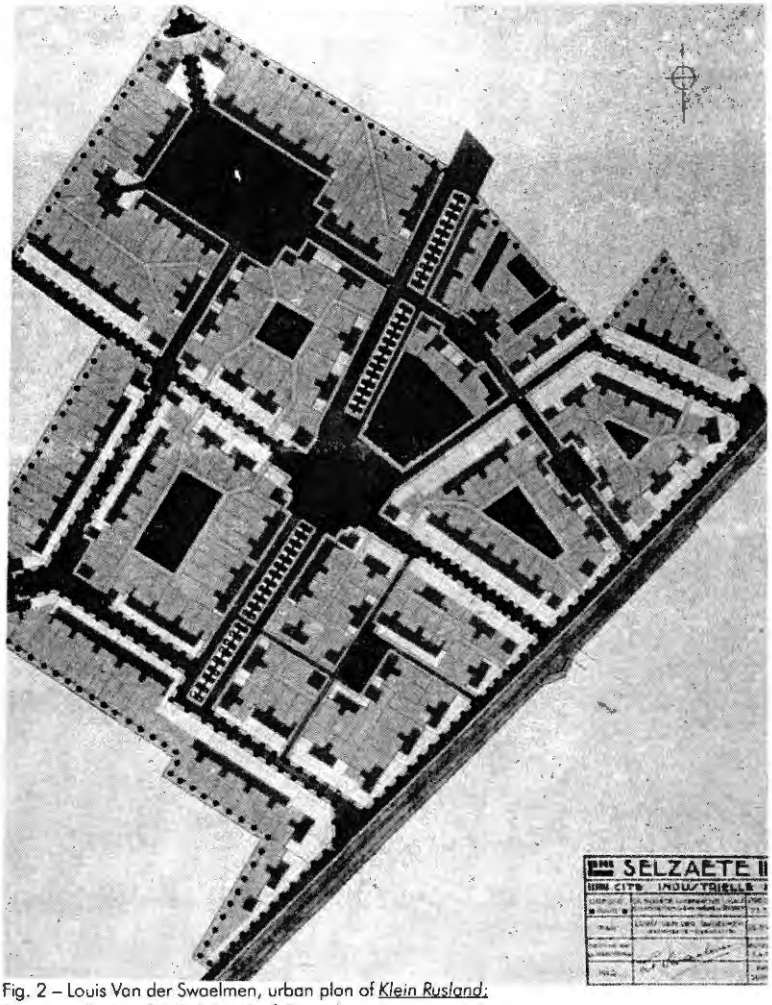

Fig. 2 – Louis Van der Swaelmen, urban plan of *Klein Rusland*.
Source: collection Sint-Lukasarchief, Brussels

Fig. 3 – Victor Bourgeois, *Cité moderne*.
Source: collection A.A.M., Brussels.

Fig. 4 – Main architect Jean-Jules Eggericx and urban planner Louis Van der Swaelmen, aerial view of *Le Logis-Floréal*.
Source: Vandenbreeden Jos & Vanlaethem France, «Art deco et modernisme en Belgique. Architecture de l'Entre-deux-guerres», ed. Racine, Brussels, 1996, p. 127.
Picture by Christine Bastin & Jacques Evrard.

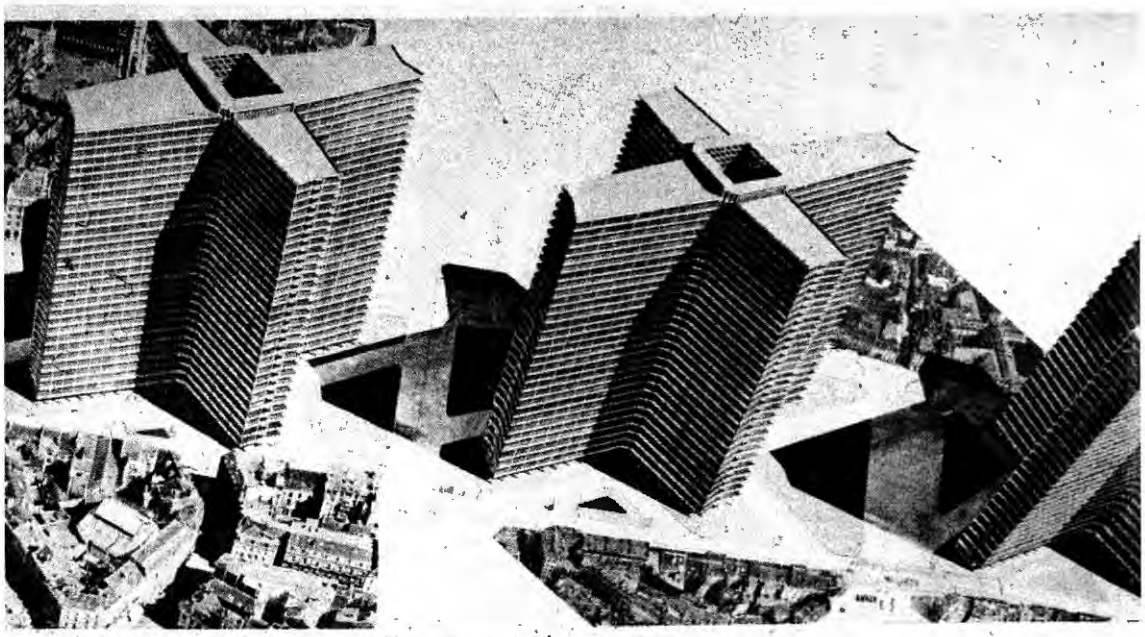

Fig. 5 – Stanislas Jasinski, project for an administrative city in the historic centre of Brussels.
Source: collection A.A.M., Brussels.

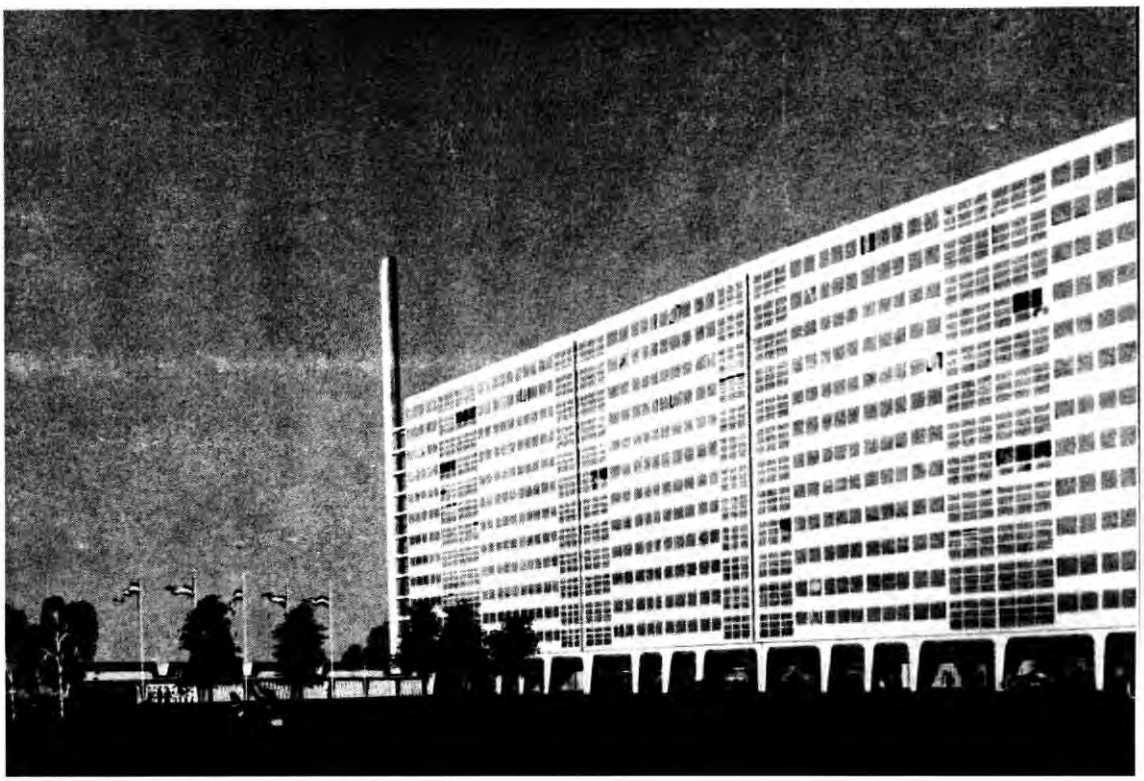

Fig. 6 – Renaat Braem, *Kiel* social housing in Antwerp.
Source: collection A.A.M., Brussels.

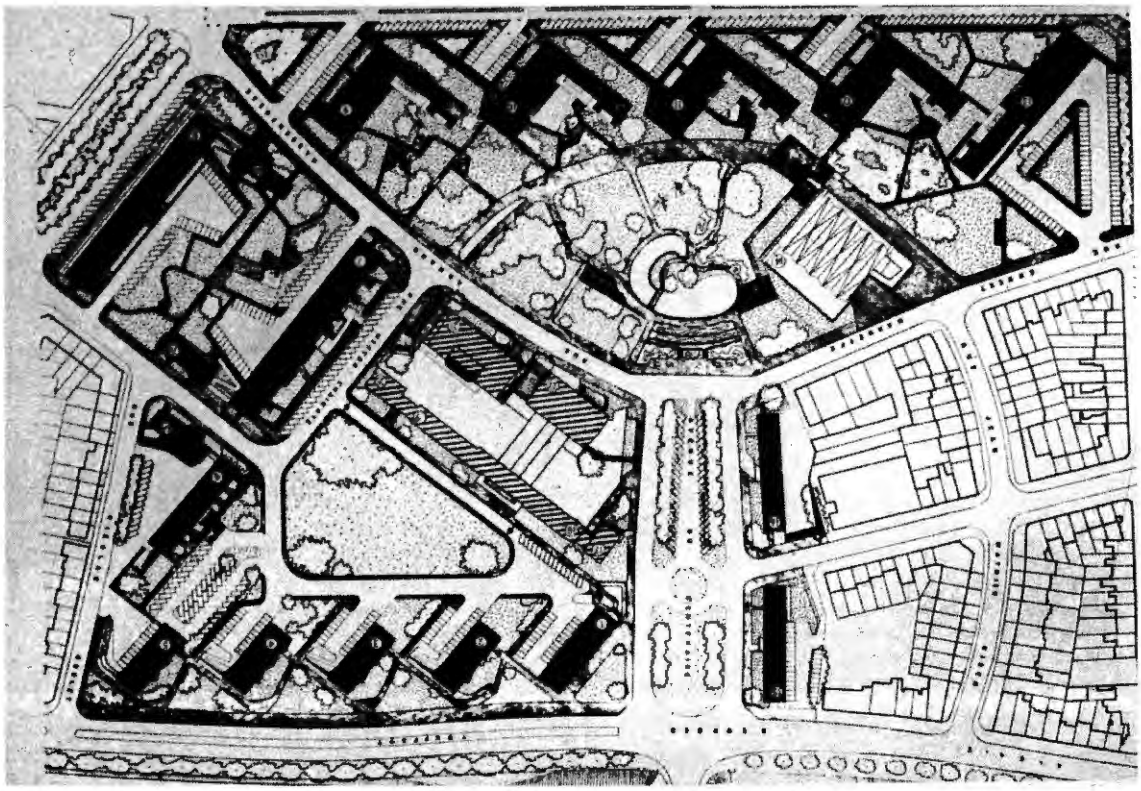

Fig. 7 – Groupe EGAU, Charles Charlier, Hyacinthe Lhoest & Jules Mozin: *Droixhe* social housing in Liège.
Source: Bekaert Geert, "Architecture contemporaine en Belgique", ed. Racine, Brussels, 1995, p. 25.
Picture by Christine Bastin & Jacques Evrard.

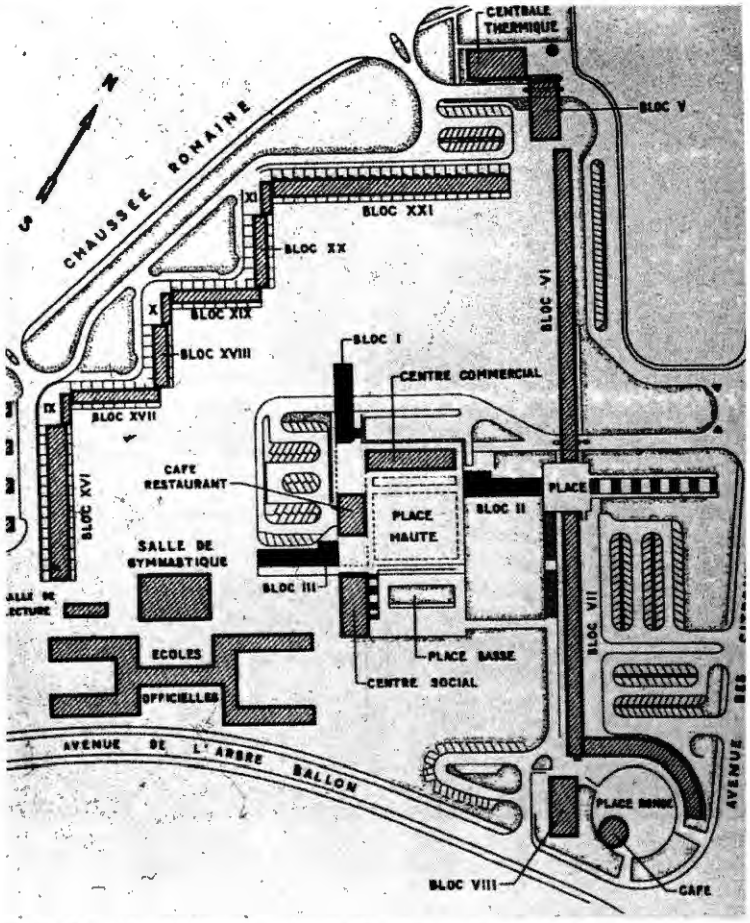

Fig. 8 – Renaat Braem, J. Van Dooselaere, R. Ponis, Groupe Equerre & Groupe Structures:
Cité modèle social housing in Brussel.
Source: collection A.A.M., Brussels.

Fig. 9 – Renaat Braem, J. Van Dooselaere, R. Panis, Groupe Equerre & Groupe Structures:
Cité modèle social housing in Brussel.
Source: Jean-Marc Basyn

KEYWORDS

social housing, garden-city, large scale high rise ensembles, urban concept, analysis and consenation policy

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X-Ray the City! Ernest Fooks, modern planner in the new world.

Introduction

Australian society underwent considerable change due to the immigration of Europeans fleeing the onset and aftermath of World War II. Concomitantly the discourse of urbanism in Australia was never more prominent than during World War II and the re-adjustment period thereafter: "Millions of words of discussion and proposal about city sprawling and satellite towns were written" (Boyd, 1947: 103). The émigrés had a substantial impact on the discourse of town-planning, however they have received little recognition. This paper will discuss the contribution made by Ernest Fooks, émigré architect and town planner, to town-planning in Australia, highlighting his influential projects, indicating where his work has contemporary relevance, and considering the conservation of his town-planning schemes. Fooks' European modernist training set him apart from the local town planners: his presence in Australia is both unusual and significant. Between 1939 and 1948 he was instrumental in the development of suburban housing estates in Melbourne such as "Newlands", Coburg, and Ashburton; he also produced town-planning and urban redevelopment schemes for country towns such as Swan Hill, Wangaratta, Horsham, Seymour and Ballarat; and a regional redevelopment scheme for the Latrobe Valley. While these country schemes were never built, the design for Swan Hill was highly feted and publicised, and would have been the first town of modern design in Australia if realised: and thus had significant impact on town-planning in Australia. The paper will also discuss Fooks' 1946 text *X-Ray the City! The Density Diagram: Basis for Urban Planning* in which he proposed a new and socio-political method of assessing urban population densities, which still has relevance today. In addition the paper will consider the conservation of the Newlands estate, Fooks' largest built design, and uncover deficiencies in the current conservation process.

Historiography

The history of émigré architects and town planners to Australia in the twentieth century remains largely unwritten. Similarly the émigrés received little recognition during their professional lifetimes. While architects Frederick Romberg and Harry Seidler have been widely accepted within Australian architecturat discourse, other European ömigrö architects require more research. The only other émigré architects included in the historiography of modern Australian architecture are Ernest Milston, Karl Langer, Fritz Janeba and Ernest Fooks; and mention of them is less than cursory. Architects such as Hugh Buhrich, who perhaps has a greater claim than Seidler for designing the first truly modern buildings in Australia, are practically ignored. And there remain ämigrö architects, such as Pavils Dreijmanis, forrner Chief Architect of Riga, Latvia; who were absorbed by the Australian profession and never gained public mention. Émigré architects and tawn planners have been represented in both Australian and American architectural history as intemationalists who designed in much the same manner irrespective of their location. However, it would appear that much of the émigrés wofk in Australia often describes key aspects of Australian culture, thought and landscape while retaining their European heritage. The work is one of cultural lamination and hybridization, rather than cultural importation. That the Australian experience seems so different to that of émigrés to America may, in part, be accounted for by their reception in Australia. Some architeats were able to migrate to America as nonquota immigrants or as part of the celebrity rescue programme of the Emergency Rescue Committee (Barran, 1997: 18-19). Whereas in Australia na special consideration was given, the European architects had to follow the same immigration procedure as all the other quata immigrants. The lack of value attributed to émigré architects and planners continued throughaut their careers, with lowly appointments, lack of publicity, patronage and pramotion. This also meant that many spent the beginning, or entire, of their Australian careers working for an architectural firm or govemment agency rather than in private practice. Despite all of this, some architects and town planners, such as Ernest Fooks, managed to have con-

siderable influence on Australian architecture ond town-planning.

Ernest Fooks

Ernst Fooks was bom Ernst Fuchs on the 6 October 1906 in Bratislava, Czechoslovakia. Fuchs' distinguished tertiary education began in architectute at the Technical University of Vienna, and culminated, in a Doctar of Technical Sciences in tawn-planning at the University of Vienna in 1932. Fuchs' dissertation *Die stadt in Streifen,* the linear city, was at the forefront of town-planning theory af the time. The same year :that Fuchs submitted his thesis Nikolai Milyutin published his wark on linear cities *The Problem af Building Sociafist Cdies* (Curtis, 1996: 253). Fuchs was clearly influenced by the Russian approach to linear cities; his ideal city was linear2nd divided into residential, leisure, city, business and industrial bands, with some functions being separated by isolation bands. The housing within his ideal city was influenced by Austrian and German practices of the time. He designed large, uniform courtyard blocks, 10 storeys high with U and T shaped plans. The courtyards contained kindergartens, schaals and ather communal functions. The lowhse apartment blocks he designed were in a Zeilenbau formatian.

After completing his doctoral thesis Fuchs worked for Theiss and Jaksch on one of the earliest high rise housing blocks in central Vienna. In 1932 his partnership Atelier „Bau und Wohnung' won a competition organized by the Central Organization of Austrian Architects for Das wachsende Haus. He continued to be interested in town-planning and won several town-planning competitions. Austria became increasingly difficult for Fuchs throughout the 1930s, as he was a socialist as well as a Jew; he migrated ta Australia via Canada in 1938-9.

In 1939 Fuchs gained a position with the newly formed Hausing Commission, Victoria, HCV. He worked for the HCV from 1939 until he set up private practice in 1948. In the 1940s Fuchs established hirnself as an active participant in the local town-planning and artistic communities. He became the first lecturer in Town and Regional Planning at the Royal Melboume Institute of Technology in 1944, a position he held until 1954. He changed his name to Emest Fooks in 1945 when he became an Australian citizen. He wrote numerous articles for Australian joumals and in 1946 he published *X-Ray the City! The Density Diagram: Basis for Urban Planning.* In 1948 Faoks resigned from the HCV due to the lack of recagnition he had received there and established his own practice. His architectural practice gained Australian and worldwide recognition in the 1950s and 1960s for residences such as Lansell Road Toorak, Tyalla Crescent Toorak and Howitt Road Caulfield and the Jewish Community Centre, Canberra. He continued in practice until his death an 4 December 1985.

Fooks at the Housing Commission, Victoria

Fooks' town-planning wark in Australia was undertaken far the Housing Cammission of Victaha. The HCV was established in 1938 as a result af the Housing Investigation and Sium Abolition Baard af Inquiry of 19367. It was initially created in an attempt to abolish slums; it was concemed with the improvement of existing housing conditians, the provision of houses far persods of limited means, and zaning within Victoria (Hausing Commission af Victoria, 1938-1939: 3). The HCV was formed just as popular and professional interest in tawn-planning burgeoned. The unity of the discourse of sa-called postwar reconstruction was its most striking charaeteristic. „Alt were concemed with the need for a planned economy and full [male) employment, city planning, population planning, decentralization, regional and participatory planning, and planning with special emphasis on the urgency of slum clearance" (Sandercack, 1990:141). The professian of town-planning in the 1930s and 1940s was made up of individuals from backgrounds such as architecture, surveying, politicians and social reformers. There was no specific training in tawn-planning in Australia until 1944; thaugh some planners such Walter Bunning and Margaret Feilman trained overseas. It was not surprising that they trained in Britain, as the discourse of Australian planning in the 1930s and 1940s was almost entirely determined by British, and to a smaller extent American, influences.

The architectural work of the HCV was prepared by the Architects Panel, which consisted of four architects, all the principals of private practices, who were contracted to prepare all the HC\Ps architectural work. Frank Heath was the member of the HCV in charge of zoning and the layout of housing estates, and he employed Foaks. Heath had read widely in the area of town-planning (though his reading seems to have been limited to English and the occasional American source), nonetheiess his planning education was limited, especially when compared with his chief assistant who had undertaken both masters and doctoral degrees in town-planning. Much of the work prepared for the HCV by Heath's office was actually authored by Fooks. That Fooks was the author of suburbgn housing estates in Melbourne including "Newlands", Coburg and townplanning and urban redevelopment schernes such as Swan Hill is at first suggested by the increased sophistication of schernes prepared by Heath's office during Fooks'employment. Schemes

for Fishermen's Bend, 1938, before his employ, and Golden Beach, Queensland 1960 after his employ, are not as accomplished as the aforementioned schemes. Furthermore, Fooks signature and handwriting appeared on critical drawings, such as preliminary freehand drawings and sketch layout plans for the schemes (Frank Heath Picture Collection). Fooks also claimed responsibility for these schemes in his curriculum vitae. To recognize Fooks as being the primary intellectual contributor to these schemes is not to criticize Frank Heath for being recognized as the author. It was, and still is, the convention in architectutal offices that all work is attributed to the principals. Rather attributing Fooks as author of these schemes goes a long way in explaining why they differed from other schemes, and why they were influential.

Swan Hill

One of the earliest and perhaps the most influential schemes Fooks prepared in Australia was an urban redevelopment scheme for the country town of Swan Hill in 1940. Swan Hill was to be the first town of modern design in Australia (Fuchs, 1942: 83 and *Journal* Traralgon 1943, May 6: 1).. Fooks' scheme was ambitious, it was to improve the present day conditions and anticipate the future needs of Swan Hill by more than doubling the size of the town, There were seemingly vast differences between the linear city with KarlMarx Hof and Zeilenbau formation housing of Fooks'doctoral thesis and the layout for Swan Hill. However, E uropean influences could be seen in the scheme. One of the most noticeable attributes of the Swan Hill scheme was the division of the residential areas into neighbourhood units, rather than the linear city approach. At first this would seem to have been influenced by the contemporary British and American interest in the neighbourhood unit. However, Fooks attributed his initial interest in neighbourhood units as coming from the similar but earlier Russian system of rayons (Fuchs, 1942 and Fooks, 1946). This Russian system conceived of several units which form a town: starting from the „houseblock"; then the „group" centred around a kindergarten; then a „block" or neighbourhood unit centred around a primary school; and then a rayon which contains a larger number of community facilities and so on (Fuchs, 1942). These neighbourhood units are not the self-contained residential units proposed by the American author Clarence Perry in *Housing for the Machine Age*. Another notable part of the scheme is the considerable area given over to parks and recreational space. Not all of the influences for the Swan Hill plan were European, Fooks' highly regimented process in determining neighbourhood units owed a lot to Lewis Mumford's notion of functional spotting. The street layout and use of culs-de-sac was clearly influenced by Garden City/Suburb notions that were the dominant practice in planning in Australia. Similarly influenced by Australian practice was the preference for the single-family house: though large residential apartment blocks in both Zeilenbau formation and courtyard arrangements were used sparingly throughout the scheme. The Swan Hill scheme represents a progression from Fooks' doctoral thesis. His use of British and American planning ideals that had currency in Australia together with his European influences produced a unique form of town-planning.[1]

The plan for Swan Hill was greeted enthusiastieally by architects and planners of the time, and gamered interest from the public as well. It was reviewed to acclaim in professional journals of the time and Robin Boyd used the plan, alongside another Fooks scheme for Seymour, in his seminal text *Victarian* Modern, 1947, to point the way for town-planning in Australia to proceed (Boyd, 1947: 66 and 69-70). The scheme was part of the Housing and Planning Exhibition of 1943 prepared by the HCV. While initially intended to be shown only in Melboume it was finally exhibited in one suburban and eleven rural centres, due to popular demand. Despite the acclaim and influence that the plan for Swan Hill provoked, it was never realised. One of the primary reasons the plan was never realised was that the decentralization of industry in the post-war period did not occur to the extent that the post-war reconstructionists had envisaged. Swan Hill today is not much larger than at the time that Fooks prepared his plan. However, the plan is testimony to the visions and ideals of the post-war reconstruction planners of Australia, and is an exceptional example of the confluence of influences in Fooks'work.

Newlands

Fooks prepared plans for the Newlands estate in Coburg between 1940 and 1943. Canstruction of the estate began in 1943 (Housing Commission of Victoria, 1942-1943) and was largely complete by 1953. Newlands was the second large-scale estate to be built by the HCV, with over 770 dwellings (Broome, 1987: 304) it was considerably larger than the first estate the HCV built at Fisherman's Bend, and was far more influential on the development of later estates. The Newlands plan was further removed from the ideal city Fooks conceived of in his doctoral thesis than Swan Hill, it represents the continuing absorption of Australian influences into his work, and th16 further development of his approach to town-planning. Yet there were still European influ-

ences in the design. Most notable was the minimal use of culs-de-sac. There was a high level of street connectivity to the suffounding areas; the Newlands estate was not the isolated residential unit many Australian, British and American town planners were advocating. Similar to his process in the planning of Swan Hill Fooks used the concept of the rayon or neighbourhood unit. Early sketch designs show that Fooks went through a Lewis Mumford type process of functional spotting for the Newlands estate: this lead to the provision of community facilities, excellent proximity to facilities outside the estate, and the zoning of land to the north of the estate as industrial. The most striking feature of the subdivision is the extent of parkland around and within it, with the Merri Creek being the western boundary of the site. Much of the estate housing has a close visual connection with the creek and adjoining parkland. The terrain of the subdivision has been carefully considered: Connolly and Outlook Streets follow the line of the Merri Creek, öther streets follow the contours of the knoll the estate is built upan. The sophistication of this layout was far superior to local contemporary schemes by other planners, and represents the maturation of Fooks' systern of town-planning as later-described in X-Ray the City! The Density *Diagram: Basis for Urban Planning.*

Fooks did not design the housing on the estate but a wide variety af housing types including three storey walk-up flats, duplexes and detached houses were built in accordance with his master plan. They were unified by a limited material palette that largely consisted of clinker brick, terracotta tiles, and corrugated asbestos cement sheeting. Focks provided the Newionds estate with a community focus; it had a shopping centre that included medical and dental clinics, estate administrative offices and eight shops situated in parkland in the centre of the estate. Each shop had an attached residence and a gorden area between the shops; it was the first of this innovative type to be built by the HCV. Newiands was positively reviewed in the professional joumals Architecture CHousing in Victoria', 1945) and the Austrafian *Housing* Bulletin fNeighbourhood Shopping Centres, 1950); the provision of large amounts of parkland and community facilities was noted. Today Newlands is one of few HCV estates not to be considerably disfigured. This is testimony to the provision of community facilities and zoning, considerabie parkland and harmonious siting of Fooks accomplished design.

X-ray the City!

After his many town-planning experiences including the design of the Swan Hill plan (1940), and Newlands (1940-1943), Fooks crystallized his thoughts on planning in his 1946 text X-Ray the City! The Density *Diagrarn:* Bosis *for Urban Planning.* In a period of time characterised, in Australia, by glib statements on town-planning this text stood out as a sensible manual. Amongst a more general discussion of townplanning Fooks proposed a new and socio-political method of assessing urban population densities. The mativation to wäte X-Ray the City! was to construct a shared and meaningful language for planners to discuss population density. For as Fooks wrote, „Overall density figures neither express the existing relation between the population and the built-up area, nor do they represent a basis for comparing density figures of varjous citiesu (Fooks, 1946: 43). This is because urban boundaries are arbitrary in nature. Overall populotion density is obtained by dividing population by area: thus wildly differing density figures arise from different definitions of what constitutes an urbon area (Mees, 2000: 184-186). In X-Ray the Ce! Fooks proposed a series of different density measurements, from overall or gross density, which included all developed and undeveloped land in a municipality or statistical area, to the more useful area and lot density that covered only residential land (Fooks, 1946: 73-76). When first published X-Ray the City! received much positive attention. It was reviewed worldwide in professionol journals to critical acclaim[2]. Lewis Mumford wrote that Fooks had „made a real contribution to urban analysis, and therefore to planning itself. "(Mumford, 1947 to Fooks 7 September). Fooks was the first to set out such a method, though the British Govemment later devised a similar system in The *Density* of Residentiol Areas in 1952. *X-Ray* the City! is of contemporary relevance as density statistics are still frequently used and cited by planners. Incredibly the majority of density statistics prepared today still use the inferior method of overall density. Thus it is still difficult to compare density figures in a meaningful way; the problem that propelled Fooks to write *X-Ray* the City! still eyists making his work more relevant than ever. His work may undergo somewhat of a renaissance in the future as planners such as Paul Mees discover and promote his method of measuring population densities.

Conservation of Newlands

While much of Fooks' influence on town-planning in Australia comes from his writings and plans such as that of Swan Hill; it is only in his built eork such as Newlands that the issue of conservation arises. Within the Australian discourses of planning and urban history conservation is a therne that seldom arises. Furtherrnore, there is little discussion of post-war planning or urban history; and this limited discussion focuses on theory and a history of issues

and policy rather than built fabric. Thus these discourses have little impact on the conservation of urban areas; architectural historians write heritage reports, and the discourse of Australian architecture directs the conservation of the post-war built environment. The historiography of Australian architecture has "successfully engineered significance for orthodox Modernism in terms of heritagem (Goad, 2000). This vision of modernism "hailed various individual architects (rather than firrns) as prophets of modernismu, heroes whose work has been codified as a sanctioned modernist aesthetic (Willis, 1997). However, other architects and their work have been represented as "aberrant or even unworthy of inclusion as part of built history" (Goad, 2000). While a villa by Harry Seidler or Roy Grounds is widely considered to be worth conserving, this narrow vision does not encompass much metropolitan or commercial architecture, architecture of the everyday, or the work of large govemment agencies. Within this discourse the conservation of govemment-sponsored estates such as Newtands has not been considered of great importonce. With the ex:et~lXion of the innovative shop/house type, the importance and significance of Newlands is in the principles that guided its plan, rather than the individual built objects. At Newlands these principles included those which directed the saphisticated street layout, the provision of parkland, the zoning, and provision of community facilities. This further complicates the conservation of Newlands within a discourse that privileges the listing of specific buildings uthat mark significant change in aesthetics and taste" (Goad, 20W).

Despite this prevailing vision of moderism, the Newlands estate has some hentage controls, it is protected by the Moreland City Council's Heritage Conservation scherne (Hubbard, 1990). After a brief discussion, this study states that the NevAands Estate is of significance as one of the first large estates developed by the HCV, as one of the mast extensive estates based on the low to medium density housing promoted by the British and American Garden Suburb and New Town theorists, and due to its high degree of integrity. Yet the discussion so far has shawn that the attributes for which Newlands is significant are more compfex than this. Notwithstanding these heritage controls, it wauld seem there are deficiencies in the current conservation process of Newlands.

The discourse af sanctioned modernism within Australian architectural history leads to the marginalisation of estates such as Newlands by the authars of heritage studies. In the case of the Newlands study there is limited discussion of the history or description of the estate and elements of its significance are overlooked. Thus when the estate is endangered by developrnent, the planners and politicians who enforce the scheme do not have enough information to fully realise the significance of the scheme. This scenario has already occurred. In 1991 the shop/house shopping centre was demolished to make way for a new convenience store and the adjoining parkland was built over with housing. This obliterated the single most important part of the estates built fabric, reduced parkland and number of community facilities on the estate; thereby diluting some of the guiding principles in the plan of the estate. If the beritage study had fully detailed the significance of the estate and its shopping centre, it may have been a more persuasive conservation tool. This case shows clearly the need for adequote documentation so that an appropriate conservation process will follow. It also points to the need for a wider, more rich and complex definition of modernism, ar modernisms, beyond the sanctioned discussion of the heroes of modern architecture.

Conclusion

The development of Ernest Fooks' approach to town-planning can clearly be seen in the progression from his doctoral thesis to his 1940 plan for Swan Hill, his design for Newlands (1940-1943), culminating in his personal statement on town-planning, X-Ray the City! (1946). Initially his town-planning was based upon his European training, later he absorbed Australian influences, and developed an individual and hybridized approach to town-planning. His town-planning work such as Newlands sits autside the canon of sanctioned modernism af Australian architectural history, and thus its conservation is endangered by the limited approach to aftributing significance within this discaurse. Though the continuing exposure, recognition and analysis of the work and careers of planners and architects such as Fooks will add to the breadth and complexity of modernism in Australia. Until an understanding is reached between the disciplines of architectural history, and planning and urban history the work of someone such as Faaks' will not be fully appreciated. While the Australian discourses of planning and urban history include discussions of theary and a history of issues and policy they do not fully embrace the discussians of the built fabric of post-war urban areas or conservation. Perhaps if they did, the conservation of this part of Australia's heritage could be secured.

NOTES

[1]Fooks' adaption to aspects of American and British town planning was later paralleled by Walter Gropius' town planning in America, for example in the New Kensington

housing, Pittsburgh 1941 and bis stadies with Martin Wagner and his Harvard stadents „Housing as a Tawn Building Problem" 1942.

[2] These publications included: *Architecture* (the journal of the RAIA), *RIBA Jaumal, Twentieth Centut3,~ The Architect and Building News* (London), *Nature* (London), *Constructional Review, Science Progress* (London), *The Age* and *Book*. VI-W.V

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KEYWORDS

Modern Architecture, Conservation, Émigrés, Housing Estotes, Australia

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Marieke Kuipers

Modern shops and modern shapes: registration versus regeneration

Introduction

Today, shopping has become a vital part of modern city-life, although it was not mentioned explicitly when CIAM analysed the Functional City. Fueled by the booming economy and globalization, the impact of retailing on urban development has increased. Shops and shopping centres reflect the fast change of fashions and of spending patterns, but they also change due to social and technical reasons. So, function, form and future do not always coincide, when the conservation of early postwar shopping centres is concerned. The question is if conservation of such dynamic concepts is desirable and to what extent. The Dutch Lijnbaan ensemble of shops and towerblocks, designed in the early 50's and regarded world-widely as an important model of urban renewal, offers us a good test case to confront two of DOCOMOMO's concerns: registration versus regeneration.

Postwar Prototype

The Lijnbaan ensemble is the remarkable result of public-private cooperation, economy and inventiveness and is an essential element of the urban and commercial reparation of Rotterdam's devastated city heart. After the bombardments of May 1940 only a few pre-war buildings had survived, mainly along the Coolsingel, which used to be one of the main crossroads through the historic town centre. In the early '40s many remnants were cleared for an almost *tabula rasa* situation – then welcomed as a fortune of war by the modernist architects and town planners and enabled by a system of expropriation, compensation and rebuilding obligation. In 1946 the ASRO (advisory bureau of Rotterdam's city plan, headed by Cees van Traa), presented its radical *Basisplan* for rebuilding the inner city with wider streets and a shift of functions. In conjunction with new west-bound traffic-routes (Maastunnel, Central railway station), a new shopping centre was conceived west of the Coolsingel, an area where such a commercial concentration had never been before.

According to this plan dozens of duped city-shopkeepers had to move from the old, small-scaled Hoogstraat to five new city courtyards. Because they had neither money nor materials to make a fresh start, they were not very keen to make extra investments for upper dwellings and offices over the shops. Moreover, they discovered the success of both the low-rise emergency shops (accommodated in aligned wooden barracks) and the large-scaled models of collective accommodation like the *Industrieflats* and the *Groothandelsgebouw* (at that time under construction). About 65 shopkeepers had allied forces to develop an affordable shopping centre and in consultation with the authorities, architects and finance companies, the idea originated to separate not only the shops from the dwellings, but also the pedestrian routes from the traffic roads. So, by irony of fate it was as a result of the shopkeepers' poor position that the revolutionary concept of a traffic-free shopping centre emerged, the first in Europe, which would become a prototype of prosperity.

Almost from the start the active, modernist architect Jo van den Broek had been involved in this project. He associated with Jaap Bakema in 1948 (as succeeders of Brinkman & Van der Vlugt's office) and was aided by Frans van Gool for the architectural details of the shopping centre after 1950, while Hugh Mooskant and others had the supervision of the U-shaped flat blocks at the west. They merged urban and architectural design in a unique, orthogonal ensemble with alternating low- and high-rised blocks which had to fit in a new city layout between some damaged *pièces de résistance* from the past, like the Atlanta hotel and the Coolsingel hospital. The L-shaped core of the Lijnbaan consisted of two intersecting pedestrian promenades, unusually broad (18 m) to allow sunshine.

The short wing broadened towards a higher square opposite the surviving Townhall along the Coolsingel, while the main wing was laid out parallel to this North-South boulevard. The shop rows were linked by free hanging awnings (giving shade and shelter) and surrounded by service roads at the rear. In order to organise the 'unity in variety' two basic shop types were available: the normal type with a basement and two equal levels or the split-leveltype with

entresol. Maximum flexibility wos allowed by the use of concrete frames, portition walls of brick and facade elements of vibrated concrete, based on a module of 1,10 m. This scheme was subdivided in cornershops and terraced shops, which varied in depth according to their location along the short wing (15 m) or the main promenade (20 m); only Meddens' fashion house had a bigger size, as a cornerstone at the crossing with the Townhall square. Although each shop could express its individual identity, many shopkeepers liked the same type of details (in shopfronts, advertisements, interiors) and often contracted the same architects. Many efforts were made to define the shopping area as a whole, beginning with the placement of its name in neon-letters above the main entrances. Also the continuous horizontality of the flat roofs, wood-clad awnings and arcades as well as the coloured pavement (which repeated the 1,10 m module) supported an impression of uniformity and harmony. Even the telephone-boxes (Van der Vlugt's pre-war standardtype) and standardized lampposts stressed the over-all appearance of cohesion and modernity. The public space of the promenades was carefully furnished with flowerboxes, aviaries, kiosks, trees and benches to create a cozy atmosphere, while outer display cases, glazed shopfronts and well-tempered lighting were meant to invite the wandering public in to shop.

In 1953 the Lijnbaan shopping centre was opened officially by the Minister of Reconstruction and Housing. From the start it was a great success; the Lijnbaan promoted shopping as a leisure-time activity; people came in crowds, excited about the modern spaces of illusion, an open-air recall of the (bombed) nineteenth century arcade. Shortly following the opening attractions typical for city-life were added like pavement cafés, restaurants and cinemas. Far south, at the Binnenwegplein behind the hospital, the great stores of De Klerk and Ter Meulen, Wassen, van Vorst formed the first demonstrations of Van den Broek and Bakema's capability to invent new shopping types. To the southwest, the *Bijenkorf* department store was given a new location (designed by M. Breuer and A. Elzas, 1954-57, and causing the final demolition of Dudok's pre-war creation near the Leuvehaven); at the other side of the Coolsingel – just between the pre-war Stock Exchange and the ruined Laurens church – the *Galeries Modernes* and other new shop buildings took shape in a great variety of sizes and styles.

Surrounded by the commercial magnets and city facilities (and tower blocks with greens) and embellished by several bronze sculptures, the Lijnbaan prototype could not be followed in its full 'downtown' character. But the arrangement of terraced, similar shops linked with awnings and provided with some public facilities and parking areas was copied frequently in new town town extensions. In fact, the Lijnbaan and these neighbourhood shopping centres could not function without each other. They were both part of a modernist vision of urban planning, in which the post-war concepts of 'urban core' and 'neighbourhood unit' were balanced in a functional hierarchy. Gradually, the idea to create a traffic-free shopping nucleus was transferred to already existing historic centres and adopted also in the central-east shopping area around the Hoogstraat during the late 60's.

Circulation and Transformation

In every respect – street profile, appearance, accessibility, combination of retail and amusement - the Lijnbaan meant an inversion of the situation in historic shopping areas. The predominant feature was the strict spatial organisation of the total shopping process, from logistics to display, like a commercial machine. The efficient routing and the consistent concept of dynamity were positively inspired by American experiences (Van der Broek had visited the States in 1948). But the separated circulation of people, goods and cars was rather a critical response to the growing annoyance caused by motorised traffic in inner cities. Although in the recovering Netherlands of the 50's the private use of automobiles was not as heavy as in the USA, it was banned from the shopping promenades; even bikers were not allowed to drive in the Lijnbaan. All was designed at a human scale and to foster the slow tempo of pedestrians being lured to consume, encouraged by glazed showcases and shopfronts, often showcasing an open connection with the interiors. Inside the shops the tempting display and controlled circulation were continued in various ways, according to the ideas of the shopkeepers and their architects.

The freedom for individual detailing was as accepted within the general architectural framework as was the supposition that most shopfronts would change over time. Therefore, the architectural aesthetic was restrained and restricted to the thoughtful proportioning and subdivision of standardized elements. Overall, a certain quality and consistency was supposed for the kind of shops at the Lijnbaan.

More extensions were foreseen when the old Coolsingel hospital was scheduled to be removed, which was the case in 1963. Hence the Lijnbaan promenade could be extended southwards and a traverse built over the promenade - this was intended for the Rotterdam Art Foundation to bring art closer to the public. Underground new shopping spaces were created, accessible by a *tapis roulant*, but this was only in use for a few months. The traverse (1968) connected the great stores of Ter Meulen and De

Klerk, which were extended at the same time, also under the supervision of Van den Broek and Bakema, while a 100 year old plane-tree and the former hospital porch recalled the pre-war conditions at this spot (now named Lijnbaan square).

In the late 60's both the economy and leisure-time (free Saturday) had made so much progress that the naive scheme for car parking failed. The initial idea was that the cars of shopkeepers, residents and customers could take the same plots successively, for which 2180 plots with parking meters were reserved at the nearby Theatre square and the adjacent streets. But soon it became apparent that a substantial increase in spaces would be needed; this was to be realised by means of one underground and three multistoried parking garages (1968-72). Meanwhile, the general traffic circulation through and around the city increased, facilitated by new infrastructure and new high-rise office blocks affected the use and standing of the Lijnbaan ensemble as it had been during the first two decades, but this was nothing compared to more recent transformations.

Recent developments

However modern the Lijnbaan was in its urban and architectural concept, the traditional commercial concept of individual shopkeepers selling specialised goods became out-dated within twenty years. Only the great department stores at the southern ends foreshadowed the increasing scale and 'Retailing Revolution' which took place from the 70's onwards. Due to the growing competition with other shopping centres and attractions – often more easily accessible by car than the down-town Lijnbaan – as well as the incursion of international chain stores and the change of generations, many shops have changed their original character, not only in appearance (fronts, advertisements, interiors), but also in standing and ownership. Generally spoken, a decline of quality can be seen in the central pedestrian area, while the 'better' shops can be found along the traffic road of the outer west side, where also some new shopbuildings have been built at the former side-entrances to the towerblocks. Just a few 'originals' have resisted the assaults of flashy fashion and fast food shops and recent modernization: Meddens' fashion house, Koch's art shop and Heetman's jewellery. But they, too, had to take precautions against vandalism and crime. Roll-down shutters have reduced the fun of windowshopping after half past five. Neon lights in screaming colours and muzak create both visual and acoustic dissonance, nat to speak of ugly stands, litter and the general degradation of the public space. In addition to the negative effects of recent social and economic development, new requirements and building regulations for safety, energy-saving, and accessibility have led to radical rebuilding of facades and interiors. Remarkably, the rear sides are essentially unchanged, except ;for the colour scheme.

However, two interventions of the late 90's have changed the Lijnbaan completely, apart from the conspicuous reshaping of the adjacent Theatre square (Adriaan Geuze). One is the total refurnishing of the public space, from pavement to canopy, from bench to telephone and flower boxes in new shapes, materials and colours. When it became apparent that a complete covering of the pedestrian area would be too expensive, the shopkeepers decided to contract the original architect's office (still under the name of Van den Broek and Bakema but run by a new generation) for another kind of facelift. Despite consultation with the municipal Commission on external appearance, this facelift resulted in the further disappearance of original architectural details, including the Lijnbaan neonlights above the main entrances. At the same time one could say that there is a continuity of architectural involvement, functian and urban design.

The other transformation concerned the complicated insertion of a semi-underground shopping area to reconnect at last the eastern shopping area with the Lijnbaan, in combination with the subwaystation. The official name of this American-Dutch shopping street (The Jerde Partnership and Architectencie.) is 'Beurstraverse' (Stock Exchange arcade), but it attained instant popularitry under the nickname 'Koopgoot' ('sale gully'), as a result of the coincident implementation of the liberal policy of the mid-90's to allow shopping partly on Sundays.

Despite this new commercial success, the loss of several typical shopbuildings by reputed architects from the early post-war years was severely felt, particularly by a small group of local art historians. This group instigated a campaign to conserve the 'heritage of the reconstruction' (1940-65), which soon also involved architects, politicians and conservation authorities The Reconstruction Committee pleaded for a new approach to the conservation and recognition of the post-war heritage by exploring existing zoning regulations and a method of design oriented study, as well as initiating a systematic inventory of the remaining buildings within the rebuilt city heart. For instance, a multi-disciplinary team investigated by visual means the functional and architectural opportunities for the re-use Huf's shoe store, a small glass palace while repecting its transparency. In addition, an expert commission was appointed to evaluate the urban and architectural qualities of Rotterdam's inner city, which resulted in the advisory report *Het gebruik van de stad* (1997, The use of the city) and developed an analytical

vocabulary and 'policy toolkit' for recent heritage under the motto *Let Rotterdam be itself.* Without mentioning any particular case, all conclusions and recommendations concerning protective measures in combination with a powerful and creative vision on future developments are valid for the Lijnbaan ensemble, which is depicted many times in this report. Nevertheless, new initiatives in favour of very high towerblocks (over 180 m) to be built at the expense of two characteristic cinemas and the Jungerhans shop flanking the Lijnbaan, will test the strength of these recommendations and the present zoning rules in practice.

Dealing with dilemmas

The recent developments give reason to approach the Lijnbaan ensemble from a DOCOMOMO point of view. An analogy springs to mind with the conservation paradox of Zonnestraal's sanatorium, which was designed as a 'disposable building' but is designated as a protected monument because of its innovative concept, despite later alterations and its ruinous condition. In the *Advisary Report to ICOMOS (The Modern Movement and the World Heritage List,* 1997, p. 10) it is stated that "in spite of its intentional transitoriness, the architecture of the Modern Movement is now an essential part of our cultural heritage and therefore deserves conservation. This implies that some replacement of original materials and other alterations are acceptable, as long as the architect's concept (idea) in the present form, space and appearance of a building or site are still recognisable. However, materials, construction and details remain important for the 'test of authenticity', to support and to realise the abstract 'idea' of the Modern architect."

The original idea of the Lijnbaan ensemble – terraced shops around a pedestrian nucleus, towerblocks and public gardens – is still recognisable, though it has lost much of its former glory. Other testing criteria give more difficulties. How does one classify the three shops which now deviate from the new re-styling by keeping the original architectural detailing – as obsolete anamalies or as treasures of material authenticity? At least these buildings deserve careful documentation, which can be useful as a starting point for future plans of maintenance and/or alteration, not only for these particular shops but also for the others. Additional documentation could also come from archival research, particularly at the Netherlands Architectural Institute where the original drawings are held. But what becomes of the knowledge that the original colour scheme has been changed almost everywhere? Keep it in memory; as reconstruction would be too radical a solution.

Apart from the 'material' changes of most shops and the public space, 'immaterial' change con be noticed now in the public perception and use of the shopping centre. A thorough exercise in 'commercial archaeology' would be necessary to find out who occupied the Lijnbaan in its very beginning. If possible, a new commercial upgrading to the original standards would be desirable, but that is most difficult to establish in the current, liberal economy with world-wide private ownership. The question of how to handle the popular, but ugly fastfood stands and temporary signs now blocking the original vistas will only be resolved through an open, voluntary dialogue between authorities, owners and local inhabitants about improving this situation. Therefore, more general measures of prevention and surveillance are needed which have nothing to do with any form of conservation. It is already a great step that some voluntary agreements have been made about the permanent shop advertisements, which is not easy with 83 different shopkeepers.

Following the pleas for protective measures, the municipality of Rotterdam has listed recently about 30 lpost-war buildings to be protected, including the *Groothandelsgebouw, Bijenkorf,* Huf and some other notable shop buildings but not the Lijnbaan ensemble, because of too many complications. However, in the – updated – International Selection of the Dutch DOCOMOMO working party both the Lijnbaan and the Groothandelsgebouw are included, thus beginning the serious evaluation of Modern architecture after 1940. The Netherlands Department for Conservation, having just started a plan of action on post-war heritage, has also recognized these buildings as national highlights which need special attention or even protection as soon as the 50 year rule applies.

It is here that an eventual conflict of interests between registration and regeneration could arise. To commercial proprietors any limitation in the use of their properties is unwelcome: they like to adapt their shops to new trends. Rightly they could refer to the original concept (were they to know it) which was meant for change and individual expression. The problem is that we, as experts, do not like the results of bad taste or the ignorance of the original features.

Because shopping is a basic function of modern city life, even an essential part of economic developments, a careful approach is needed to keep the ageing shopping centres alive, firstly in function but also in form. Since Rotterdam is not the only modern city facing this problem, an international exchange of knowledge has been started (thanks to DOCOMOMO contacts) with another harbour city with a modernist city heart: Le Havre (France). Here the national rule of urban conservation (ZZPAUP,

Zone de Protection du Patrimoine Architectural, Urbaine et Paysager) has been brought into operation, together with on educational and contact progrom for the shopkeepers, who are mostly the same kind of retailers as in the 50's. Just as the rigid reconstruction plan itself, under the supervision of old Auguste Perret, the French method is full of detailed guidance and centralistic tendencies, which cannot be translated completely in the same way in free Rotterdam, proud of its dynamity. Perhaps a mixture can be destilled with the policy model on the Miesian shopping centre in the English new town Miltan Keynes of the 70's, where the involved owners have undersigned voluntary an agreement with the local authorities on a common architectural treatment. More examples can be added to demonstrate that DOCOMOMO's register work and professional network can act os an important tool to develop new strategies and extend the knowledge how to deal with the dilemma's of Modern shops.

In conclusion, the idea of 'integrated conservation' by using the available planning instruments and a weighty section on the cultural-historical values in every development plan as well as a voluntary commitment of the private owners seems to be a good option to solve the tensions between documentation, conservation and transformation in order to keep the 'commercial' legacy of the Modern Movement as a *living* heritage. The Modern shopping centres of the 50's deserve a second chance and a detoiled documentation os a source of inspiration for future developments.

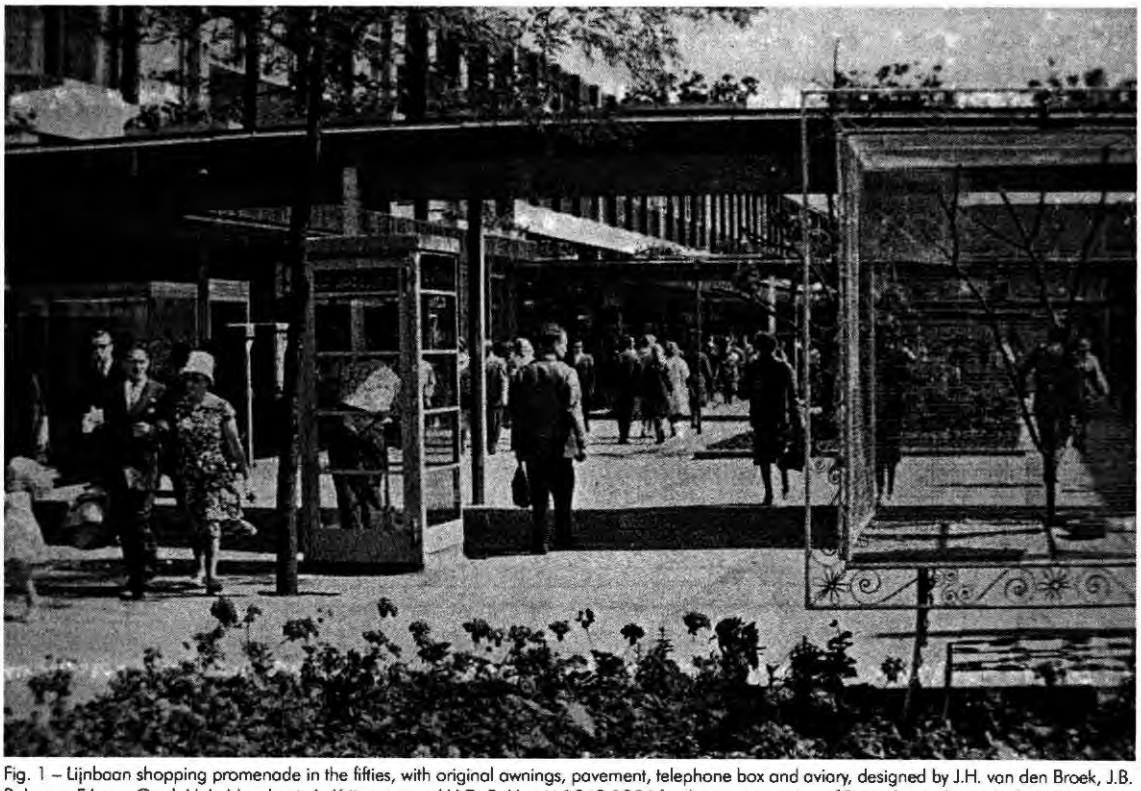

Fig. 1 – Lijnbaan shopping promenade in the fifties, with original awnings, pavement, telephone box and aviary, designed by J.H. van den Broek, J.B. Bakema, F.J. van Gool, H.A. Maaskant, A. Krijgsman and H.D. Bakker in 1949-1954 for the reconstruction of Rotterdam's devastated city heart.

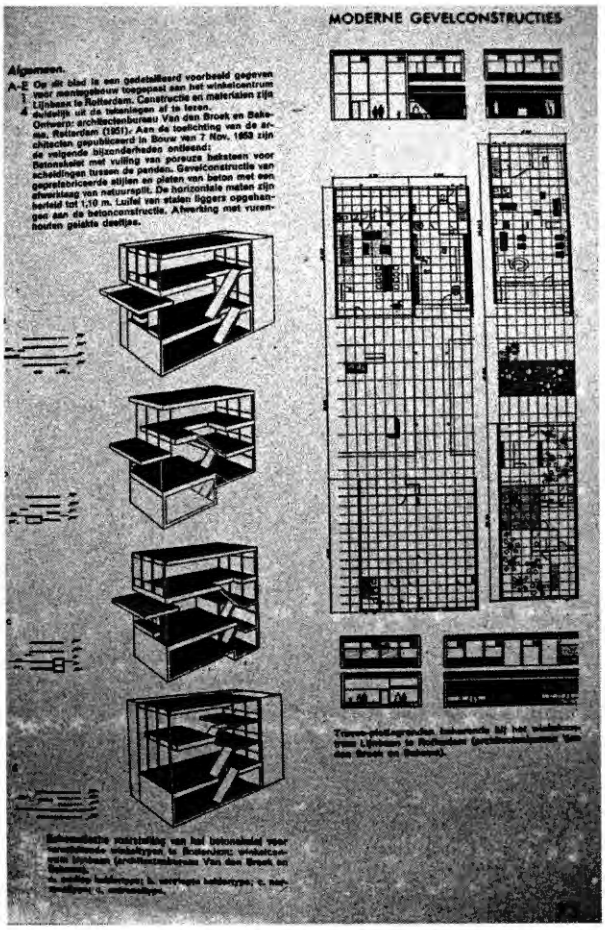

Fig. 2 – Schematic variants for the shops along the Lijnbaan.

Fig. 3 – View of the restyled Lijnbaan, with shops, high-rised flat blocks, signs and new additions. Photo: RDMZ, Zeist, 1999.

Fig. 4 – View of the restyled shopping promenade with new awnings, neons, benches and pavement. Photo: RDMZ, Zeist, 1999.

Fig. 5 – View of the short wing of the Lijnbaan in the direction of the surviving Townhall from 1911-19 with new elements (and litter). Photo: RDMZ, Zeist, 1999.

Fig. 6 – Front of Koch's art shop, the only remaining authentic element of the originol layout of the Lijnbaon. Photo: RDMZ, Zeist, 1999.

Fig. 7 – Rear of Koch's art shop and adjacent shops along the expedition street. Photo: RDMZ, Zeist, 1999.

Fig. – 8 Interior of Koch's art shop with staircase. Photo: RDMZ, Zeist, 1999.

Fig. 9 – View of the Schouwburgplein (Theatre squore), restyled by Adriaan Geuze, with the Lijnbaan flatblocks. Photo by Marieke Kuipers, 2000.

Fig. 10 – View of the Beurstraverse, nicknamed Koopgoot (' sale gully'), with M. Breuer's Bijenkorf and the extended Stock Exchange at the left. Photo by Marieke Kuipers, 2000.

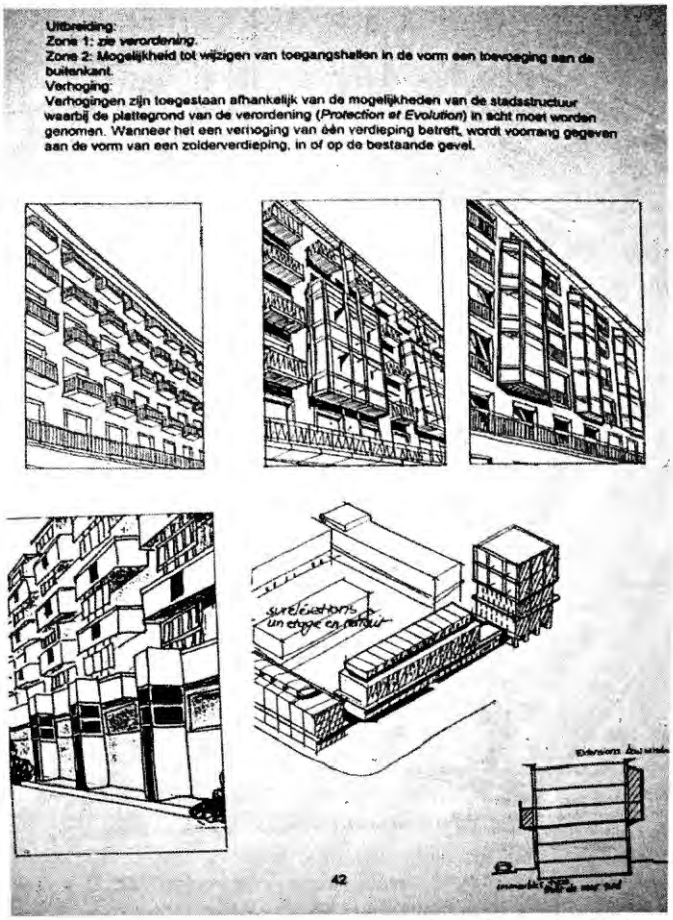

Fig. 11 – Le Havre, recommended extension variants for the flat and shop blocks.

Fig. 12 – Rotterdam, Lijnbaan flatblocks with green square still functioning according to the original intentions. Photo: RDMZ, Zeist, 1999.

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KEYWORDS

documenring and developing early shopping centres (Lijnbaan, Rotterdam).

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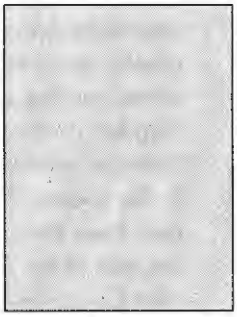
TECNOLOGY SESSION



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Power architecture in Modern New Zealand

Fram its establishment in 1948, the Hydroelectric Design Office (HDO) of the New Zealand Ministry of Works developed an architectural response to the country's technological experience af modernity, as evidenced in a national electrificatian plan. The projects of this office are individually resolved power stations, occupying specific sites on major waterways, and while it is possible to treat them as discrete architectural and engineering works, it is equally possible to discuss them as nodes in a natianal 'grid'. In this latter sense, widely held ideas on electrification are important prefaces to the architect's experience of designing for hydroelectric production; the monumentality of power station sites, while a consequence of the engineering involved in electricity productian, provides a fitting legacy for the ideology attached to these national endeavours. Power stations trace a point in New Zealand's history at which electricity was essential; further, they index a mechanism of production and consumption in which landscape is rendered both cultural and modern, a resource for rapidly expanding industrial and urban, albeit relatively distant, cities. This development, and the role these sites played in that process, was recognisably one of madernisation. It was the means to fulfil widely held demands for electric transport systems, street lighting, telephones, and complete access by domestic consumers to public electricity supply. Architects involved in power station design therefore became complicit in an architecture conveying electricity's significance to an increasingly modernised country.

From the first instance of public electricity supply in 1879, energy production sites represented for the Government a chance to unify a sparsely populated country, and to gain international recognition as a modern country. Two strategies were set out: New Zealand would grow smaller through communication devices and networks (such as rail and telegraph); and it would become less remote as an exporter, sending dairy produce home to the United Kingdom. In each case, electricity ployed an important role: networks in the first instance, refrigeration in the second. From 1918, Chief Electrical Engineer Evan Parry made declarations that mimicked the spirit of the Soviets, establishing an uncompromising programme of complete electrical reticulation. In order to cover the demands of urban centres, the rural population, and industrial development, power needed to be generated from a small number of significantly productive sites, predominantly hydroelectric, and distributed through an interconnected system. This would comprise "ane of the mast essential agents in national reconstructian." (Martin, 1998: 68) The campoign targeted each individual; the more remote, the more assistance they deserved.

The Ministry's antecedent, the Public Works Department maintained a close control of electrificotion and systems put in place across the country were essentially universal. This reflected a singularity of purpose for both the Government and its agencies. Established in 1945, the Rural Electrification Reticulation Council (RERC) systematically connected the isolated seven per cent of the population over a short period, focussing effort particularly on rurol dwellers in more remote areas. This effort saw public supply reach into homes, businesses, farms, factories, and streets of 99.8 per cent of New Zealanders, exceeding the results of any other national scheme. As demand increased, a vigarous construction programme adding productive sites to the national framework staved off widespread electricity shortage through the mid-1940s. In the North Island, New Zealand's longest river, the Waikato, suggested many potential dam sites. In the South Island, engineers targeted the Waitaki and Clutha Rivers for development of their high volumes and extensive catchment areas.

Establishment of the HDO followed a general reorganisation of public works agencies in 1948 under the more responsible control of the Ministry of Works. The Office permanently seconded a small team of architects and draughtsmen from the Government Architect's staff to work with civil and electrical engineering specialists; as a multi-disciplinary team, it was responsible for all aspects of the civil, mechanical, and architectural design of hydroelectric projects. The first architectural Section Head was the Viennese Frederick H. Newman (1900-1964), who immigrated to New Zealand with his extended family as a refugee in 1938. Educated in Vienna and Paris, he had earlier joined the large contingent of German and Austrian architects who fol-

lowed Ernst May to Moscow in the 1930s, working from 1932-1937 on architectural projects that bolstered the infrastructure and administrative capacities both of new cities and existing industriol settlements.[1] He worked in the Department of Housing Construction from 1939 until 1948 and the formation of the HDO. Newman's writing on the architect's role in nationally important building programmes reveals some of the ideological and architectural thinking behind aesthetic and material choices in the HDO's architecture programme. Discursively, it is quite possible to briefly consider this programme as distinct from the important pragmatic concerns shared the engineering profession in this context. In the design of "cathedrals of power," Newman dealt with the dual pursuits his work required as both an architectural expression of electricity and the exploration of an appropriate technical response to the architecture of electricity. (Newman, 1959: 80) It forced Newman to consider the role of architects productively involved in large-scale engineering works; his response to this challenge resulted in his assumption of the task of communicating power to a nation. On this matter he wrote:

> *"The national importance of these large structures must, I repeat, must, find architectural expression. It is imperative that these works become cultural assets because they are part of our social life. Production of power – though their primary function – is not all that matters." (Newman, 1959: 70)*

In setting out the parameters of the architect's influence in this programme, Newman considered the skills and attitudes an architect would constructively contribute to an engineer's work. As in the design offices of the Tennessee Valley Authority, Newman's architects enjoyed an open exchange with engineering design staff. The HDO projects, including direct architectural involvement in engineering works for the first time, were unavoidably entrenched in engineering design issues; this was a necessary matter of expertise. This aspect of the project drew the bulk of the spending and effort in hydroelectric projects; architects did not have training suited to these matters. However, Newman observed: "In general the problem in this type of work is to find a common platform or way of thinking between the Engineer and the Architect." (Newman, c.1956) He determined two fields in which architecture could operate successfully and effectively. Obviously, the buildings associated with the dams – turbine halls, offices and control facilities, workshops, and so on –belonged to his immediate field of concern. Simple determinants of function and circulation directly influenced planning, and a consultative process was involved to produce architectural products sensitive to the "technological requirements of gear and power reticulation." Referring to the design of powerhouse buildings: "The case is a problem of scale and order similar to the large single roomed edifices of the past, but restricted to engineering structures, site, etc." (Newman, c.1956) The rapidity required of the hydroelectric programme demanded structures simply and quickly assembled on site. In comparison with the civil engineering costs of earthworks and dam construction and the obvious electrical engineering costs, the architectural budget was rather insignificant; however, as a stand alone operational budget it was very generous, allowing architects serious flexibility and experimentation in both their design work and their choices of materials. For Newman, an architect's role was minimal in the sense of his or her singular impact on a power station site. However, he rendered that role as vital in a collaboration; as engineering solutions developed as aesthetic decisions, the architect became responsible to taking a resolution in built form, and preparing it as a spectacle for consumption by the nation via media mechanisms. In this sense, the addition of beauty to structure was fundamentally important. (Newman, 1959: 71) On this subject he wrote:

> *"However much an architect may have succeeded in producing a sound building satisfying all the requirements of his client, the ensuing work will contribute little to raise the status of the profession. The general public can only perceive the visual, and in the visual the emotional content is paramount." (Newman, 1952a: 22)*

In the case of hydroelectric design works, this involved determining the architectural elements most readily manipulated, suggesting through monumental scale the power of a site. By coordinating the massing of architectural elements, the public received a gracious and powerful image marking national progress, a consequence of the effort of sons and husbands. The development of that image by a sustained influence over the aesthetic consideration of engineers remained the architect's most challenging yet rewarding function in the HDO. So successful were both the role and the open communication between professions that the HDO became the primary designers of public structures whose visual impact was important, over other engineering work groups not including architects.

Maraetai Hydroelectric Power Station (Waikato River, 1946-1952) was New Zealand's first project in which architects were active and integrated members of the design team. The first public power project specifically conceived as a necessity for New Zealand's sustained modernisation, Maraetai would

generate enough power to prevent the country experiencing certain power shortages. This factor meant that construction solutions had to be simple and fast. However, this did not prevent a more profound series of considerations from taking place, these established as precedents for all the power station projects to follow Maraetai from the HDO drawing boards.

In his 1952 article 'Beauty in Engineering', published in the Wellington Architectural Centre journal *Design Review*, Newman wrote: "Works, striking in their forms and of a strange but exciting rhythm, can at present be seen in some of the large hydro-electric constructions built by the Ministry of Works." He saw in the Waikato River power stations shapes of an "amazing likeness to some of the monasteries built since the 10th century on the Greek islands in the Ægean Sea," specifically referring to and illustrating Simopetra on Mount Athos. The restless and elemental images of the transformer platform and the penstocks inscribed with the lines of scaffolding and incompletion, "reminds us of the fantastic perspectives of the Piranesi Brothers [sic] conceived during the time of the Baroque in Italy." These engineering elements could remain visible; their completion, necessary for the station to function, would hide the historical allusions Newman understood to be operating in this power station. Its historicity prompts, for Newman, serious contemplation:

> *"There is much matter for thought in these gigantic projects beside their engineering functions and problems which in themselves are of a magnitude without parallel in New Zealand. Our engineers are proud of their work, and rightly so. But is it only the material side of their designs that they are proud of? Does one think only of kilowatts when confronted with such engineering works?" (Newman, 1952b: 88-89)*

Contemporaneous to this article is another, 'Social Factors in Architecture and Their Implications for New Zealand', in which images of Alexander Vesnin's powerhouse of the Dneproges Project in the Soviet Union demonstrates "[one] of the outstanding examples of contemporary industrial design." Praising the perfect application of the elements of architecture ("The room behind this impressive wall must be very beautiful") he ventures to ask: "Is it not the transition into architecture of ideas on electrification and industrialisation?" Newman clearly read this hydroelectric project, likely known from his Moscow years, in terms of its signification of electricity and industrialisation. (Newman, 1952a: 16) This building was an architectural consequence of a politically driven electrification programme; Newman's citation of the project delivered to New Zealand architects a pure lesson in their potential contribution to hydroelectric architecture. Likewise, Maraetai was important as an expression of these political, or at least ideological, imperatives. As rapidly as the designers and constructors could force the elements of the project into shape, media produced newsreels and articles describing the heroic work of men building New Zealand's newest power stations. While the population absorbed the power and beauty of their project, they saw its architecture.

Of the four hydroelectric power stations designed during Newman's eight-year tenure in the HDO, Roxburgh Power Station (Clutha River, 1948-1956) was the final and most striking. The Roxburgh site is, quite literally, powerful, both in its significant generating capacity and in its authority as an image of electrification in New Zealand. The Roxburgh project was developed in response to ongoing electricity shortages experienced in the South Island, with smaller regional stations unable to cope with the Island's increasing dependence on electricity with increasing industrialisation following the War. Once tapped, the proposed site would produce enough electricity not only to quell the current difficulties in power supply but which would easily provide for twenty years' development. Roxburgh was thus a 'project' in the full meaning of the word, a plan resulting in over-abundance of modern energy, electricity rendered utopian as the building project became a promise of better urban, industrial and domestic environments.

The completed hydroelectric dam and powerhouse was the largest in New Zealand, and remedied all South Island power shortages until the late 1960s, when industrial development necessitated the addition of further power stations to the national grid. An internationally relevant public works project, it is an expression of both architectural power and the power of architecture. As a site, it demonstrates a resolution of the relationship between "pure design" and the technological considerations of the highly trained engineers searching for electrical solutions. The engineering features found resolution in an overall image of power transformed and translated into architectural expression. Architecturally, Roxburgh is the most comprehensive of Newman's designs, developing a synthesis of architectural, electrical, and engineering concerns.

While urban environments remain electricity's largest consumers, the landscape is the source of electrical production. Between these two zones of capital interaction, the architecture of power continues to address the importance of electricity to the modern nation. The implementation of a national electrical grid, articulating a network of productive sites,

brought to a logical conclusion the colonial practices of mapping, territorialisation, and infrastructural development that marked the initial cultural and environmental experiences of nineteenth century New Zealand. The 'national grid' is an abstract representation of the relationship between the country's population and its electrically productive territory; it is a mechanism of acculturation, with landscape rendered cultural by the values imposed upon it. Roxburgh marks the maturation of a modern approach to the built environment in New Zealand, both in its production capacity and in architectural synthesis with engineering concerns. It further marks a conclusion to the narratives of progress and hope that accompanied the earliest post-War power station projects, defined as they were by an architectural response to social ideology. The HDO's architecture programme receives little discursive attention, historical commentary focussing on the political and social investment of these public projects and their engineering feats. Newman established the way for electricity's cultural, idealistic, and political meaning to receive attention as architectural form, providing the will to electrify with a currency in architecture. HDO architects subsequently produced architecture for visual apprehensian; it is image-architecture in the sense that the scale and proportion applied to each project conveys power. From Maraetai, they established a clear contribution architects could make to the development of infrastructure; refining the profession's role, in that circumstance, as bearer of political and cultural values, architects were capable of communicating through the built environment in a way far which the engineer is ill equipped. Newman, and his successors, reinforced this position in each project. Through consultation and understanding of the particular requirements of both architecture and engineering on the part of each, the architect could manipulate the engineered environment to bear a message of power.

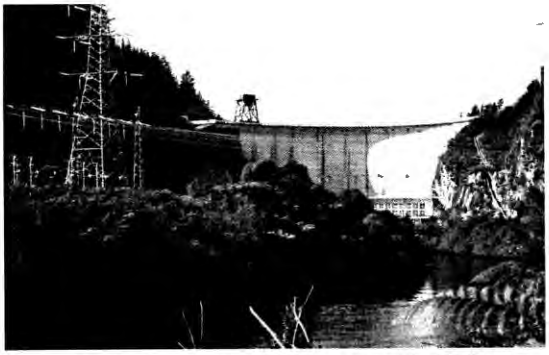

Fig. 1 – Maraetai Power Station, F H Newman and the NZ Government Architect, 1946-1952; photograph by Andrew Leach, 1999.

Fig. 2 – Whakamaru Power Station, F H Newman and the NZ Government Architect, 1949-1954; photograph by Andrew Leach, 1999.

Fig. 3 – Turbine Hall Interior, Whakamaru Power Station, F H Newman and the NZ Government Architect, 1949-1954; photograph by Andrew Leach, 1999.

Fig. 4 – Roxburgh Power Station, F H Newman and the NZ Government Architect, 1948-1956; photograph by Andrew Leach 1999.

NOTES

[1] His projects from this time include the Trade-Union Building of the Locomotive Factory in Orsk, the Central Trade-Unions Council Workers' Club in Theodesia, Crimea, the Railway Works Main Entrance Buildings in Kusnetzk, Siberia, the Main Entrance Buildings for the Copper Refineries in Balkash, and the Main Entrance Buildings for the 'Stalin' Motorcar Works in Moscow.

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Philip Goad
Julie Willis

Essential war material, modernist harbinger: unseasoned hardwood and its implications for the post-war Australian city

Introduction

Between 1942 and 1945, Australian architects and engineers within the Allied Works Council and the US Army Corps of Engineers undertook a vast program of building works to assist the campaign to drive Japanese forces northward through Papua-New Guinea, the Philippines and the Southwest Pacific and avoid invasion. Huge distances, lack of time and the need to wage a campaign from the air lay behind US General Douglas Macarthur's phrase that it would be an 'engineer's war'. By necessity, buildings such as airfields, hospitals, camps, warehouses, and other structures had to be light-weight, constructed quickly, and inevitably dropped in by air as easily handled pre-cut packages. With the lack of American and European softwoods in the Australasian region, an unlikely local material was pressed into war service - unseasoned or 'green' Australian hardwood. It was a material choice that would have profound implications for two reasons. Firstly, in the years of conflict, circumstances dictated the unprecedented innovation and experiment in lightweight timber structures. Secondly, in an echo of Lewis Mumford's poignant maxim that "war is the health of the machine"[1], the systematisation and ruthless economy inherent in wortime timber buildings would influence the development and practice of a particular form of modern architecture in Australia in the late 1940s and 1950s.[2]

The Southwest Pacific Theatre (SWPA)

In the first four months of 1942, Japanese air, land and naval forces had swept everything before them in Southeast Asia. They had overrun not only the Philippines, but also Malaya, Burma, and the Dutch East Indies, and they had seized strategic areas in various island groups northeast of Australia. As eorly as January 1942 they had captured Rabaul and had begun construction of a major base there. Shortly afterwards, they occupied the northern Solomons, and in March they seized Lae and Salamaua, in the Australian-mandated territory of North East New Guinea. It was clear that the Japanese, in order to isolate Australia and cut her supply lines to the United States, would try to extend their conquests still farther south. In fact there was a strong possibility that Japan would attempt an invasion of the Australian continent.

With Macarthur's forces scuttled south from defeat in the Philippines, a new theatre of operations, the Southwest Pacific Area (SWPA) was established on 18 April 1942, with Macarthur as commander-in-chief. The plan was to drive the Japanese back through Papua-New Guinea and northward to Japan. To do so, it was clear that it would be a war won from the air. The distances were much greater than ever before experienced. The terrain, materials and climate did not conform to previously known areas of US combat, and nor could lessons learnt European and Middle Eastern Theatres be easily applied to this new theatre of war.[3]

Base sections were established. Located on the strategic northern coast of Australia, Darwin became the site for an advanced air base and a port of embarkation for troops and supplies going to more forward bases. Brisbane became the site for the main US base for the assembly, repair, and maintenance of all types of aircraft, and the principal supply base and port of debarkation north of Melbourne. Townsville was to be a secondary base for light aircraft. Headquarters USAFIA was to be in Melbourne, a city that was also to be the principal port for the debarkotion of troops and supplies. Melbourne was also to be the major location for the design of the infrastructure and the mostly timber structures that would accompany the surge northward to eventual victory.

Essential War Material

During World War II steel was essential for armaments and munitions and was thus in short supply. In the massive building program required for the defence of Australia and the move north through

New Guinea, unseasoned or 'green' Australian hardwood, a building material that many design and construction professionals would have considered unsuitable, became an essential war material.

It was a choice determined by circumstance – all other materials were in short supply. Most major timber structures employed imported pines and firs. Local hardwoods were limited to simpler structures because, though the timber can be stronger that European or American hardwoods it tends to shrink and distort more during seasoning. This made large sections dimensionally unstable unless seasoned for several years. Seasoned Australian hardwood could not be readily supplied in long lengths because several years were needed to cure the timber to avoid distortion and splitting. Unseasoned hardwood could thus only be used in short lengths. The advantages of this timber were low production times and low costs, and the presence of Australian forests, which promised an abundance of the raw material. However it was a much stronger timber than imported softwood and nail joints could be used which enabled rapid construction using unskilled labour. The properties of this timber would therefore enable ruthless minimisation and a potential set of extremely efficient and economic structures that could be erected in a matter of hours or days.

Sverdrup and Parcel

A major problem however was that there were practically no US Army Engineer officers or enlisted men available for assignment to the Engineer Section in Australia. Fortunately, an American engineering firm, Sverdrup and Parcel had been at work in Australia since October 1941. Sverdrup and Parcel were engaged in designing and building airfields for an air ferry route from the Hawaiian Islands to the Philippines by way of Fiji, New Caledonia and Australia. In January 1942, Sverdrup and Parcel was given a fixed-fee contract to perform architectural and engineering services for the USAFIA, and the firm's employees were thus made available to the Engineers' Section. Under this arrangement, this firm was responsible for the preparations of designs, drawings and specifications, and for the major supervision of combined American and Australian army construction projects in Australia.

Setting up office in Melbourne

The Engineers Headquarters of the US Army Forces in Australia for the Southwest Pacific Area (SWPA) became a separate entity on the 4th February 1942. Four US officers and a stenographer moved from the Repatriation Building in St. Kilda Road to the top floor of Craig's Building in Elizabeth Street in central Melbourne. It was an old unused warehouse, the only merit of which was a large area of somewhat poorly lit floor space unobstructed except for a few haphazard partitions.

The Architectural Section of Engineer Headquarters commenced a week later on February 11th 1942 when Osborn McCutcheon, a director of the Melbourne architecture firm Bates Smart and McCutcheon (BSM), accepted the position of Chief Architect with the firm of Sverdrup and Parcel, then under contract as Architect-Engineer to the USAFIA. The next day, Otto Yuncken, a director of the Melbourne architecture firm Yuncken Freeman and Freeman, was appointed Assistant Chief Architect, and within a few days, a drawing office had been established and was in active production.

The architectural staff was assembled from local practising architects and architectural draftsmen in Melbourne, all of whom welcomed the opportunity to play some active part in the war effort. Architects known to have worked for the US Army included Alan Ralton (already at BSM); Douglas Gardiner and Philip Pearce (both of whom were to become postwar directors of BSM and lead the development of highrise building design in Australia) as well as Race Godfrey and Geoffrey Mewton. Under the office manager, Eric Hughes (later of Godfrey Spowers Hughes Mewton & Lobb), the senior staff were organised into groups. Each group, while being available for general work, were required to acquire a special and expert knowledge of some phase of the work such as camps, hospitals, warehouses, standards, airport buildings, barracks etc. This system proved very successful despite all odds, especially as from the Chief Architect down, all commenced with no knowledge of army requirements, standards or procedures. Because of this, an extraordinary amount of intensive study, research, and often experiment was necessary. For example, Melbourne architect Henry Pynor, who was in the Procurement Division of the US Army Corps of Engineers, developed a successful design for a portable and telescopic parachute drying flue (5 feet in diameter and 38 feet high). Another Melbourne architect JFW Ballantyne was responsible for the design and development of three types of laundry unit suitable for use under a range of field conditions (Portable, Mobile and Base). His mobile unit was mounted on a 7-ton trailer and 105 of these units were subsequently contracted for construction.

The Allied Works Council

Parallel and in concert with the efforts of the US Army Corps of Engineers were the activities of the Allied Works Council whose major role was the integration of the Australian and American war effort in construction in Australia. The Allied Works Council was formed in February 1942 as a response to the

need for an organization to control and co-ordinate the depleted Australian sources of manpower, heavy construction equipment, and supplies in the face of imminent Japanese invasion. The Allied Works Council had the respansibility of co-ordinating and supervising all civilian effort devoted to the construction of military defence projects. Its membership was made up of Australian civilian officials, the Chief Engineers of the US Army Forces in Australia (USAFIA) and the Royal Australian Air Force (RAAF), and the Engineer-in-Chief of the Australian Military Forces. The Allied Works Council when merged in November 1942 with the Works and Services Branch of the Australian Department of the Interior became the single organization responsible for all work executed by civilian agencies in support of the military construction program in Australia. With a staff of 4,600, it became the largest collaborative practice in Australian architectural history.[4]

The problem of drawings

From the outset there was a major and practical stumbling block to the Australian-American collaboration. At the beginning of operations there were only about 12 of the several hundred US Standard Theatre of Operations drawings available. Information had to be gathered from all possible sources, such as conversations with officers visiting Engineer Headquarters, discussions with senior NCOs, visits to Australian camps occupied by US troops, studies of Australian practice and so on. Eventually a more complete set of standard drawings became available but not before much useful work had already been carried out and an ethos of invention and resourcefulness engendered.

There were also problems with the American drawings themselves. They were unsuitable for use in their original form and it was necessary to adapt them to conform with the use of Australian hardwoods in place of American softwoods, which involved a complete revision of structural design. The drawings also had to be adapted to conform to Australian sizes of sheet materials such as corrugated iron and the use of alternative materials other than those envisaged on the American drawings. In this way the Australian Theatre of Operations or A-TO series of standard drawings came into being. As a result, actual projects, when required, could be prepared with the utmost speed. All that was required was a site layout plan and a schedule of buildings. It was common that two days would suffice for the preparation of necessary drawings and estimates for a 1000 bed hospital. These standard drawings and other documents were made available to Base Sections and thus also formed the basis of American construction projects in the region.

Wartime structures

The works program of the US Army Corps of Engineers and the Allied Works Council was vast. It involved complex logistical liaisan; the speeding up of administrative procedures in procurement and construction; and the inventive substitution of conventional building materials for lightweight and structurally small and easily transportable members. Trussed structures in arched and gabled farms (some of the largest ever to be built in Australia), modular post and beam structures, and composite canvas/timber tent structures thus resulted from this repetitive systems approach to wartime construction. In Australia alone, construction completed amounted to 47 airfields, camps for staging 10 divisions plus camps for base troops, 2000 miles of roads, 11000 hospital beds, and 11 million square feet of covered storage. The bulk of this work was constructued by civilian labour organised through the Allied Works Council.

Most of the structures erected by the Allied Works Council involved the use of green Australian hardwoods. But it should also be noted that a suite of Australian, American and British-designed prefabricated steel, timber and canvas structures also accompanied these timber structures built in the SWPA. It was the exposure to not just an innovative use of timber but also the unique forms of these other structures that would have subsequent influence on postwar Australian architecture. The combination of lightweight timber and the idea of material substitutian would have extraordinary influence but so also would the necessary leanness and expediency of the construction process and also the means of constructian and limited detail.

Examples of the existing prefabricated structures included the Australian-designed Sidney Williams huts. These prefabricated metal huts were constructed extensively throughout the Australian theatre of operations, and especially so in the Northern Territory and Queensland. There was also the highly efficient Bailey Bridge designed by British inventor Donald Colman Bailey which was frequently used in achieving difficult river and gorge crossings in New Guinea and involves the basic idea of using trusses built up of panels instead of box girder sections. There was the Butler Hangar and the Luria Catenary Type Hangar, both of which were extemal lightweight steel truss structures with suspended canvas beneath to enclose the aircraft. There were also improvised mobile structures such as hospital trains and in another form, a 100 bed hospital with patients and personnel housed under canvas, the whole being readily moveable in motor trucks even special trucks for operating theatre, sterilising units etc. Another material that was used across not just the SWPA but across the globe was pierced steel plank (PSP) with the need to provide instant runway surface for fighter aircraft. The entire architectural language and struc-

tural techniques were drawn into a repetitive and hence productive process during wartime. As a result, virtually every structure found new form.

Timber structures in wartime

The majority of buildings constructed in the South-west Pacific Theatre were of timber. Designs for these structures emerged both from the US Army Corps of Engineers and the Allied Works Council. Greg Nolan has identified the major types as: huts; post and beam stores; trussed roof buildings; workshops; arched buildings; and hangar buildings.[5]

Huts

Developed as a simple gable roofed building with a timber frame sitting on timber stumps, the hut was developed to satisfy a range of widths from 4.9m (16') to 6.1m (20') as the war progressed. Cladding for roof and walls was typically corrugated iron or asbestos while windows either had top hung corrugated iron shutters or were glazed. In northern Australia, the huts' eaves were extended and in addition to the top hung shutters, openings were fitted with mosquito gauze. In 1943, the US Army Corps of Engineers devised a standardised light timber portal frame version of the hut (Nolan, 1999). The type of timber used varied according to region and remoteness. In some places, timber was flown in but for the most part, temporary sawmills were set up locally. The application of the hut types were to camps such as those at Rockhampton and Brisbane, each for 20,000 men, hospitals such as 250 bed hospitals at Seymour and Tocumwal, 1000 beds at Gattan in Queensland, prisaner of war camps, and ordnance and chemical warfare depots. The numbers of huts is difficult to predict. There must have been tens of thousands constructed. The Allied Works Council's US prefabrication program alone shipped parts for 17,000 prefabricated huts throughout the Pacific Islands between May 1943 and August 1944.

Post and Beam Stores

Post and beam stores were built all along the eastern coast of Australia during World War II. Used for general ordinance storage, these stores generally had columns spaced at 5m (16'8") and 6.1m (20') and ranged in width from 10 to 48 metres. Many of these stores had swiftly laid concrete slabs with the timber columns fixed to the floor with steel angle brackets. External cladding was generally corrugated iron or fibre cement sheet with no windows or a very small number of glazed rooflights.

Trussed roof buildings

Trussed roof buildings were also generally store buildings. Truss designs varied according to Australian and American influence. Where American influence was not great, trusses generally had bolt and shear connector joints. These designs employed heavier but fewer timbers and were an improvised version of the traditional mortice and tenon truss type of pre-war Australian construction practice. By contrast, the US Army Corps of Engineers developed truss designs that employed larger numbers of lighter timber members that could be nailed together by hand and hence employ relatively unskilled labour, as well as greater quantities of unseasoned Australian hardwood.

Workshops and other major buildings

A number of very large buildings were developed either as unique or standardised building designs. Developed often from pre-war defence buildings such as a standard RAAF ordinance store design, these buildings had a variety of roof forms (sometimes large segmented roof structures) and while often constructed of unseasoned hardwoods their designs were not as experimental as other building types of the period.

Arched buildings

Where spans longer than 20 metres were required, the most common building form for stores was an arched structure. The most architecturally interesting structures were the arched warehouses and hangar buildings. This is where Sverdrup and Parcel's expertise was used, especially in the design of the igloo arch – developed by an Australian engineer, a French engineer, and the Chief Engineer, GHQ, SWPA.[6] It was made up of small pieces of scrap-size timbers, principally 1 to 3 inches, and, with subsequent addition of a corrugated iron roof, provided a form of covered storage which 30 skilled men could erect in about 9 to 12 days. Designed initially as a frame for camouflage cover, this igloo–type construction was also subsequently used for warehouses and hangars. It illustrated the adjustment of designs to conform with local limitations of materials and manpower. Typically these were three pin arches constructed from light hand nailed boxed and trussed arches of green hardwood, though it is known that one such structure was built of imported US Oregan. Both American and Allied Works Council designers developed the igloo arched store building with standardised spans of 31.7 metres (104'), 32 metres (105'), and 51.8 metres (170'). Only until very recently with the construction of Ken Woolley's Exhibition Dome at Homebush in Sydney (1998), these arched buildings were the longest clear span timber structures existing in Australia.[7]

Hangar buildings

Aircraft and workshop hangars were either open ended igloo structures or trussed hangars whose shape

formed the outline of a parabola, and earned the name of 'hog-back' trusses. The trusses for this latter group of hangars were built with bolt and shear connector joints connecting pieces of green hardwood and a number were constructed in Werribee in Victoria.

The ethos behind the design of all of these structures was one of improvised minimalism and a ruthless engineered economy behind the use of a readily available material. There was no specific aesthetic intention rather a pragmatism and sense of success gained from necessity of the method. These buildings were not the result of the necessity of artifice but borne from the necessity of production.

Postwar Application

The implications of this architecture from war was an ethos of structural rationalism and systemised material and production delivery that engendered a unique postwar architecture culture especially in Melbourne, Australia - the wartime headquarters of the Southwest Pacific Theatre of Operations. Three areas of practice were immediate inheritors of this timber driven aesthetic: the pre-cut timber house; the development of the so-called Melbourne School, a group of buildings that exhibited daring structural expression; and the revision of postwar corporate practice and the emergence of the highrise curtain wall skyscraper.

The pre-cut timber house

Immediately after the cessation of hostilities, the prefabricated house was seen by architects and government bodies across the world as a potential solution to the pressing demand for housing. There was also the issue of what to do with wartime industries. Propositions therefore for steel houses such as the Beaufort (1946) and Myer Houses (1945) that were produced by aircraft factories enjoyed brief currency. Instead, it was the pre-cut timber house that was to have greater impact and application. Ironically however Australian hardwoods were often not used in these prefabricated schemes. In a reverse of the wartime situation, many of these timber houses were imported from England, Scandinavia and France.[8] On other occasions the wartime expertise that had been gained through the use of repetitive timber construction was applied to the design but not to its material choice.

For example, Otto Yuncken's firm was involved in 'Operation Snail', the project initiated in 1948 by Colonel WS Kent-Hughes, then Victorian Minister of Transport, to attract one thousand urgently needed British migrants for employment by the Victorian Railways. In order to house such a large number, and to compensate for the inability of local resources to supply the housing upon which the whole idea depended, it was decided to seek houses from abroad.

Proposals were invited from firms in England, Sweden and Austria from which Simms Sons and Cooke of Nottingham were appointed as principal contractors for a pre-cut house yet to be designed. In January 1949, Melbourne architects Yuncken Freeman Bros, Griffiths and Simpson in association with Baxter Cox and Associates were appointed as designers and mass importation began under the name of the "Victorian Pre-Cut Housing Project". Other government departments took advantage of the speedy relief offered. By late 1950, over 2000 permanent timber houses were being supplied at a rate of forty per week to not only Victorian Railways projects throughout the state but also the State Electricity Commission's new townships of Newborough (Yallourn) and Mt Beauty (Kiewa), as well as the new town which the State Rivers and Water Supply Commission was building at Eildon.

The houses themselves were a blend of imported and locally produced components with the maximum proportion of labour content of the houses being applied at the English end. Australian components included the stumps, bearers and joists, gas or electric stove and canopy, and the installation of electricity and plumbing. The superstructure was precut, packaged and marked in England and delivered in complete house lots. Most of the timbers were Swedish whitewood, dressed throughout and formed to the exact size and shape. All the timbers were kiln dried, and the external vertical lining boards were primed in England to minimise distortion during transit through the tropics. The low pitched gable roof was made up of light timber trusses. The roofing was Trafford tile pattern asbestos cement sheeting but later replaced by a specially designed interlocking aluminium sheeting. The result was a range of forty-four different house types of two, three and four bedroom homes.

In a curious turnabout, wartime systems were applied to postwar peacetime building but not in fact using the local material that arguably had helped win the war. Melbourne architect and critic Robin Boyd (1919-71) was to ask "Is Australia incapable of solving for herself this problem?".[9] Across Australia, the pre-cut timber house in a range of designs was applied to new township designs for major postwar infrastructure projects involving hydro-electricity, transport and water supply. By the mid-1950s, it was a philosophy that inform the building of houses for remote mining towns and was exemplified by Ernest Milston and Don Hendry Fulton's Mary Kathleen uranium mining town houses in north Queensland (1956) where pre-cut timber and the module dictated modest but eminently workable house forms.[10] Thus it was that the philosophy of the modularisation and prefabrication of the building system became

the rationale, while the Australian timbers were eschewed in favour of imported timbers.

The Melbourne school

The same fascination for the module of timber construction also swept through Australian architecture schools in the late 1940s and early 1950s. Spatial thinking moved from Le Corbusier's *plan libre* to a disciplined modulated approach to spatial division and expedient lightweight structural sections, an inheritance largely of wartime experience.

Modernism, as now reinterpreted, largely meant a frame with repetitive components. Flexibility became interchangeability as the 'modular plan' replaced the free plan and 'form follow(ed) form'.[11]

University projects focussed on modular construction in residential design. Typical products were Douglas Alexandratos and Peter McIntyre's 1949 schemes for "A House for the Immediate Tomarrow". Both were of modular timber construction with lightweight panel materials and structural window mullions.[12] In practice, these concerns were translated into rigorous modular timber house designs for one-off clients but there also came a specific structural functional response to the design of postwar domestic and institutional buildings that came to be known as the Melbourne School and which encouraged designs of daring structural expression. In no other Australian city was the sense of lean structural experiment so widely felt.

Chief among the Melbourne designers exploring timber construction was Robin Boyd whose Finlay House, Warrandyte (1951) and Clemson House, Kew (1957-59) employed the repeated scissor trusses to provide dynamic butterfly roofs and shed rainwater water to a single point. His Gillison House, Balwyn (1952) was an attempt to reduce the timber frame to its most basic structural essence, the diogonal of the timber stud frame, while his Richardson House, Toorak (1954) was a translation into steel of the arched forms of the workshops and hangars of wortime but with a disciplined timber box suspended between. Peter and Dione McIntyre explored lightweight timber construction with a series of eight arched roof houses. The concept of the houses was based on the idea of a flexible plan roofed by 8.2m (27') wide gently arched timber trusses supported on timber posts with the internal walls designed as panels of a standard size and which could be taken away without affecting the structure. The owners were then not only able to change the size of the rooms but also the arrangement of bedroom and living areas.

Larger structures like Kevin Borland, Peter McIntyre and John and Phyllis Murphy's Olympic Swimming Stadium, Melbourne (1953-56), while deriving much of its formal principle from an earlier Harry Seidler competition entry (1952) for another stadium[13], could also be read as a virtual hangar for swimming in with its marching line of canted girder trusses. Even the steel arched Basketball Stadium (1956) built in the grounds of Melbourne's Exhibition Buildings seemed to recall the arched hangars and workshops of nearby Werribee and far off Queensland. Another wartime analogy could be made with Yuncken Freeman Bros. Griffiths and Simpson's Sidney Myer Music Bowl, Melbaurne (1956-59) which might be read at one level as a giant piece of camouflage netting drawn across a sunken gun emplacement rather than its final function, an innocent acoustic bowl for free concerts in a park.

While it is clear that unseasoned Australian hardwood plays little direct part in any of these postwar structures, there is little daubt that the wartime construction experience had affected the design methods of Melbourne architects and contributed to a very specific line of architectural enquiry in that city. It should also be noted that no causal linked is being claimed here rather the fact noted that in previous histories of postwar Australian architecture, the impact of war has been overlooked and not seen as a potential design source (one amongst many) for Melbourne's original contributions to a postwar Australian architecture.

Postwar practice and the highrise building

Perhaps most significantly and surprisingly, the implications of wartime uses of timber con be seen in the most urbanistically influential of postwar structures: the glazed curtain wall skyscraper. Through a complete revision of production technology, material and labour mobilisation, and an associated aesthetic that was transferred from the wartime use of timber to the repetitive glass and steel facades of the postwar city, architects began to turn wartime experience to the task of building far the new postwar commercial world.

In Melbourne (and largely Australia), the advanced design of the postwar skyscraper was pioneered by Osborn McCutcheon and his staff. On Australia's entry in 1942 into World War II, McCutcheon held the position of Chief Architect of the Corps of Engineers of the US Army in the South West Pacific Area from 1942-1944. Joining him in the Corps of Engineers was another BSM partner since 1937, Alan Ralton. War was a time of revelation for McCutcheon as the development of repetitive building systems and programs of mobilisation were crucial to the efficiency of the wartime enterprise. Systematisation, standardisation and the speed of industrial production formed the core relationship between architects

and wartime industry. Methods and processes of prefabrication, dry systems of construction, and the co-ordination of teams of specialists combined with efficient systems of delivery were paramount. War was a time when the modernist dream of the machine was realised, when the construction industry was forced to match the pressures of military mobilisation at a scale not experienced by any previous conflict. Indeed the mechanisation of World War II was the impetus for an entirely new aesthetic of postwar architecture that US firms like Skidmore Owings and Merrill, architects of numerous wartime projects, would take up with alacrity. It was a modernist aesthetic not of cubist abstraction but one of system building, repetition and modular planning, and of which the glass curtain wall modulated by aluminium framing (a material refined in application by its use during World War II) was found to be the thinnest, lightest and most efficiently erected skin. At the conclusion of hostilities, McCutcheon invited two other on-time members of the Corps of Engineers to join him in BSM's postwar practice. Douglas B Gardiner and Phillip F Pearce joined BSM as partners in 1945. Both had between 1942 and 1944 worked closely with McCutcheon in wartime operations and Pearce had extended this experience as Senior Planning Officer in the War Homes Division of the Commonwealth Government 1944-1945. McCutcheon similarly had enriched his wartime experience as Controller of Planning and Chief Technical Adviser on Housing to the Commonweolth Government, 1944-46.

From 1945, BSM transformed their practice techniques and procedures. The design aesthetic of the office was also transformed. After returning to private practice, McCutcheon travelled overseas to the United States, England and Europe. On his return, the firm commenced an intensive study of lightweight construction methods. Some of these principles were applied to new housing at BSM's Eildon Township (1950-56) and also to high-rise building design most notably the six MLC Building projects in Brisbane (1955), Perth (1956), Wollongong (1956), Adelaide (1957), Newcastle (1957) and Sydney (1957). McCutcheon introduced the notion of teams of specialists within a multi-disciplinary office. He was an advocate of integrated thinking and integrated systems. There were seven departments: architects; structural engineers; services; estimating; interior design; accounting; and general clerical and filing. He had, in effect, recast his Melbourne office as the US Army Corps of Engineers.

The exemplar of McCutcheon and his collaborator's search for the system built skyscraper was ICI House, Melbourne (1955-58) – a building essentially of dry construction and prefabricated parts that had emerged from an office which had been entirely restructured after World War II as teams of specialists by its principal director.[14] It was as if the high rise building was a wartime structure. Repetition, the module, the kit of parts with glass and lightweight infill panels, and documented, assembled, and delivered in tendered packages - the analogy is altogether too neat but also compelling in that the similarities are startling. Once again, while there is clearly no unseasoned Australian hardwood being used in the design of the postwar glazed skyscraper, the question of influence is hard to ignore. Previous histories of the postwar skyscraper constantly hark back to the birth of the skyscraper in 19th century Chicago or the visionary glass tower schemes (1921) by Ludwig Mies van der Rohe or the Van der Nelle Factory, Rotterdam (1926-30). They dwell little on the influence of World War II and its associated and circumstantial aesthetic of engineered scientism. Even histories of the work of Skidmore Owings and Merrill, the American skyscraper firm par excellence make no reference to the effect of war nor give reasons for the appearance of a building such as Lever House.

Modernist Harbinger

Architectural histories often indicate that times of war are times of minimal architectural production. Yet one needs to ask: where do architects go during wartime and are their architectural services rendered obsolete? The effects and implications of war on the practice of architecture is a relatively little studied and little understood subject. Renaissance architecture included expertise in military architecture as a necessary and founding component of architectural practice. But twentieth century architectural histories have tended to overlook that pedigree and instead use the dates of war as benchmarks for changes in style rother than examining the direct effect and implications of war upon architectural practice; building technologies; project construction and delivery; and on an aesthetic that is associated with the mechanics of war. The prevailing canon of 20th century architectural histary has been to follaw the international trend of examining architectural movements thraugh the medium of the house, rather than through public, industrial or commercial architecture, and inevitably through the framework of progressive modernism rather than through frameworks of social and political change. In particular, the effects of wartime, when issues of building production and delivery take primary position over aesthetics, fashion and style – these have not been considered. By examining such o modest material as unseasaned Australian hardwood, one can begin to speculate that far from being irrelevant, it was not only an essential war material, but it also was an important if unlikely Modernist harbinger.

Fig. 1 – Erection of prefabricated framework. Three hundred feet of roof trusses were erected in six days by 12 men.
Meeondah – Warehouse construction. July1943.
Item 53.3/3.4, box 18, series B5281, National Archives of Australia.

Fig. 2 – Carpenters pre-fabricating bow-truss cord [sic] on specially constructed table. Rydlemere. Construction US Stores. February 1943.
Item 53.1/2.4, box 17, series B5281, National Archives of Australia.

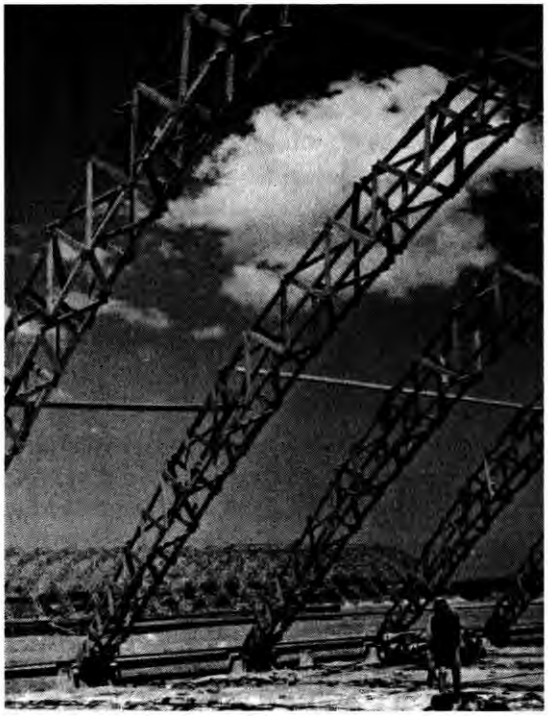

Fig. 3 – View of walls, abutment pads and arches. 2nd store in similar stage of construction. Rydlemere. Construction US Stores. February 1943.
Item 53.1/2.7, box 17, series B5281, National Archives of Australia.

Fig. 4 – A B-17 is parked inside a repair hangar at an Engineer installation at 4th Air Depot, Townsville, Australia December 1942
Photograph: Pvt Joseph Herda. Signal Corps Photo #GHQ-SWPA-SC-43-169-19S-147E/sc 166048. Held National Archives and Records Administration, College Park, Maryland, USA.

Fig. 5 – Construction of bows of repair hangar 46 hangar at an Engineer installation at 4th Air Depot, Townsville, Australia December 1942
Photograph: Pvt Joseph Herda. Signal Corps Photo #GHQ-SWPA-SC-43-2418-19S-147E/SC166054. Held National Archives and Records Administration, College Park, Maryland, USA.

Fig. 6 – Yuncken, Freeman Bros., Griffiths and Simpson, Sidney Myer Music Bowl, Melbourne (1956-59).
Photographer unknown, c.1959. Held collection of Philip Good.

Fig. 9 – Kevin Borland, Peter McIntyre and John and Phyllis Murphy, Olympic Swimming Stadium, Melbourne, (1953-56).
Photograph © Wolgang Sievers. Reproduced with permission.

Fig. 7 – Members of the [Civil Construction Corps] mobile unit wheeling prefabricated bow trusses into position for erection.
Townsville – Garbutt – RAAF Store. July 1943.
Item 53.3/1.4, box 1B, series B5281, National Archives of Australia.

Fig. 10 – Robin Boyd, Richardson House, Toorak, VIC, 1954.
Photograph © Wolgang Sievers. Reproduced with permission.

Fig. 8 – Bates, Smart and McCutcheon, ICI House, Melbourne (1955-58).
Photograph © Wolgang Sievers. Reproduced with permission.

Fig. 11 – Adelaide River (AWAS Camp), c.1943. Item 52.2/1.1, box 16, series B5281, National Archives of Australia.

NOTES

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KEYWORDS

Architecture, Australia, war, timber, Modernism

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Griselda Pinheiro Klüppel

Brazilian Modern Architecture: climatic Adaptation Principles

Introduction

There are several elements which characterise the modern architecture in Brazil. They represented, beyond the formal language and aesthetic value, the materialisation of inherent concepts to good architecture, which adapted itself to the local climate.

At the beginning of the 20th century as a response to the proliferation in Brazil of the new styles from abroad, the so-called "neo-colonial style" was created. This style was a result of a movement promoted by some architects who intended to recover national roots of Brazilian architecture through colonial architecture language. It came up as Lúcio Costa said, "with good intention" arguing that "if we have to fake, we should do it faking what is ours" (COSTA, 1975:98).

However these architects chose as formal reference the 18th century architecture which, wrongly, could represent "our architecture" despising models already transformed that could mean indeed a new Brazilian architecture that was being built since the middle of the 19th century in diverse parts of the country. This architecture, most residential, indicated a specific typology with constructive elements adapted to the climate and therefor able to giving better salutary and comfort to the users than the colonial architecture.

The error of the neo-colonial architects was somehow redeemed when Lucio Costa and others architects started to develop the so called Brazilian Modern architecture once they recovered formal concepts and constructive elements already tested and approved by use which could be identified as "national" due to their adequacy to the hot humid climate of the country.

Two of these principles or basic concepts are: the open character of the architecture and the integration interior/exterior specific of certain housing typologies either rural ar built in urban peripheries since the middle of the 19th century. From this time are also the external elements of solar protection, the lattice windows, the trellis as well as glazed tiles applied to external walls, which were recovered and used in the modern architecture built in Brazil.

It is important to look at this principles and concepts and how those elements were used in order to understand tropical climate, as well as the appropriation and transformations undertook by them in their utilisation and articulation as elements and solutions within Brazilian modern architecture.

Before analysing, from the climate point of view, the utilisation of these elements in some outstanding examples of Brazilian modern architecture, they will be studied regarding their adequacy to the climate and the transformations, from old to modern, suffered by them due to new formal concepts and building materials used in Brazil.

Outsider Influences

As Philip Goodwin (1943:81) asserts it is clear that Brazil has been dominated by a great cultural influence from France, for since the second decade of the 19th century the presence of the French Artistic Mission in Brazil was highly responsible for the spread and taste in arts and architecture. The members of the Academy were the idealizers and organisers of the first Academy of Fine Arts, in Rio de Janeiro, where the first undergraduate course of architecture was later created. Since the middle of the 19th and beginning of the 20th century influences through many instances of neo-classical and eclectic architecture spread in the most important cities and in the capitals of the Brazilian states.

The pre existences and this flexibility to adopt international influences made it carrier for the ideas of Le Corbusier to be welcomed and applied by the young architects responsible for the project of the Ministério de Educação e Saúde of Rio de Janeiro (1936 – 1943). This building although was not the first manifestation of modern architecture in Brazil it is, undoubtedly, the great reference of the modern movement in Brazil. As Henrique Mindlin (1956: 196) states: *"...is the most striking symbol of modern architecture in Brazil and the first application an a monumental scale, of Le Corbusier's ideas.*

The adoption of new ideas and the need of an architecture, responding to the changes and modernisation occurring in the country, and somehow these ideas supported innovation in the very governmental mochinery. Without doubt these factors were determinant for new building patterns

grounded themselves in a cultural as well as proper climatic reality, that allows, without being orrogant assert, that: *"Brazilian Modernism is, simultaneously, an effort of actualisation and a rediscovery of our cultural roots, a renavation within a tradition"* (MORAIS, in ALCÂNTARA, 1997:93).

The Search Of "Appropriate" Solutions

"Although the first modern impetus came from imports, very soon Brazil founded its proper way"(GOODWIN, 1943: 84). This proper way does not resume to the utilisation of *"(...) innovatians destined to avoid the heat and the lightened reflexes in glass surfaces, by means of external special quebra luzes."*(GOODWIN 1943: 84). Much more than that, one can dare to assert, some concepts and *bio-climatic* principles are inserted in many of the founded solutions: concepts as cross ventilation with specific zones, of in and out ventilation, of fragmented spaces enlarged and integrated with the exterior, intermediary spaces of protection and connection with the mild nature of the place, besides other elements that constitute the skin of the buildings, which will be detailed later on.

Enlarged spaces and zones of integration exterior-interior

The enlarged spaces on colonial architecture determined either by the great height of the rooms or by the little fragmentation of the spaces are also present in modern Brazilian architecture. These large areas allow great cubature of air facilitating thermal changes among diverse air layers in the internal environment.

This concept of large room height is extensively used in modern architecture via the introduction of the mezzanine. For instance, in the work of Oscar Niemeyer they are mainly found in outstanding buildings such as the Palácio da Alvorada (1957), the Palacio da Industria in Ibiapuera Park (1953) or the Cassina da Pampulha (1942). One can also list the Estação de Hidroaviões (1937-1938) by Atílio Correia Lima, the Aeroporto Santos Dumont (1937-1944) by the brothers Marcelo and Milton Roberto, the Faculdade de Arquitetura e Urbanismo (1961-1969) by Vilanova Artigas and the Escola de Minas e Metalurgia (1960-1967) by Oswaldo Bratke, the two last belonging to the Universidade de São Paulo. Besides these examples, many others buildings give an idea of the amplitude and flowness of the space and air through the double height of some areas.

Among other smaller buildings, notably residences, dauble height spaces can de seen in Cunha Lima House (1958) by the architect Joaquin Guedes, in Caetano Miani House by Paula Mendes da Rocha and J.E. de Gennaro from 1962, in João Paulo de Miranda Neto (1953) by Ligia Fernandes built in Maceió, in Gearge Hime Country House (1949) designed by Henrique Mindlin and the own house of to Italo Eugênio Mouro in São Paulo (1947).

The other constant reference of traditionol Brazilion architecture is the indoor/outdoor integration through multiples openings pierced in the foçodes and by the *varandas* around the building. This spoce, acts os chock obsorber of the thermol impact on the walls as well as shodow and protection zone against the direct action of the sun on people. This space where one feels sheltered and it expands the relations of the very building, interacting directly with the nature of the surrounding space, with its maximum enlargement in the *pilotis*.

In modern architecture the veranda has a character of great protection and formal expression of the covering as one can see in the Supremo Tribunal Federal (1958-1960) or in the Palácio do Planalto (1958-1960) by Niemeyer where the lenghtening of the roof form terraces all around and the body of the building is halted and free in its interior integrated to the exterior through the mild transparency of the glass. Another huge example of this protection of lenghtening roof is the Museu de Arte Moderna (1954) by Affonso Reidy. Here the building basically hang in the large roof that shelter itself and the exterior spaces invade the covered area resulting in shadawy gardens.

One could give innumerable examples of architecture in Brazil where the integration of inside and outside can be seen, for instance several buildings by Lucio Costa, Rino Levi, Cerqueira Cezar and Oswaldo Bratke among others. A good example is the house of Oscar Niemeyer where the built mass is sheltered by the sinuous curves of the cover forming a continuous veranda integrating, through the floor, open spaces and covered spaces. These verandas are alsa present in many residential high rise buildings such as the Edifício Prudência (1944) by Rino Levi and Roberto Cerqueira Cezar, the Edifício Louveira (1946) by Vilanova Artigas e Carlos Cascaldi, the buildings that compose the Parque Guinle (1950) by Lúcio Costa. The verandas of both areas social and service of a residential compound designed by Gregori Warchavchik in São Paulo (1939) also deserve mention as well as his first work in Brazil, his own house, designed in 1928, where the architect refers to the "L" shaped veranda of the *casa grande* (manor house) of the colonial period.

The utilisation of these intermediary areas between inside and outside presented huge advantages in a hot and humid climate that dominates a great part of Brazilian territory. Besides the promotian of shadow and its effectiveness blocked of direct solar radiation, the integrated areas facilitates the flow of

the air inside the building, allowing the flowing off of the wind, that with low pressure, easily penetrates in the building through the windows facing the veranda. This shadowy area also serves to diminish the natural light intensity in the interior, rooms reducing the effect of dazzling of this light and makes, principally, an intermediary space that integrates the building with the nature all around.

Besides protecting the walls and creating shadow the veranda works as a dispersed of heat and that captors the breeze and facilitates its penetration in the building. In the same way as in the protected corridors and sidewalks generated by the *marquises* or by over hangings of buildings over *pilotis* they created a continuous shadow in the public space.

Building on *pilotis* promotes sheltered circulation from the sun, and ameliorates the quality of the urban environment from the point of view of ventilation and salutary, by allowing greater flowing and dispersion of air at the level of the street. It also reduces the levels of dampness of the floors and in it has the great advantage of isolating the walls of the building from the natural action of the rising damp through capillary. It eliminates the residual water added by this process to the walls of the ground floor, there by it reduces and controls the dampness inside the building besides contributing to a better conservation of the bases of walls and generally speaking to the building as a whole.

External Walls Treatment

The constitutive elements of the external walls or the surface treatment of the buildings, includes openings and closing elements, with are extremely responsible for thermal changing between the building and external environment. Through them one can pramote an architecture that works passively with the climate guaranteeing desirable levels of comfort inside the buildings principally when the climate is mild without great thermal amplitudes as it does occur in the most part of Brazilian territory.

Brise-soleil and *quebra-sol* vs. glass panels

Undoubtedly the influence of Le Corbusier over the group coordinated by Lúcio Costa for designing the Ministério da Educação e Saúde(1936), in Rio de Janeiro, was remarkable and brought conclusive outcomes ta the modern architecture built subsequently in Brazil. From this influence stands out the attitude of searching solutions in building materials and characteristic elements of local constructions like designing buildings and façades considering the climate. As examples one can mention the protection against solar radiation by *brise soleil* elements, firstly developed by Le Corbusier for a project in Argel (1933) but formerly used at the façade of the Associoção Brasileira de Imprensa by M.M. Roberto designed and built in Rio de Janeiro between 1936 and 193B.

Elements of exterior protection applied on the openings had already been tested and its efficiency was well-known in Brazil. To correct or diminishing thermal effects and problems originated by massive use of English glass windows or sash windows, that became a substitute to the *gelosias* from the second decade of the 19th century on, when the *esteiras da china* including started to be used. It was a sort of exterior movable curtain, made of small horizontal juxtaposed slabs, fastened laterally by strings that, when closed allowed regular intermediary open spaces between them. Superimposed to the casement fastened by the outer side at the upper part of the openings, these elements assured not only privacy inside the rooms but also and principally they allowed the efficient control of the natural light excess and the direct solar radiation through the glass windows.

Certainly these external curtains, which appeared by the middle of the 19th century as can be seen in engravings and photographs of some cities as Salvador and Recife were the harbingers, in Brazil, of the lattice windows that worked as the future *brise soleil*. Superimposed to the windows they hindered the direct solar radiation penetration until guaranteeing ventilation through its gaps, inside the house.

The use of *brise soleil*, allow the great advantage of belonging to the body of the building and formally defining it. The decision of using them might be incorporated in the designing decisions, for its correct localisation, to assure the efficiency an the protection element of the openings as well its function as barrier to the direct sunlight, and its of extreme importance the correct design during the elaboration of the project.

With the localisation of the *brise-soleil* or *quebra-sol* superimposed to the façades, externally to the curtain wall, it is much more efficient from the thermal paint of view, than any other element or barrier that eventually may be used inside the openings. In this way it blocks the direct action of the solar radiation, reducing significantly the solar radiation thermal effect an the glass, known as "green house effect".

The use of *quebra-sol* in façades might be correctly designed considering the latitude of the place, the apparent course of the sun in the sky, the orientation of the façades, the topography of the plot, the characteristics of the surrounds and the different positions of the sun during the year in order to guarantee its efficacy. All these factors might be considered to a correct definition of the position and dimensions of the slabs of the *quebra-sol* otherwise it will happen, as we can see in some build-

ings were they appear indistinctly in façades that receive little or no sun or even the orientation of the plates which instead of protecting they serve as captor of direct solar radiation. In these cases the *brises* loose its function and turn to be mere superimposed tridimensional objects to give movement to the façade and illusions of good architecture.

In Brazilian modern architecture one con find an extreme formal diversity in the way *brise soleil* are applied regarding the direction and the dimension of its plates. Examples vary since the huge vertical panels in concrete, as in Assaciação Brasileiro de Imprensa building, olready cited, by M.M. Roberto or in the Aeroporto Santos Dumont by the same group, to the small attached slabs of the Parque Guinle buildings (1948-1954) by Lúcio Costa in Rio de Janeiro or in the alternated panels with narrow slabs proposed by Paulo Antunes Ribeiro to the Caramuru building in Salvador (1946) until the movable panels designed by Alvaro Vital Brasil for the Banco da Lavoura built in Belo Horizonte in 1951. Regarding horizontal plates, one can mention, among others, the movable panels constituted by small slabs, similar to the ones of *esteira-da-china*, used in the Marques de Oval building by M.M.Roberto (1953-1955) in Rio de Janeiro, the movable panels of asbetos with large width and length equal to the anes of its windows in the Ministério de Educação e Saúde, the panels of the Bus Terminal in Londrina, by Vilanova Artigas (1951) and the fixed plates of the Cooperativa e Lavanderia of the Conjunto Residencial Pedregulho by Affonso Reidy. Another important reference by Reidy is the extreme movements resulted from the fixed and movable *quebra-sois* simultaneously using horizontal and vertical plates with diverse proportions, posed to the west façade of the Instituto de Previdência do Estado da Guanobara headquarters (1957).

Lattice window with diverse variations is another element that largely has been used in the modern architecture in Brazil. This type of frame was already extensively used in the country since the last half of the 19th century. Its adoption meant the integration of the wooden strips of the *esteiras-da-china* to the window frame. These wooden elements counterpoising or substituting the glass casement corrects the utilisation of glass windows in two crucial aspects, from a climate point of view. They allow the direct and diffuse radiation control and the in and out of air inside the rooms. The parallel plates that may be fixed or preferably movable allow total contral of quantities of ventilation and natural lighting inside the building through the openings formed by the continuous intervals.

Besides the correct utilisation of lattice windows modern architecture also brought the innovation to use huge glass panels to the façades of Brazilian buildings. The employment of curtoin walls bring serious troubles to the higro-thermal and luminous character in a hot and humid climate. For that they should be avoided at any situation in a climate like this due to the green house effect, already mentioned, as well as the dazzling effect resulting of the excessive natural light coming inside.

> *"Thus glass transmits radiation in a selective manner, permitting solar radiation to penetrate into the building to be absorbed by the internal surfaces and objects and to elevate their temperature. But the heated surfaces emit radiation at peak intensity with a wavelength of about 10 microns and this radiation cannot be transmitted outwards thraugh the glass owing to its opaqueness to this wavelength. (GIVONI, 1976:234)*

In this way either the radiation by retransmission of objects or the transmission given by the users of the rooms remain inside generating an internal overheating. This heat only can be dissipated if the ventilation openings are sufficient. Generally the glass panels allow only small apertures in relation to the total opening what certainly bring great troubles from the thermal comfort point of view in hot climates. This leads to the necessity of introducing artificial mechanisms of environmental refrigeration which many times would have been, totally dispensable if the façades were properly treated.

Another problem caused by the curtain walls is the excessive entrance of natural light within the building which is usually corrected by fabric curtain or interior barriers that do not eliminate the *green house* effect and contribute to increase the thermal charge inside by the thermal process mentioned above. At present an attempt to diminish this problem is obtained by the utilisation of filtering pellicle of light and chromatic treatments applied to the glass. This modifies the quality and quantity of natural light inside the buildings. However these solutions offer becomes are very expensive and besides it only partially solves the problem.

One can mention many instances of correct uses of lattice windows and glass applied to modern architecture in Brazil as the employment of horizontal pivoting windows like the ancient ones used by Gregori Warchavichik in the Max Graf House in São Paulo (1928-1929), where the very window serves as a barrier for the solar radiation while permitting the natural ventilation inside the room, or the fixed lattices used in the Casa Modernista by the same authar in 1929-1930.

Other examples worth while mentioning are the façade of movable lattice used in the George Hime

country house (1949) by Henrique Mindlin, the residences for officials and teachers of the Centro Técnico da Aeronáutica by Oscar Niemeyer ,in São José dos Campos (1947) and the large lattice or tilting windows of the Instituto Nacional do Câncer by Rino Levi and Roberto Cerqueira Cézar in São Paulo, built in 1954.

The "*Cambangás*" or enlarged trellis

Another element developed and largely employed in Brazilian architecture after the thirties is the *combogó*. This element possibly originated in Pernambuco is a pierced slab of ceramic or chinaware which has the hollow area bigger than the massive one.

Its function may be compared to the wooden trellis of the old *gelasias* that filled up the window's openings or the beautiful *muxarabis* of the Brazilian colonial architecture. These, althaugh blacking the entrance of direct solar radiation and allowing certain ventilation through the interstices of the wooden frame, resulted in small openings that darkened too much the interior of the room. The resultant open space was smaller than the closing area making difficult the penetration of external ventilation and the free circulation of air inside the houses. This element worked better to withdrawal or flowing off the internal air.

On the contrary the *combogó* solves these problems and may be considered as an enlarged trellis. Made of clay or cement they present few structuring material and larger apertures. This empty and full relation gives to them a great advantage, from the ventilation point of view, for it permits a free circulation either at the entrance or at the withdraw of the air inside the building. According the pattern arrangement and its localisation in the façade in relation to the relative sun positions in the *sky* they can minimise or even hinder the entrance of direct solar radiation inside the rooms. Therefore a west wall of *combogá* is much more effective from the thermal point of view, than an open wall, while it offers shadow and works perfectly when these openings are directed to the air exit.

With the direct solar radiation occurring in this pierced wall this half-open space creates a *heated air-mattress* that works as an air sucker through the apertures of the intermediary wall between this limited area by the *combogó* and the interior space. This means, it produces a *chimney effect* facilitating ventilation in the opposing exterior wall.

The glazed tiles on the façades

Glazed tiles used as facing material of walls in Brazilian architecture is an issue that deserves to be studied due to its large employment. Not only as a compositional element since colonisation times till the architectural modern movement in Brazil, but also as an impermeable isolating facing material for walls and façades in high rainy regions.

Regarding thermal aspects the glazed tiles smooth surface has a function of reflecting solar radiation that is greater than that of plasterwork. Therefore theoretically, it absorbs less radiation and it has a density that presents a major thermal inertia that is larger then that af plaster. The result is that the tiled wall absorbs less quantity of thermal energy. Consequently the internal surface of the wall transmits less quantity of heat to the interiar of the building, when compared in a similar period of time, to an equal wall without tiled revetment.

When tiled walls are used in a hot humid climate like the ones of Brazilian coast, its may case problems of bad indoor comfort. When the façades are washed by the rainfalls, great part of the water is absorbed by the joints, between the tiles, mainly if the they haven't been treated with hydrous repellent material. This water infiltrated into the wall, and has to difficulties to evaporate to the exterior due to the impermeable revetment. Instead it evaporates through the internal face, accumulating the level of relative air humidity inside the building that already was high in the first place.

Besides being expressive, the reuse of glazed tiles on the walls of the Ministério da Educação e Saúde, redefines a recovering of cultural roots. Beyond its useful functions it carrier a powerful symbolic meaning as an architectural monument, demonstrating it a renewal of cultural and constructive tradition representative of the country.

Conclusion

Brazilian modern architecture stands out in the national and international scenario for its differentiated repertoire. It appropriates some concepts firstly developed in other countries, adapting and intermingling them with needs, concepts and constructive elements already existing in Brazil. It develops without copying mimetically, and elaborates a repertoire based on formal and constructive responses that adapt themselves to the place where it works passively with the climate somehow obeying to *bio-climatic* basis.

It is necessary to say that many times the protection elements and the treatment of the building skin which represented the Brazilian modern architecture sometimes used empirically and other times were integrated to the façades searching to create more aesthetic than functional expression. Nowadays it is necessary to rescue these constructive elements through a correct evaluation of its use. However is also necessary to promote the diffusion of these fundamentol concepts and patterns once they

can work very well in an architecture that functions passively in favour of the climate and in consanance with energy economy necessary to the development in this new millennium.

This process that suffered an abrupt solution of continuity in the middle of the sixties is basically absent because concepts and constructive patterns in Brazil nowadays are adopted the proliferate exogenous models, despite the typical ond specific conditions of the country. Architecture that is good to a temperate climate certainly does not to workable in a tropical one.

The proliferation of exagenous models is present in the globalized world. "Extreme epidermal hedonism" dominates architectural works where the dictatorship of glass and transparency rules, brought by an expressionless architecture. Some months after a new building appears in an International magazine or Internet one can see it emerging as a clone built in our tropical cities. The technical patterns that, many times, are inside the original are not transferred to the copy which lacks the rigor purpose determinant of the original, where technology was incorporated overall in order to respond not only to formal and utilisation questions but, certainly, to the milieu that determined it. One builds a standardised international architecture that is absorbed without minimal architectural criteria of analysis, because generally even in Brazil, it is not undertaken an evaluation of energy costs and maintenance of artificial conditioning equipments as well as of the damaging effects on the environment regarding either the building or the people. From this lack of adaptation to the region peculiarities results the unsatisfactory solutions introduced through artificial climatisation.

The technological development allows that these buildings are adapted climatically by the introduction of mechanical equipments, able to transform the internal hydrothermal conditions. The constant use of artificial conditioning brings, in time, irreversible damages to the human thermal regulator system as well as breathing problems caused mainly by development and proliferation of fungi and micro-organisms inside of these refrigeration systems.

Most of the developed countries search alternotives to adapt buildings to the climate with low costs of electrical and human energy. But in Brazil the proliferation of a glass transparent box architecture, or worse, the black or dark glass boxes, with extravagant plastering and inadequate openings dominates the new architecture. This demands a massive utilisation of mechanical conditioners with high costs of energy, if even heats the external environment instead of using and taking advantage of the extremely favourable and beneficial conditians of the tropical climate on Brazil.

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KEYWORDS

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Philip Gunn

Transitions in modernist factory planning in São Paulo 1945 – 1955 : the influence of British and North-american design ideas.

American factory architecture with notions of being "lean and mean".

"Architects who undertake the design of factories are faced with considerations different in many aspects from those to which they have been accustomed. These differences are perhaps more in degree than in kind, for the same fundamental principles apply to all types of architecture. In the industrial field they are simplified, are more clear-cut and uncompromising than in most others. Here function is the dominant factor, followed closely by economy. No esthetic consideration can prevail unless it is completely consonant with these other factors. This is a matter not arguable, especially with industrial clients. Such a concept is really very wholesome. The type of discipline involved might very well improve almost any practitioner of our art".[1] Frederick J. Woodbridge AIA

(Architect- Evans, Moore & Woodbridge) Architectural Record, January. 1941.

Albert Kahn, Architect "Producer Of Production Lines"

It was on Thursday, February 5, 1939, that Albert Kahn received a telephone call from the Glenn L. Martin Company, Baltimore. "Can you furnish plans quickly enough for us to put up a 440,000 sq. ft. building by May 1?" That was quite an order: a mammoth aircraft factory building to be ready for use in 84 days. But Kahn was prepared to answer, "Yes" [2]

The conception of a "Fordist" architecture as a 'speeding-up' of the factory

The Van Nelle cigarette, coffee and tea factory in Rotterdam, during the 1920's provided an innovative design repertoire with the volumetric composition of glazed walls and arranged forms with up to ten floors of glass and concrete in a geometric variety of rectangular blocks, circle quadrants and diametric arcs. During that decade, these innovations provided a certain design preeminence for European factory buildings in general and more specifically for the Dutch architectural firm of Brinkmann & van der Vlugt.[3] Later, in the early war years of the 1940's the american professional journal, the 'Architectural Record', included one article by a north-american architect Roland Wank, who as well as himself, cited other architectural colleagues already considered 'pioneers' in modernist factory architecture. These included Peter Behrens with his turbine Factory in Berlin in 1909, Eric Mendelsohn and his hat factory in Luckenwalde, Germany built between 1921-23 and Robert Maillart's Benet Factory in Barcelona in 1924 [4]. The turbine factory in Berlin wauld appeal to an international fascination with new mechanical technology whereby power stations and their turbines became "the new cathedrals" as in the UK case of the Battersey Power Station by Sir Giles Scott.

Behrens steel roof trusses took on an added importance for the fabricatian, maintenance and storage not only of the turbines but also the new aviation machines which required ever increasing roof heights and especially spans. The Eric Mendelsohn hat factory provided its peculiar formal representation of ventilation control, while the Benet Factory in Barcelona provided new unencumbered north light monitors in 1924. The New York based architect Wank, as in the case of all authors, could be criticized for his eventual amissions such as the curtain-wall innovation of the Fagus shoe factory by Walter Gropius and Adolf Meyer at Alfeld-an-der-Linhe in Germany (1911-25) [5]. In Holland in the twenties other important designs for a modernist factory design paradigm were produced including the Rokin building in Amsterdam (1926).

In the industrial architecture of the thirties, however, Europe was already seen to be incorporating north American factory design influences. In the United Kingdom the Architectural Record in February 1940 presented a project for new chemical factory, in Buckinghamshire, England as designed by the architect Raymond McGrath in 1939 [6]. In this project McGrath had already prepared for war time bombing, with air-raid shelters already installed at basement level. In a more formal sense, the McGrath design could be understood as attempting to "americanize" Van Nelle. In the UK plant for 600

Fig. 1 – the Van Nelle tobacco, coffee and tea factory in Rotterdam 1925-31. Brinkmann & van der Vlugt

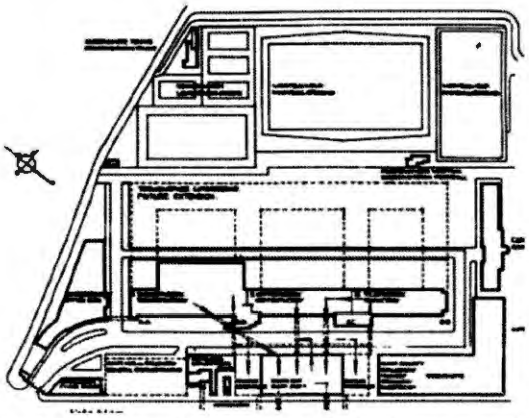
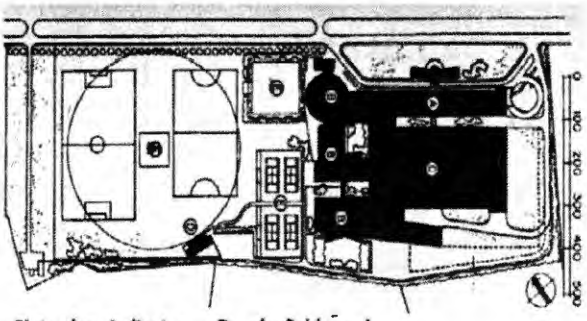


Fig. 2 – The European Van Nelle factory site plan showing an ample provision of recreational and sports facilities for factory employees. source: Geurst,1994.

employees, the architect still followed the provision of Van Nelle type employee benefits with approximately half the site given over to playing fields and recreational uses. Fig.3 At the same time, the volumetric use circular forms, diametric arcs were inscribed in a lower building mass. The UK buildings were also of reinforced concrete frame construction with precast slab facings on main facades and brick an other elevations and north light roof slabs. But the american design character could be seen especially in the height of the factory now designed on a low horizontal block basis with bosement facilities in addition to the longer horizontal rectangular forms. The differences with previous factory design characteristics began with building function increasingly tied to an unimpeded flow pattern design for mass fabrication. In a 1941 review of architectural factory architecture by the Architectural Record, began with the following introduction: *"... an axiam af production engineers states that, for economy and efficiency, 'the plant must be built around the process'...."*.

> "It is essential, therefore that a factory design be first considered as a problem in production. Requirements ought to be researched for every department, operations charted, basic **flow patterns** developed and studied. In addition, the broad policies of a company control questions such as centralization or decentralization of various manufacturing operations and employee facilities, which may bear directly upon building design." [7]



Plot plan indicates extent of employees' playfields. A, offices; B, service and recreation area; C, manufacturing area; D, playfield equipment pavilion; E, bowling greens, tennis courts, football and cricket fields, etc.

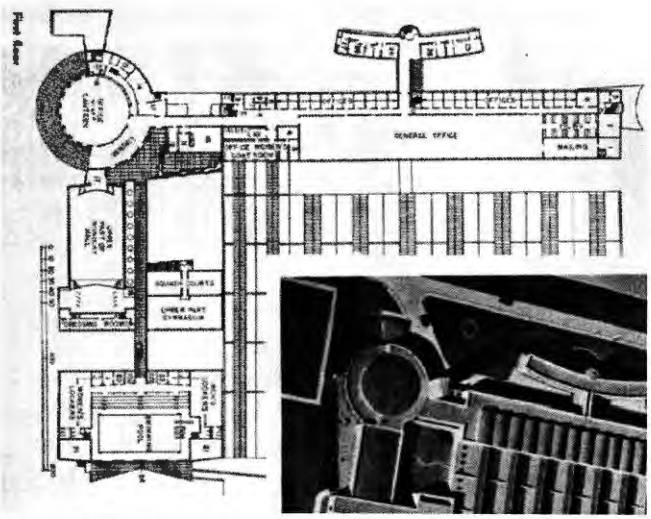


Fig. 3 – Chemical Factory Bucks., UK by Raymond McGrath ARIBA in 1939 with air-raid shelter basements and ample recreational facilities.

In the same year of 1941 the AR journal published an article by the designer and builder H.K.Ferguson dealing with new design techniques now required by changed economic conditions of war time production. According to Ferguson, new design guidelines follow the *" manufacturers desire for large clear areas unabstructed by columns, partition walls, stairs, elevators, etc. Such space readily houses a proper "flow sheet" arrangement of equipment. It also facilitates later changes in production layouts, as required by research, new products, availability of improved and higher speed machinery, and varying needs for raw and finished storage. Improved possibilities for transportation, supervision and inspection, in single story buildings, with clear floor space, are also very helpful. Column spacings are today never less than 40ft (12.2m); often 200ft (61m) or more in at least one direction".* [8]

The logic of speeding up production line extended to factory building itself and Ferguson commented the benefits of prefabrication, in the following terms *"... To any manufacturer, standardization and speed are closely related. In consequence, there is a renewed interest in the better types of standardized one-story industrial buildings which are available for quick completion. Such structures are easily dressed up with an attractive exterior architectural treatment, or to conform to adjoining existing plant buildings. They are ordinarily delivered, ready to occupy, in 60 working days."* [9]

For the American industrial architect Albert Kahn, the architect working in industry did not have to opt for "off the peg *easily dressed up*" solutions but instead could competently begin to follow and use the prime company values of the industrial client themselves : organization, efficiency, and speed.[10] The Detroit based firm of Albert Kahn Inc. Architects and Engineers emphasized the speed of production flow even in cases where assembly did not involve a moving line as the Ohio Steel Foundry Co. building or the factory for the Toledo Scale Campany at Toledo, Ohio both reviewed by the AR journal in January and February 1941. Fig 4b The firms design specialty seemed to concentrate of assembly work in both aircraft and automobile plants.

Their clients included Curtiss Wright and Pratt & Whitney and parts plants as well as Chrysler Corp, Ford and General Motors / Chevrolet Automobile and aircraft factories.[11] The economy of speeding up the productive cycle had already been apparent not only to Henry Winslow Taylor but more especially to Henry Ford, after the recession and financial squeeze on the Ford Motor Company in the early twenties. [12] Speeding up the consumption-production cycle was at the origins of the Fordist six dollar day but what might be termed the "mechanics of fordism" involved immediately re-channeling individual workers savings capacity through the spread of financial hire-purchase economics which began in the United States in 1918 and 1919. If Henry Ford became the spokesman for a new mode of industrial production it could also be orgued thot might be termed the 'Mechanics of Fordism' for 'speeding-up' industrial economies were more widely known by the head of Ford's rival in the General Motors Corparation, Alfred Sloan. 'Sloanism', in the nineteen-twenties and thirties, implied new company standards of planning, programming and logical demand prevision, with stondards for financial controls (including those on the profit rate retum on invested capital), inventory stock management, decentralized engineering and distribution operations and personnel management.[13] While the diversity of GM product lines contrasted with Ford's initial single product for the Model T and after 1928 the later Model A cars, Sloan's company mechanics repeated and perfected Ford's insistence on transportation economies and 'wasted time' elimination. But it was Ford who expressed the implications for factory architecture De-

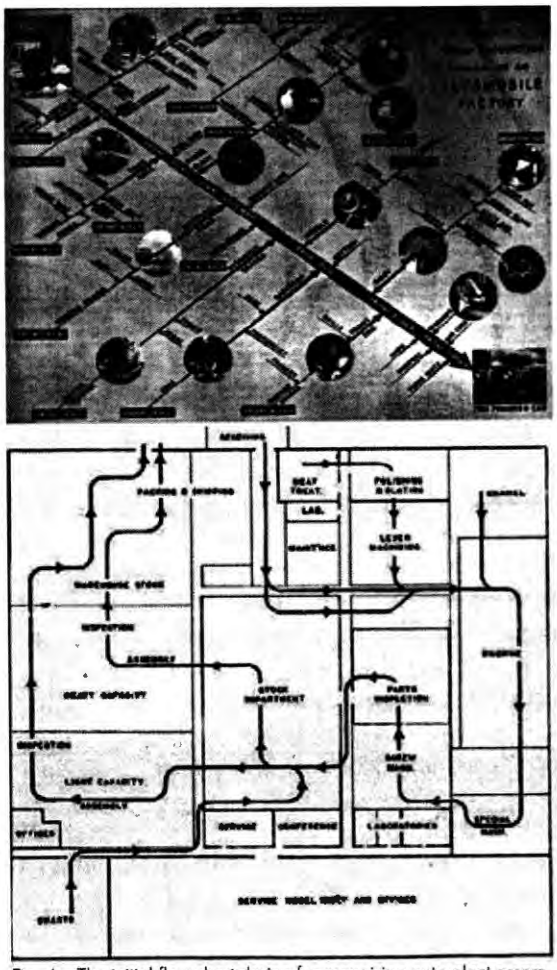


Fig. 4 – The initial flow chart design for organizing auto plant assembly plant flow operations and their factory design parameters.
Flow process design as applied by the Albert Kahn office for a factory project for the Toledo Scale Company.
source: Reid, 1951,2.4.

scribing company operations in the lote twenties, Henry Ford commented: *"We recently established a new type of assembly plant, which has only one story with transporters laid-out in such a manner as to eliminate as much as possible transport and handling. This new type of factory means greater efficiency. Production increased without an increase in labor. In the Chicago factory the greatest distance that any material travels without fabrication is six meters – from the incoming rail wagon to the first transporter."*[14]

For a new automobile factory in Detroit in the forties design began with machine template layouts and elaborate CPM flow charts integrating parts production and assembly operations began in a planned movement based on unencumbered relations of flow and velocity. Line speed and the timing of material flows and fabrication operations had still to encounter layout problems of machinery and product obsolescence with the consequent need for retooling and change in fabrication flows. These could be dealt with by incorporating external factory expansion provision and ample internal bay widths and distances between columns. Long linear flows minimizing vertical movement reduced multi story building costs while the fascination with speed and material flow seemed to spread to almost all aspects of factory architecture.

Speeding up accessibility and circulation patterns for material, labor and products emphasized the factory as a long linear or aggregated-linear form in single or multiple bays providing the unencumbered space for "housing" actual and future factory production flows. Material flows, employee entrance and exit movements and other visiting personnel flow routes should be designed around the primacy of the production line flaws. Service flows dealing with everything from toilets and food to garbage and cleaning material etc. had to eliminate or at least minimize cross movement.

The long linear form could have an aesthetic dimension as in the long line production solutions suggested in the Ford Willow Run Bomber Plant in Detroit or the GM factory in Flint Michigan in the 1940s. Factory form would mean elongated single or aggregated bays as used when bending or folding the main product flow of fabrication. Speeding up production flows led to a 'fordist' design predominance for single story unencumbered floor space which in turn led to new programmatic requirements for mezzanine and basement production and service areas. Fig 5

For employees still divided by blue and white collar distinctions, one crucial issue for both groups was punching the time clock with variations in the desired location of this control of paid-labor at the moment of arrival in the factory grounds or from the management viewpoint, a preference for time-

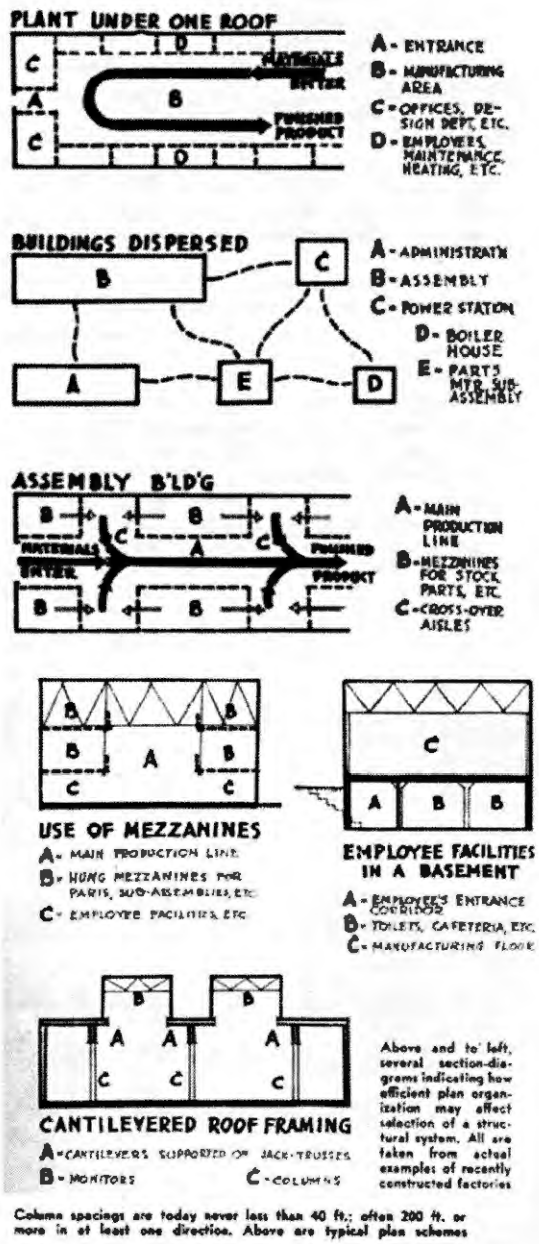


Fig. 5 – Design alternatives for factory layouts with mezzanine and basement alternatives. The efficiency of "everything under one roof' would favor thelarge scale production plants. ibid 47,51.

clack locatian at the point of contact with the production line or specific work station. In the nineteen thirties and forties union/management strikes and negotiations led to the widespread acceptance of the "portal to portal pay" measured an the points of entry and exit from the factory building itself.

Promoting the notion of "speeding up" ta the point of cultural absession, General Matars by 1940 had located their new Allison engine plant for aircraft, designed by the Austin Co. specifically in the town of Speedway, Indiana, near Indianapolis.[15] The speedway for racing car competitions or often seen in testing facilities also was used as the basic design motif in the organizotion of the multi-functianal complex of activities proposed by the architectural firm of

Saarinen & Swansan when invited by Alfred Sloan, president of General Motors, to prepare the project of the new GM Technical Center near Detroit. With its "speedway" enclosing the gigantic seven acre artificial lake this speedway motif integrated Saarinen's major architectural buildings for administration, research laboratories, advanced engineering, and styling section design studios which were reviewed in the Architectural Record in November 1945. See Fig 6a. If speeding up activity interrelations became a principle design obsession the building reviews af this professional journal, many examples illustrate the diversity of design questions considered.

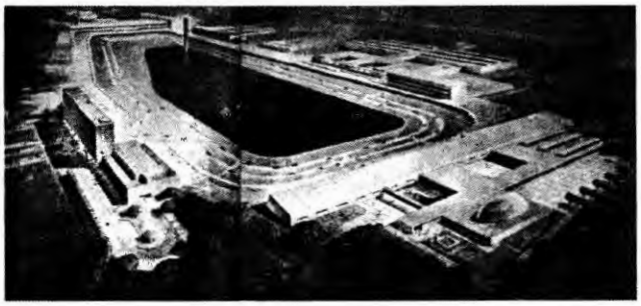


Fig. 6 – The Saarinen & Swanson design for the General Motors Technical Center near Detroit 1945 and speeding up factory accident escape routes using engineering duct design solutions.
Reid, 346-9, 343

Speeding up toilet time was one such issue raised in a design brief by Albert Kahn Associated Architects and Engineers Study as published in a paper on "Factory Design for Law-cost Production" which appeared in the Architectural Record AR in November 1945. In this paper the Kahn viewpoint was stated in the following terms"

> *"We believe the production flaar should be kept as clear as possible of all non-production obstructions far the sake of cleanliness and adaptability and flexibility.*

Toilets an the production floor may stand in the way of a needed new conveyor, and lockers may block the path af a projected new production line. The necessary corners and angles formed by lockers and similar facilities are also dirt catchers and elimination of them reduces the housekeeping burden on the production floor. Sometimes because of rock, ground water, or other sail conditions it is not practical ta provide a basement. In such cases we recommend locating employee facilities on a mezzanine and bringing the men dawn to the production floor instead of up from the basement. A mezzanine layout follows the same essential pattern as the basement design...The reasan we prefer a basement to a mezzanine is that to get necessary clearances it is generally advisable to go so high with the mezzanine that considerably more steps are required to reach toilets and lockers located there than in the basement. Not only are the extra steps fatiguing to the workers, but it should also be kept in mind that if conveniently located facilities can reduce by only ane minute a day the time spent by a worker in going to and from toilets, the sum total of savings in a plant of 6,000 men odds up to 100 hours a day which would otherwise be non-production expense." [16]

As well as speeding up toilet time (p.141 166) Kahn had his engineering sections also interested in other aspects of speed. Speeding up gravity was another such design issue dealt with by H.D.Unwin, a mechanical engineer in the same Detroit firm of Albert Kahn Associated Architects and Engineers, Inc.. In an article on "Industrial Piping" in the Architectural Record in February 1943. Unwin considered storage facilities for gasoline and oils of different types including lubricating oils, and cutting oils for steel, aluminum, magnesium, bronze, and brass, with high military value in war-time, Unwin wrote: *"In order to keep tank cars and tank trucks rolling, extensive unloading stations are built which will empty the tanks in a minimum of time. Gravity unloading is too slow. By using pumps it is often possible to release a railroad car within 60 to 80 minutes from the time it is first spotted.'* [17]

In other areas of industrial laboritory architecture, the possibility of industrial accidents or war-time sabotage brought speeding up considerations to fast escape routes using new ducts as developed by mechanical and ventilation design. In November 1945, the Architectural Record provided a photo illustration of a young lady emerging from one such a duct in a review of a new Firestone Research Laboratory for the Firestone Tire & Rubber Co. in Akron, Ohio as designed by the firm of Voorhees, Walker, Foley & Smith architects and engineers.[18] See Fig 6b.

One other factory design area with bottleneck problems requiring speeding up solutions were the velocity flows in industrial restaurant queues.

According to the Albert Kahn war-time design *briefs "the planning of food facilities depends closely on the scheduling of the time for meals".* [19] This also concerned Arthur W.Dane, a restaurant consultant discussing "new ideas" in industrial restaurant design in the pages of AR in November 1945. According to Dane: Bottlenecks in the cafeteria line frequently are the cause of slow service which affects company morale in plants with in-plant feeding. The counter plan most prevalent today is based on the conventional two-line traffic principle. The revised plan eliminates the two long regimented lines and provides, at a single counter, free access to all stations. A line forms only at the hot-food station.... (In the new "speeded up version") ...

The fact that the several manufacturing departments were located at varying distances, and that lunch hours were staggered; decreased congestion and warranted the use of the "free access" counter. Studies made over several days indicated that the rate of flow past each of the two cashiers was rarely greater than five a minute, or an aggregate of 10 a minute. The new counter set-up allows a rate of 18 to 20 a minute. Formerly the counters were staffed with four steam-table servers, three salad and dessert servers, two beverage attendants, one coffee maker and two cashiers - a total of 12 employees. The new arrangement calls for three steam table attendants, two salad and dessert servers, one beverage server, one utility server and coffee maker, and two cashier's. This cuts the staff to nine, just one instance of the efficiency of the new system..... (Dane concludes:)

The results of reconverting this industrial cafeteria, then, have been successful. Among other things, it has doubled the speed of service, has reduced the number of employees necessary by 25 per cent, and has decreased many of the burdensome tasks of operation." Danes critique of pre-existing flow patterns and new design proposals modified not only equipment layouts but also extended flow considerations to food preparation "The service of sliced roasts is speeded by apportioning them in advance of service between squares of parchment paper. This paper does not disintegrate when wet, and helps to retain heat and the meat juices...."[20]

The notion of speeding up design became the hallmark of the Kahn architectural and engineering firm especially during the second world war when "war speed construction" increased the elasticity of profit margins which went together with increasingly inflexible war production schedules. Kahn and his practice became the professions leading authority on "production line production" [21] In this field the movement of material and completed parts became subject to the rationalized calculation of flow involving

Fig. 7 – Albert Kahn in 1939 and the design sections of his architectural and engineering company. In the engineering sections the only specialty not considered was the control of acoustic comfort.

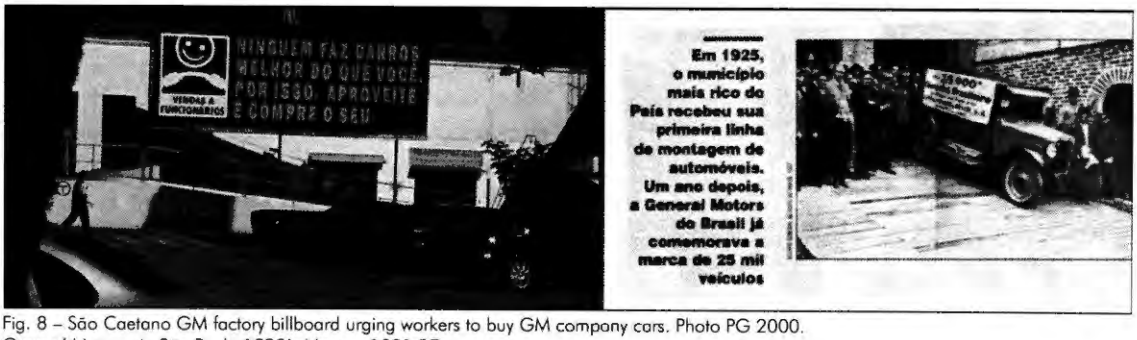


Fig. 8 – São Caetano GM factory billboard urging workers to buy GM company cars. Photo PG 2000. General Motores in São Paulo 1920's Manera 1991,27

mass, velocity and consequently force. As portroyed in the design of engineering laboratories for automobile and aircroft factories "speeding up" could lead to disequilibrium and destructive vibrations.

These occurred not only in the industries products but also in the mechonical noture of the production line itself. In their car and aircroft products Ford and GM often designed control mechanisms for disequilibrium and destructive vibrations. In the Fordist factory setting, a Kahn based design code would suggest careful attention to the control and management of process velocity with particular attention to the environmental tolerances of the work processes as a preventive measure to avoid 'bad vibrations" particularly among the work-force.

São Paulo and the peculiarities of brazilian fordism

In one important source of information an modern architecture in São Paulo, the first architect responsible for a modern architectural building in this metropolis, was Julio de Abreu Junior and not Gregori Warchavchik as more suggested by other sources. According to Xavier, Lemos & Carona (1983, 01), Abreu Jr. worked extensively in São Paulo in the 1920's but was more concerned with industrial construction than with his modernist apartment building on Angelica Avenue completed in 1927. Little appears to be known of this industrial work. In the survey of 'Modern Architecture' in this metropolis presented by these some authors, industriol architecture received relatively limited attention. In a universe of 211 examples of 'modernism", factory architecture received 7 mentions. It should be said that other functional categories, including churches and also hospitals, received even less emphasis. This paper is not concerned with the criteria used in this survey selection although the cited text does make repeated references to prize-winning awards and honorable mentions in Architectural 'Bienal' competitions. However, it may seem strange in Latin America's largest industrial agglomeration, to have so few celebrated examples of factory modernism. This situation could even be possibly attributed to the normal partiality of tendencies and interests in academic architectural history. In relation to colonial architecture, Menezes and Rodrigues (1986 p.17) cited Rui Carita who criticized the fact that colonial military architecture was often treated as an academic subject of limited stature between the more important classifications of de religious and civil architecture. Paraphrasing Cartita it may be felt that 20th century industrial architecture in Brazil has been treated as a type of "parenthesis" between public and private residential architecture on the one hand and buildings designed for tertiary sector functions including government on the other.

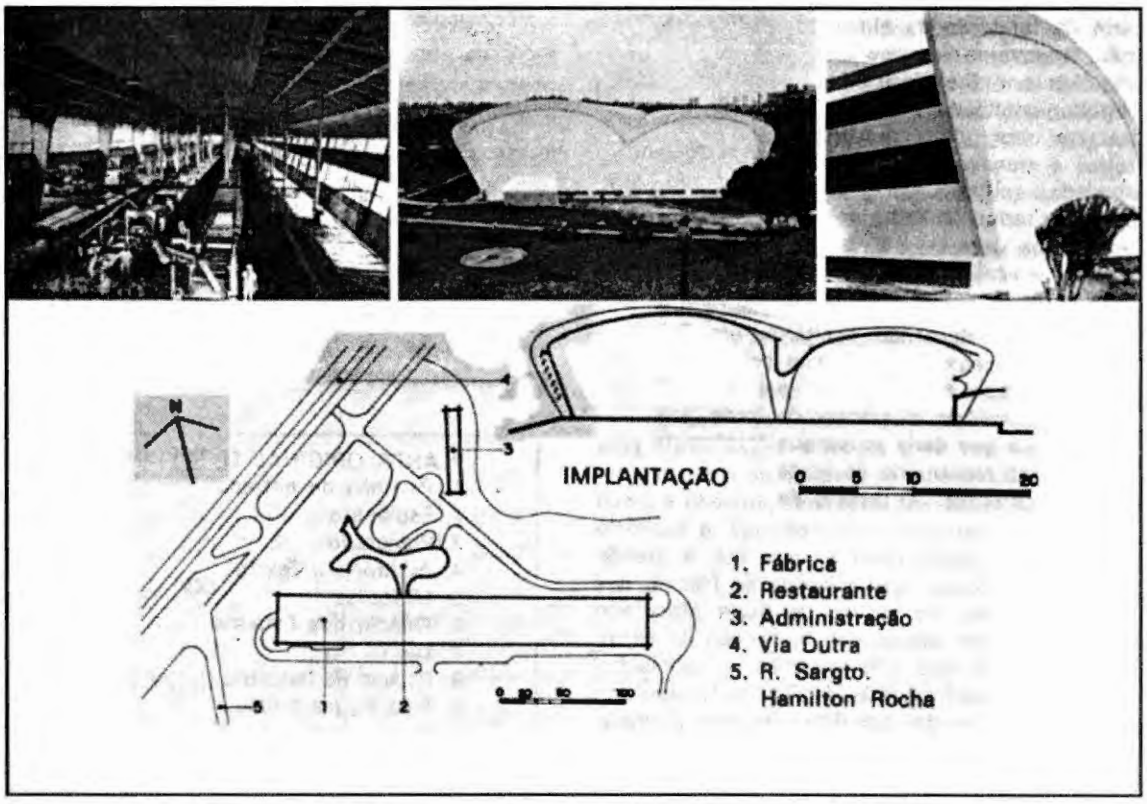


Fig. 9 – The now demolished Duchen Biscuit Factory Guarulhas SP by Oscar Niemeyer and Hélio Uchoa 1950
source: Xavier, 1983,23

American industrial methods ond factories orrived with the american corporations in the 1920's. Henry Ford had visited São Paulo and Recife in 1919 and in the twenties was responsible for new rubber production plants in the Tapajós river basin in the Amazon with its new company towns appropriately named Fordlandia and Belterra with the largest town square in Brazil not far from the port of Santarem. As well as avoiding questions on the internationalization of the fordist salary at US$6 dollar day at the end of the first world war the company had little difficulty in applying US prohibition laws inside its own company gates in its Fordlândia and Belterra rubber plants in the late twenties and early thirties.

However mony elements of Fordism as described by Sloan would arrive in Brazil only half a century later with military government and the massification of hire-purchace finance or *'cansórcia'* arrangements in the sixties for a consuming middle-class. It is also comparatively recent the appearance of billboards inside the São Caetano GM factory urging brazilian workers to buy company cars through a *cansárcio* car installment plan. see Fig.8.

Lipietz and the french regulation school and the characterization within 20th century Latin America raising the possibility of Brazilian Fordism as an its extension of work practices inherited from an anteceding phase called "bloody" Taylorism. It could be argued that this type of Taylorism was always endemic to most types of capitalist industrial development. Gramsci repeated and extended a belief in Taylorism into a new fordist era. [22] Fordism in industry led to:

> *"a continual reduction of the economic function of transport and trade to the level of a genuinely subaltern activity of production. Indeed, it has led to the attempt to absorb these activities into productive activity itself. Recall here the experiments conducted by Ford and to the economies made by his firm thraugh direct management of transport and distribution of the praduct. These ecanamies affected production costs and permitted higher wages and lower selling prices." While the economics of the change were clear the political consequences were more nebulous:*
>
> *"... In America rationalisation has determined the need to elabarate a new type of man suited to the new type of work and productive process. This elaboration is still only in its initial phase and therefore (apparently) still idyllic. It is still at the stage of psycha-physical adaptation to the new industrial structure, aimed for through high wages."*

In more practical terms new modes of industrial work were presented as a means of "speeding up" all types of change. The notion of "speeding-up" brazilian industrialization achieved a formal political status when the development slogan "fifty years in five" was adopted by the Federal Government of Juselino Kubetchec in the second part of the nineteen-fifties. Import-substitution in many senses was attempting to instill a sense of nationalist pride based on endogenous industrialization aimed at "speeding-up" of production chains and their market inter-relations.[23] In the academic literature on development after the 2nd World War, third world national economies were to be treated as aircraft engines, tearing down runways in order to achieve the develapment goal of "toke-off" in the Kuznets "airpeed" model of dealing with under-development economies. Fordist speeding-up seemed to become a discourse model frequently more useful off than on the factory floor.

In the Brazilian city and regional planning literature, paved roads for automobiles after the second world war meant much more than simply speeding-up accessibility in the city. Since the twenties and the Agache plan for Rio de Janeiro the "express-ways" had appeared as a justification for the functionalist zoning of industrial areas separate from workers residential areas. In many senses the "express-way" separation of labor in production and labor in reposition and reproduction ended a period where the company suburb, town or industrial district gives way to a more complex industrial agglomeration based on enlarged scales of production, more intensive in its use of materials and mechanical and electrical equipment and more diverse in its creation and development of markets. (This does not contradict a parallel tendency for the continuation of the company-town form of urbanization as in the cases of specialization, remoteness and/or the particular use of natural resources, as mentioned by Crawford,[24]) In different countries "speeding-up "the city could take on peculiar national expressions.

In the US, the stream-lined and modernist "express-ways" sometimes became "free-ways" as portrayed in Richard Neutra's proposals for "Rush City" in 1939 pre-figured an urban version of the myth of "the open-road". In the UK the search for faster accessibility in the city far an ever-increasing car traffic load led in the sixties to an increase in the hierarchical capacity and access sophistication of urban roads which seems to have reached a high point in the work of Colin Buchanan while Peter Hall would show the unparalleled expansion of the London urban area with the automobile expansion of the cities periphery.[25] In Brazil in 1945 the federal government published the First National Road Plan with route map proposals for phased road paving beginning in the large urban agglomerations in Brazils south east. Subsequent information tends to suggest a close correlation be-

tween the extension of poved roads (and radio reception) in rurol states ond out-migrotion especiolly from Brozils north-eost regian going to the large metropolitan centers in the southeast ond especially to São Poulo. In this part of the country new rood pavement programs were presented in populist terms by governers such os Jônio Quadros or Ademar de Barros for whom foster accessibility reduced costs and lowered the cost of living. Road poving olso helped on inedited demographic exponsion for the São Paulo metropolis where "speeding up" might refer to the increasing growth rates of the city populotion.

Other examples of "speeding-up" os regards the building of the foctory building itself. Accelerating construction time for new production plants had become a wartime necessity in the USA. When reviewing the important foctory architecture contributions of Oscar Niemeyer in the Duchen biscuit plant in São Paulo and his CTA Structures Laboratory building the projects themselves the north american war speed literature does seem relevant, particularly when discussing the important engineering contributions of Niemeyer's partner the civil engineer Joaquim Cardoso. In the United States concrete structures where columns, load bearing beams and shell as they merged into a single product were not innovations in themselves, not even when the products of a single movable form, repeating in series the production of form based linear factory structural elements. As well as the work of the Albert Kahn office, ather patented systems already existed including a Roberts and Schaefer system knawn as the "barrel-shell"or Z-D type of roof construction. What was innovative was the treatment of the concrete form in a new speed technique for thin shell concrete structures: *"With the idea af saving critical materials, keeping down costs, and also of developing a farm af concrete canstruction which could be put up with great speed, Albert Kahn Associated Architects and Engineers and Mahany-Troast Campany, contractors, developed, after considerable study, the now famous "warspeed" canstruction.*

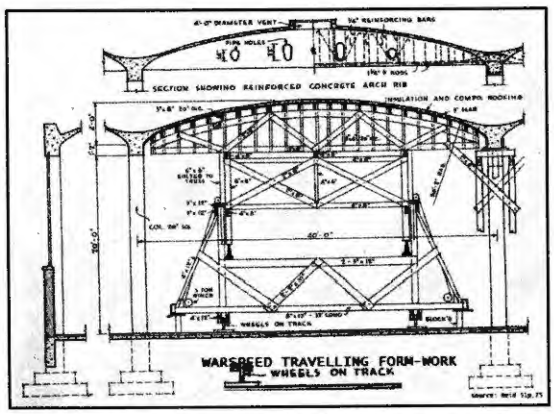


Fig. 10 – The "warspeed" method of thin shell concrete construction with travelling form work as developed by the Albert Kahn Office 1941.

A system of cantilever slab design was nathing new and had long since been discarded for so-called modern forms of concrete construction. What was new, however, and very successful, was the concept of building the structural system about the form work rather than designing first the structure and then somehow the form work which would enable it to be built. ... a system of form work was scientifically developed-form work which was drawn over previously laid rails by tractors and which could be used over and over again to form each succeeding unit of construction."[26]

In Brazil immediotely after 2nd World War the overall CTA project (centro Técnico de Aeronautica) at the Brazilian Airforce bose ot São José dos Compos in the state of São Paulo was to be the location for many Oscar Niemeyer / Joaquim Cardoso design innovations. The structures loboratory at the professional engineering school within the CTA complex began life as a simple elliptical form seen in an early scale model of Niemeyers initial project. As design work progressed this form changed, most probably for functionalist reasons, but led to a new ribbed form, reminiscent of the Kahn design with its 'war-speed' method of construction.[27] This impression increases when Niemeyer and Cardosa design the new biscuit factory plant for the Duchen compony in 1950. In relation to the structural elements most architectural comment stresses the plastic possibilities of reinforced concrete as seen in highly visible double curved frame structural elements which characterized the now demolished Duchen factory.[28] However this form was in fact a subsidiary design condition after a lang linear factory form for a production line process had been located on this difficult triangular sloping site. The externalizing of the double curved frame structural elements also implied a "cleaner" interior surface and reinforced the long linear rectangular form. It could be argued that this solution has modernist parallels with the SOM 'inside-out' design notion already emphasized in a review of the Kimberly-Clark Corporation plant at Neenah, Wisconsin published in March 1941, which had been designed by the architecture and engineering firm Skidmore, Owings and Merrill. In that review the AR commented that the plant *"is actually turned 'inside-out'. Walls and ceiling are flush inside instead of outside... The fine clean appearance (of Machine Building No.3) could be viewed as the result of novel economics rather than "art". The tight furred ceiling protected the product against dirt...."*[29] Curiously, the exterior ribbed curved concrete frame elements and the long "clean" factory lines had already come tagether in his contemporary project for the engineering professional school and structures laboritory in the CTA project mentioned earlier see Fig.11.

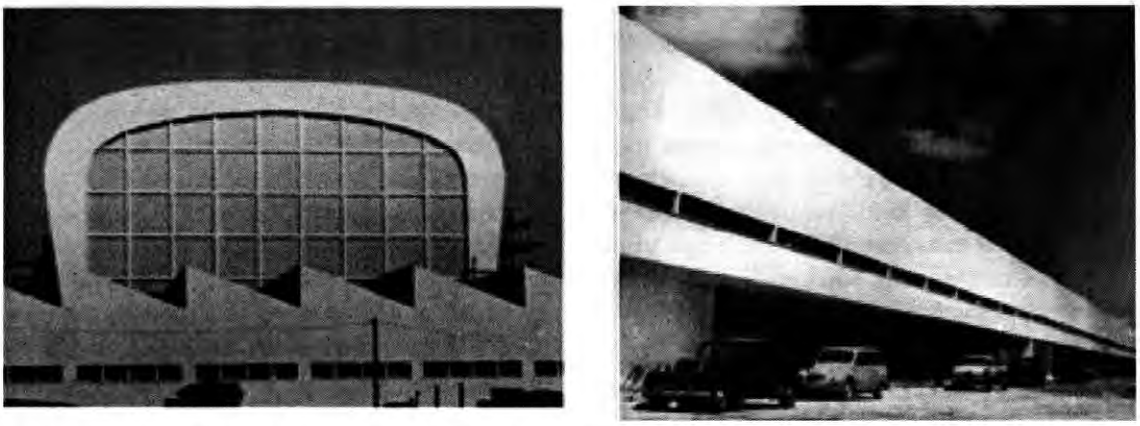


Fig. 11 – a,b the engineering professional school and structures laboritory in the CTA project, São José dos Campos, SP
Oscra Niemeter, 1950

Fig. 12 a – The initial scale model of the Niemeyer project for the CTA project in São José dos Campos
Fig. 12 b – An Initial design for the Volta Redonda steel plant as rejected by the modernist Attila Lima
sources: Penedo 96 Ackel 96.

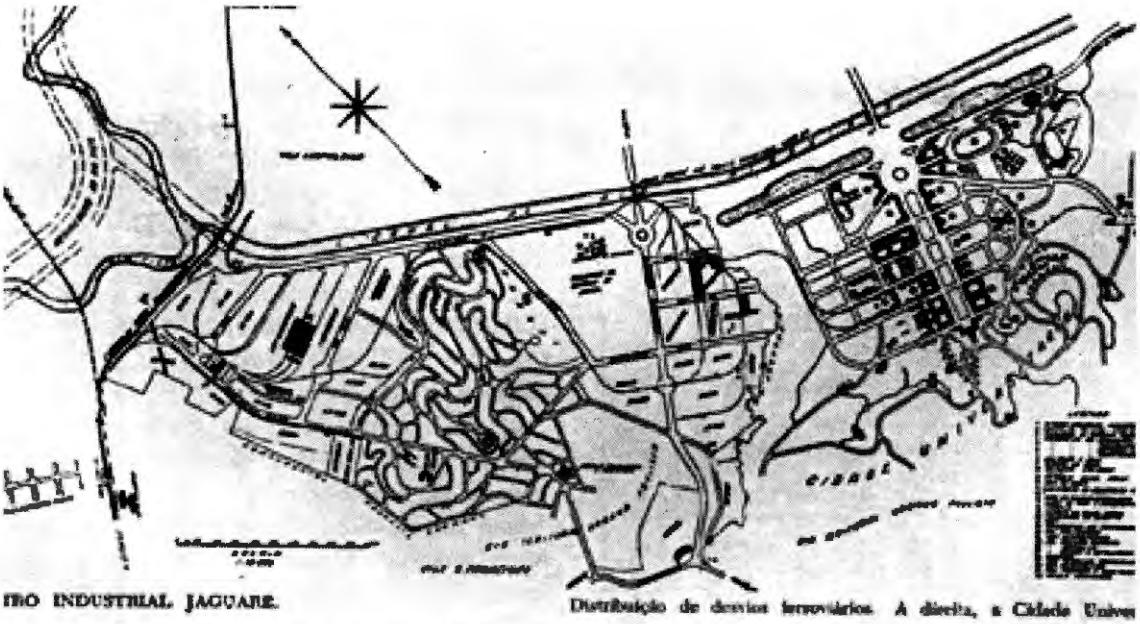


Fig. 13 – The Jaguaré Industrial Center in São Pauo SP. Henrique Dumont Villares 1941-1947.

"Speeding up" the city by reducing the number of crossing points seems to have been one more issue which began to affect layout plans during the forties. At the beginning of the design work on the CTA project it is also curious to note the overall regular orthogonal layout plan in the scale model used to illustrate the sites relationship to the definitive route map for the then proposed Via Dutra regional highway. see Fig.12 The curiosity is in the similarity with an initial layout plan for the new steel complex in the state company town plan in 1941. This initial CSN plan gave way to more modernist layouts by Attílio Correa Lima [30] and this aspect of Niemeyers initial project conception for the CTA were later abandoned in the rival proposals during the CTA design competition, as shown by Penedo (1997, pp36-39).

It is tempting to suggest that in some respects these project changes seem to represent part of a paradigm shift where Brazilian modernism leaves more than breaks with the Belles Artes tradition of formal regularity admitted by previous generations of city beautiful architects and engineers who could organically juxtapose Garden City pretensions with urban neo-classical regularity as permitted both by the Raymond Unwin Town Planning Manual[31] and by the "American Vitruvius" of Peet e Hegeman. In the 1940's this could still be seen in contemporary industrial real estate development projects in São Poulo. In the cities western limits urban expansion signified a transposition of the Pinheiras river valley and the localization of the Jaguaré Industrial Center as described and proposed by Henrique Dumont Villares in the late forties. The Jaguaré project is an interesting example of a combined industrial and residencial development following a paradigm of English industrial garden suburbs still present at this time in the work of Patrick Abercrombie ond also in the previous design ideas of Raymond Unwin and of Barry Parker, who had worked for the City of São Paulo Improvements Company, during the first world war. In São Paulo, this heritage assumed a more modernist perspective in the writings of Prof.Dr.Luis Anhaia Mello founder of the University of São Paulo architectural school in 1947 and wha also worked as a consultant of the Cia City. Curiously the plan for the USP compus as inscribed in the Villares plan for Jaguaré portrays a plea for neoclassical regularity.

Recreation and Labor Reposition moves outside Fordist Factory design.

The suggestion that the 1940's were a transitional period in design solutions with differences between generations and alsa with differences between American and European varionts for a more intensified industrial production. The regulotion of portol to portal pay and of the poid ond unpaid time onsite at the plant led to a pronounced reduction in factory lunch breaks and recreational activity now condemned in the post-Pullman industrialists mind as 'paternalistic' in management-labor relations. In 1946 in the US one factory architect, Ronald Wank, would declare: *"Right now in the larger industries both management and labor seem to consider it bad form for industry to offer any employee facilities or services unless they were first demanded and bitterly fought for by the unions".*[32] Where possible recreation facilities were soon seen, after the war, os an off-site problem to be solved by the city. The eliminotion of recreational provision also provided another source of economy.

European proctice followed an alternative path as can be seen in the ample recreational provision in the Van Nelle project and the sports and recreotion facilities also considered in the McGrath chemical plant in the England in the late 1930's as mentioned earlier in this paper. In Europe inter-war industrial and public relations development used increasingly similar design objective to "evoke in employees or clients a "feeling of pride and personal attachment" toward the plant, the company and its products. Recreational facilities and landscaping became important components of strategies for promoting the company image. This might be increasingly difficult to do for employees especialmente in the US factories where the evolution of fordist labor-management relationship in its "lean and mean" confrontational form, was seen in the bitter disputes in the white-collar/blue-collar thirties strikes in the GM car plants as in Flint, Michigan, in 1937, at the same time as building a new brazilian assembly plant in São Caetano São Paulo. In Brazil both European and North American tendencies for the maintenance or exclusion con be seen ot the same time. The European pharmaceutical company Bayer in the early fifties installed a new company industrial suburb on a 'green field' site in Belford Roxo on the outskirts of Rio de Janeiro with access to the new Via Dutra Highway with housing for key workers and ample provision of recreational areas. Further along the Via Dutra Highway in direction towards São Paulo the steel town of Volta Rodunda designed by Attília Correa Lima at the beginning of the 1940's does include campany town type recreational, housing etc type provision for the CSN workers.

Similar provision had already been planned by the New York firm Town Planning Associates run by Paul Lester and the exiled sponish architect and cofounder of the Sponish GATEPAC, Luis Sert and for the State industrial company town FNM (Fábrica Nocional de Motores) ot Xerêm in the locol author-

ity area of Duque de Coxias in the state of Rio de Janeiro in 1945 [33] While the FNM and CSN projects might announce remoteness from existing urban areas as a justification for the ample employee facilities, there are many other examples from Brazil, in less remote urban areas, where employee provision was or wasn't on the architects agenda when designing factory facilities. In the same town of São José dos Campos where Niemeyer worked on the CTA project, the automobile company General Motares, later in 1959, would locate its second São Paulo plant which also showed no recreational facilities. However in the Parahyba Textile factory complex on the outskirts of this same town of São José dos Campos, a complex variety of modernist buildings in a company town setting included in the 1950's, a model house for factory managers by a new generation of modernist architects from the Mackenzie school of architecture in São Paulo including Carlos Millan, L.R.Carvalho Franco e Sidney Fonseca. The same company sponsored a series of modernist projects by the Rino Levi Architects firm including the following projects: the Olivio Gomes Residence, a company 'workers market' commercial facility, housing units for the Parahyba Tecelagem farm workers at Monte Alegre, a company school for the children of the Monte Alegre farm workers, an experimental small church for the farm almost without a cross, two projects for a larger church for a workers residential area adjoining the main factory complex, a health center, crèche and junior school for the same residential area as well as two and three bedroom workers housing units in a ground floor back-to-back formation. The same residential project by Reno Levi shows the ample inclusion of sports facilities, see Fig14. thus following a British, German French and Italian company town policy with the retention of recreational facilities, even were the residential necessity has been subsumed by the town of São José dos Campos.

While firms such as Parahyba Tecelagem or Bayer in Brazil would favor workers housing and recreational benefits North-american practice shows an increasing concern with limiting the concern with workers benefits. In the US, after the 2nd world war, these questions were now subject to management-labor negatiating mechanisms and Companies such as Bayer responded differently in the US than if the location was a plant in Brazil. At this time a review of a new Bayer plant in Trenton, New Jersey designed by the Austin Company was published in the Architectural Record in august 1948 and mentions no recreational provision.[34]

It is also interesting that Reids 1951 selection of Architectural Record Industrial reviews and articles in the previous decade include two examples of industrial plants from Latin America by local architects but which include no recreation provision. From Argentina the Architectural Record published a review of the State Petroleum Company YPF (Yacicimentos Petroliferas Federales) Research Laboratories in Florencio Varela by the architects Jorge de la Maria Prins, Hugo M.Rosso, Jorge M. Verbrugghe and Jorge R.Martin. This project included museum type presentations of this industry and exhibited other features including the public relations appeal of the new CIAM and Le Corbusion modernist esthetic but with no recreation facilities on site. [35] Another architectural project for a new Hoffman Lo Roche pharmaceutical plant in Rio de Janeiro by the architect Louis Parnes was reviewed by the Architectural Record in march 1947. Parnes design emphasizes modernist advances in luminosity control by the use of the *bris soleir* and the use of glass louvers to assist natural cross ventilation all aimed at the tropical environment portrayed in impressionistic terms in the architects perspectives which accompany the reviewed project. [36] But no recreational facilities were apparent. see Fig.15

Another factory project in Guarulhos, São Paulo on the other side of the Dutra Highway near Niemeyers Duchen biscuit factory in 1956 wos a new Olivetti typewriter factory by the italian architect Marco Zanuso. The factories peculiar form in part is on immediate design response to the needs imposed by a tropical climate with the ample provision of natural ventilation and structural towers integrated in isosceles triangular column spacing which permitted long production lines along the longest side of the factory site. see Fig.16 Long production line fabrication processes were olso the hallmark of the architectural form chosen by another italian architect Giancarlo Palanti, responsible for a new shoe factory for the São Paulo Alpargatas company and built in São José dos Campos in 1958. Penedo mentions the fact that Palanti was a partner in a São Paulo design firm 'Arte Palma' during the 1950's together with the more famous Lina Bo Bardi. [37] see Fig.17 But in both of these factory projects by italian architects no recreational facilities were apparent at the time of conception. It could be termed ironic to state that by the end of the century both of these factories would finally be converted into a certain type of recreation in the not necessarily commercial functions of shopping centers. It should be mentioned in the case of the Alpargatas shoe factory one employee facility included in the project was a kindergarten for the plants female employees located beside the main portal entrance. Other employee facilities in other projects sometimes seem to limited the "lean and mean" tendency that seemed to come with the

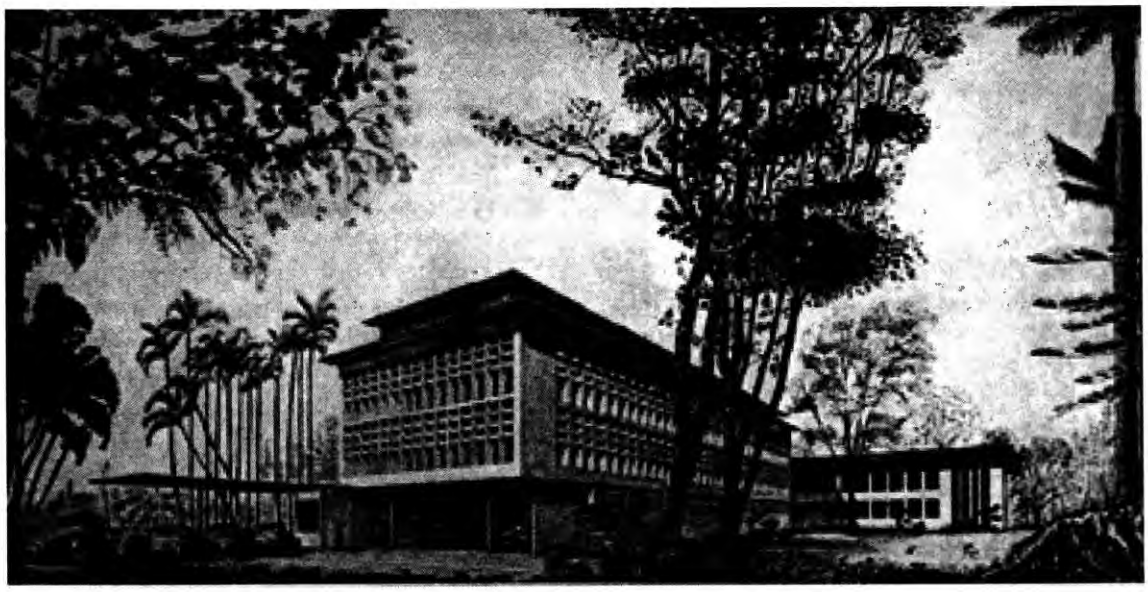


Fig. 15 – Hoffman La Roche pharmoceutical plant in Rio de Janeiro by the architect Louis Parnes 1947.

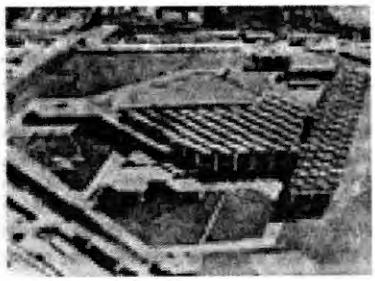
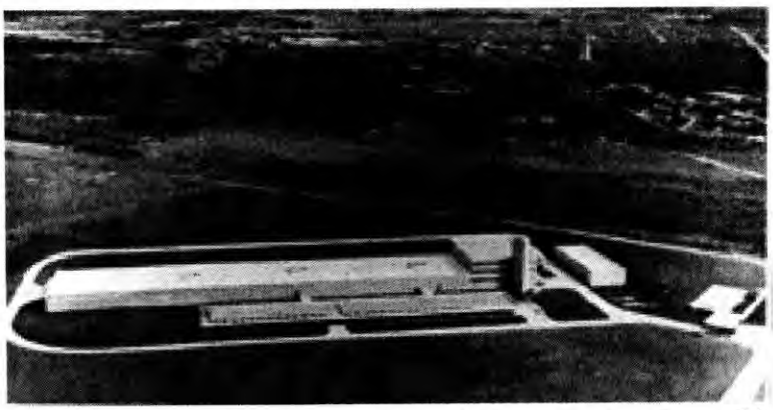


Fig. 16 – Olivetti typewriter factory Guarulhos SP architect Marco Zanuso



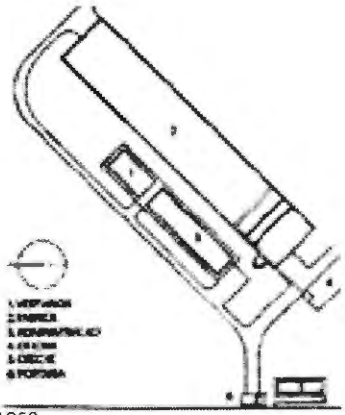


Fig. 17 – shoe factory for Alpargatas company São José dos Campos SP architect Giancarlo Palanti 1958.

fordism of american design ideas. Going back to Niemeyers and Uchoa's paradigmatic project in the Duchen biscuit factory, it is interesting to note the presence of a separate workers canteen and rest area in a peculiar organic form which tends to negate the long linear production space. see Fig.9.

In conclusion it can be seen from mid-century factory architecture in São Paulo and Rio de Janeiro that many aspects of the Fordist rationalized factory architecture did appear in Brazil. But this was not quite the Fordism as seen in Detroit or as seen in some European intellectual appreciations of Fordism as registered before the 2nd World War. From his prison viewpoint in fascist Italy at the end of the 1920's Antony Gramsci presented one eulogy of fordism in the following general terms: *"In America rationalisation has determined the need to elaborate a new type of man suited to the new type of work and productive process. This elaboration is still only in its initial phase and therefore (apparently) still idyllic. It is still at the stage of psycho-physical adaptation to the new industrial structure, aimed for through high wages."*

In Brazil, 'high-wage fordism' at the end of the XXth century still seems to be paralysed at the "pre-initial" stage while advanced Taylorism has proved not quite *idyllic*. What arrived in São Paulo, in the 1930's and 1940's, seems to have been a "stripped down" version of Fordism, or a "CKD" version to use an analogy from the auto industry. The version assembled in São Paulo was somewhat different from the Norte-american and even European versions given the different labor histories. In Brazil, new labor laws with the CLT, a minimum salary and heavily repressed trade-unions in the 1940's gave way to a tendency for americanized factory planning in the 1950's aimed more at the establishment rather than transformation of industrial production. Green field sites abounded on urban peripheral territory along regional highways for new import-substitution industrial sectors. The 'surge' of industrialization in the 1950's became too readily apparent in the "speeding up" of migratory flows, of metropoltan demographic growth rates, and in a wider sense the countries urbanization. For Volkswagen arriving in 1953 the Via Anchieta plant had little on site recreation and the giant car-parks were more used as open air warehousing facilities for finished and partially finished products subject to wide macro-economic market and trade fluctuations than for workers arriving in their own cars coming off the express-ways. In adapting to local development conditions VW at least began a consumers cooperative for employees in the commercial center of São Bernardo to economize on the limited Brazilian fordist salary.

However, for factory workers in the ABC district of the São Paulo metropolis, working in the new Fordist and Ford plants along the Via Anchieta Highway in the 1950's there were to be no cars but only the essentials - hired factory bussing and plant feeding, when absolutely necessary. The military government in the 1960's helped massify industrial production with new financial hire-purchase economics providing a means of market expansion, though more for a growing urban middle class than a Fordist emerging labor aristocracy. The reemergence of a militant factory based trade unionism at the end of the 1970's did tend to raise salaries and widen tertiary employment markets but in the local economy of industrial urban areas such as ABC but the economic recessions of the 1980's qualified this militancy while reinforcing a trade-union-management 'confrontation with negotiation' pattern often modeled on N.American labor-management "lean and mean" relations particularly after the 1988-1993 recession.

Industrial innovations in Brazil during the 1990's appears part of another historical period of intense and rapid change. It is tempting to cite again Gramsci's controversial view of the beginnings of Fordism. Talking about the United States in the 1920's Gramsci noted:

> "Since these preliminary conditions existed, already rendered rational by historical evolution, it was relatively easy to rationalise production and labour by a skilful combination of force (destruction of working class trade unionism on a territorial basis) and persuasion (high wages, various social benefits, extremely subtle ideological and political propaganda) and thus succeed in making the whole life of the nation revolve around production. Hegemony here is born in the factory and requires for its exercise only a minute quantity of professional political and ideological intermediaries"

In Brazil at the end of the century the nation appears not quite sure about what it is revolving around and certainly the techniques of organising political hegemony have changed in certain formal senses. But at least Gramsci's conception of force and persuasion does still appear relevant at least for discussion. At least fifteen years after micro-electronic innovation began its introduction on the modernist factory floor, the discussion of the high-salary technique of Fordist persuasion seems to run in Brazil in an apposite direction, even with the supposed benefits of a suddenly discovered "new" economy. New factory plants in radically new locations within Brazil permit the forceful establishment of much lower salary levels than those achieved in ABC paulista. What is unclear is the role of low salaries being seen as a necessary competitive injunction for operating in a Brazilian market or as a starting off benchmark for future com-

pany and trade-union relations which should evolve *slowly and gradually,* with improving urbanization living standards, towards higher salaries for fewer industrial employees. The existing tendency of industrial reorganization in Brazil has exhibited an american Fordist paternity with a characteristic of being "lean and mean" especially in labor relations. The urban consequences may not be pleasant.

NOTES

[1] Frederick J. Woodbridge (Architect - Evans, Moore & Woodbridge) JAN.1941 "Industrial Practice Disciplines the Architect in Kenneth Reid (Ed.) "Industrial Buildings – The Architectural Record of a Decade", New York, F.W.Dodge Corp., 1951, pp.28-29

[2] Albert Kahn, Architect "Producer Of Production Lines" Architectural Record, June 1942 em Reid, 1951, ibid. 257-259

[3] Geurst, Jeroen e Futagawa, Yukio "J.A.Brinkman and L.C. Van der Vlugt – Van Nelle Factory, Rotterdam, The Netherlands 1925-31", Tokyo, ADA Edita, 1994.

[4] Wank, Ronald A. (Associate Felheimer and Wagner, Architects and Engineers) "the Architects Opportunities in Factory Design", Architectural Record, August 1947 In Kenneth Reid, 1951, op.cit. pp.178-180.

[5] Sharp, Denis & Futagawa, Yukio "Wa;lter Gropius Bauhaus, Dessau, Germany, 1925-26 Fagus factory, Alfeld-an-der-Line, Germany 1911-25(with Adalf Meyer", Tokyo, ADA Edita, 1994.

[6] An Arch.Record Case Study Feb.1940 Chemical Factory, in Buckinghamshire, England Raymond McGrath, A.R.I.B.A., architect which commented the presentation of the case: "Started shortly before hostilities broke out in Europe this factory contains numerous provisions for recreation and comfort, as well as a system of air-raid shelters, all for employees benefit." In Kenneth Reid, 951, op.cit. p. 19

[7] see "Design for mass production". The Architectural Record. Feb.1940. in Reid ibid.p.1

[8] H.K.Ferguson "New Techniques meet Changed Conditions Economically" jan. 1941 in Reid, 1951, op.cit pp.36-37

[9] ibid. p.37

[10] For this architects contemporary industrial work see Kahn,A. "the Architect Working in Industry ",Architectural Record, March 1941 in Reid, 1951, pp416-417, and Kahn,A. Architect "Producer Of Production Lines" Architectural Record, June 1942 in Reid, 1951, 257-259.

[11] Among other factory projects the following projects were reviewed in the Architectural Record, were the following:

De Soto Employment and Welfare building, Chrysler Corp., Detroit, Michigan Albert Kahn Inc., architects and engineers Feb.1940, ibid p.24.

Ohio Steel Foundry Co.building, Albert Kahn Assoc. Inc. Architects& Engineers Jan 1941 in Reid, 1951,ibid. p.34-35,

Toledo Scale Company Factory at Toledo, Ohio published by the AR journal in February 1941 ibid.p.4-8

Willow Run Bomber Plant for the Ford Motor Company Albert Kahn Assoc. Inc. Architects & Engineers AR Sept.1942. ibid.p.271-278.

Curtiss Wright Aircraft Plant, Columbus Ohio Albert Kahn Assoc. Inc. Architects & Engineers AR Nov.1944. ibid.p.282-287.

Pratt & Whitney Aircraft Engine Plant, Kansas City Albert Kahn Assoc. Inc. Architects& Engineers AR journal February 1945, ibid pp.288-295.

Automobile Factory Chevrolet-Flint Assembly Plant, Flint, Michigan Albert Kahn Associated Architects and Engineers Architectural Record August 1948 ibid pp.200-205.

[12] Ford,H. n/date op.cit. p.135.

[13] Alfred P.Sloan Jr., "My Years with General Motors," New York, 1963 (portuguese version)"Minha Vida na General Motors - Relato Pessoal do antigo diretor principal da maior companhia Manufatura do mundo", Distribuidora Record, 1965.

[14] Ford,op.cit.p.286.

[15] Reid, 1951, op.cit p.9

[16] Albert Kahn Associated Architects and Engineers Study for Mill and Factory and the Architectural Record "Factory Design for Low-cost Production" (AR nov.1945) in Reid, 1951 p.141

[17] Unwin, H.D. "Industriol Piping" Architectural Record Feb.1943, in Reid ibid. p.485

[18] see Reid 51 op.cit.,p.343.

[19] ibid p.143.

[20] ibid 155.

[21] ibid pp. 24,74,75, 82,257 among the factory projects designed by the Kahn practise reviewed by the Architectural Record were the following:

, Willow Run plant Ford, Albert Kahn Associated, Chevrolet-Flint Assmbly Plant, Flint Michigan August 1948.

[22] Gramsci, Antonio "Selections from the prison notebooks", London, Lawrance & Wishart, 1971, p.298.

[23] The car industries arriving in São Bernardo in the fifties had a close relationship with new petrol refinaries, petro-chemical and steel plants in the neighbouring ABC and Cubatão local authority areas. see Gunn, 1992.

[24] Crawford,Margaret "Building the Workingmans Paradise : The Design of American Company Towns", London, Haymarket,) Verso Books, 1996.

[25] Buchanan, Colin "Traffic in Towns", Harmondsworth, Penguin, 1963.

[26] Albert Kahn (Associated Architects ír Engineers, Inc.) ""WARSPEED" system of construction in concrete. as first used for a new aircraft plant", Architectural Record December 1942, in Reid p.72,73,82.

[27] Penedo,Alexandre "Arquitecturo Moderna São José dos Campos", São José das Campos, A.Penedo, 1997, pp.29-50.

[28] Xavier,Alberto, Lemos,Carlos & Carona,Eduardo "Arquitectura Moderna Paulistana", São Paulo, Ed.Pini, 1983.

[29] Reid,1951,op.cit.,418-9.

[30] see Lopes, Alberto Costa "A Aventura da Cidade Industrialo de Tony Garnier em Volta Redonda", Rio de Janeiro, Masters Dissertation, UFRG Geography, 1993, p. 81.

[31] Unwin, R. (1909) ''Town Planning in Practise - an introduction to the art of designing cities and suburbs'', T.Fisher Unwin, London, 2ed.1911.

[32] Roland Wank Associate, Felheimer & Wagner, Architects and Engineers, "Industrial Buildings – the Plant as a Place to work",

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cember 1946 In Collaboration with "Mill and Factory" in Reid 1951 op.cit pp.157-160.

[33] Ackel, Luis Gonzaga Montans '"Attílio Correa Lima: um urbanista brasileiro 1930-1943", São Paulo, dissertação de mestrado Univ.de Mackenzie, 1996, pp.177-178.

[34] ibid, p.214

[35] "YPF" (Yacicimentos Petroliferas Federales) Research Laboritories in Florencio Varela in Reid, 1951, p.368-75.

[36] ibid p.376-9

[37] Penedo,1997,op.cit. p.154

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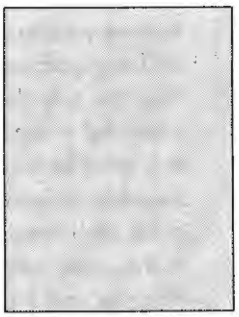
CLOSING LECTURES



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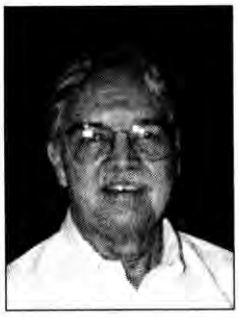

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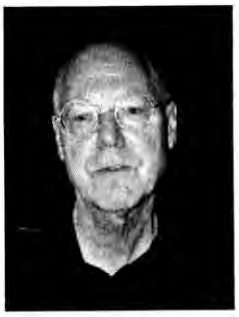

Allen Cunnigham

Jagdish Sagar

Revisiting Chandigarh: The Question of Preservation and Intervention in the Sector 17 Central Chouk*

Billboards crowd the premises of the railway station. Traditionally frowned upon by the Chandigarh Administration[1], they have been concentrated here under the protection of the Northern Railway. At the road entrances to the UnionTerritory[2] stunted reproductions of Le Corbusier's Open Hand symbol sport the civic boast:'WELCOME TO CITY BEAUTIFUL.'

Nothing much has changed, yet now, returning very occasionally to Chandigarh,[3] I do not find it a cosy experience of recognition: rather, my mind goes back to the impressions of a few brief visits made some years before the time when I lived and worked there. Uninstructed, I was uncertain about what to make of my surroundings, though not displeased with them: the ubiquity of modernist architecture and the absence of the visual clutter of other Indian cities; the wide, often barren spaces and vast green but often empty-looking parks; those long blank-walled roads; the feeling — I do not have a particularly good sense of direction anyway — of being unable to locate oneself.

Being there officially, I was each time shown the sights by obligingjunior members of whatever Department of the Punjab or Haryana Government was concerned with my visit: I would be driven through the Capital, shown the lake and, most importantly, Nek Chand's Rock Garden. The Rock Garden, a small miracle created out of waste, scrap, local materials — and plenty of cement — by a once humble employee of the Engineering Department, is Chandigarh's only really well-known tourist attraction, the only thing here that people not specially interested in modernist architecture come to see: it is another kind of modernity, having nothing whatsoever to do with Le Corbusier, yet not out of place in his city. I fancy it as the location of one sequence in the chase across town at the climax of a thriller film: the end must of course come somewhere in the moonscape[4] grounds of the Capitol after the camera has exploited the drama of its great buildings – action among the forest of columns in the foyer of the Assembly, on the ramp and rooftop of the Secretariat, in the tall shadows of the High Court portico, under the Open Hand monument as it rotates ever so slowly... Directed right, the camera's eye should discover in Chandigarh a visual personality that is sufficiently self-consistent, distinctive, stylish – and strange – for some slick cinematography of that genre: though a certain amount of scruffy Indian reality would have to be edited out.

Later, while working in Chandigarh and charged with administrative responsibility, the lens through which it seemed proper to view the city was that of its famous Master Plan. A tour de force it was when first expounded to me by the Urban Planning Department, marrying art with professional omniscience, inspired in its neat appropriation of the natural features of the site as it fitted the gradual slope southward from the hills between two framing choes[5], damming one of them to create the lake and turning a third choe into the Leisure Valley. In the Master Plan that he drew, and in the Statute of the Land and the Edict of Chandigarh, Le Corbusier had left us a code of almost scriptural authority. Chandigarh became a sort of designer city and, as such, a functional and artistic unity: tamper too much with any of its elements and you might put the whole at risk. First, there is the ten-mile deep green belt on the periphery. This is essential because "Chandigarh is a Government city with a precise goal and consequently a precise quality of inhabitants. On this presumption, the city has not to be a big city (metropolis) — it must not lose its definition"[6]. Next, there is the hierarchical 'sept voies' road system. Third, there is the system of zoning which, together with the road system, creates the self-contained residential sector crossed horizontally by the (V-4) market street (with shopping on only one side of the street) and vertically by a continuous green belt. 'The fundamental principle is that never a door will open on the surroundingV-3s [inter-sector fast-traffic roads]: they must be separated from the sector by a blind wall all along.' Fourth, there is the whole panoply of architectural and visual controls. These include 'Full Architectural Control' in some cases; in others con-

trol on the system of construction and architectural treatment of the exterior, except in the case of large private housing plots; 'frame' or facade control in the case of smaller houses in terrace formation; standard designs for gates and boundary walls; the 'no statue' rule and very strict controls on advertisements. Sixth, we could mention the city's trees and gardens, very systematically planted in Phase I in the 1960s under M.S. Randhawa and now a part of the city's image. Finally, there is Chandigarh's stock of modernist buildings; Le Corbusier's Capitol deserves to be completed and made a world heritage site, but the city's riches also include a large number of workaday buildings by the original team of architects and their successors. The effect of the controls and the stock of existing buildings, taken together, still give Chandigarh a consistency of style and appearance that is unique among Indian cities.

Yet one found that these elements, and the unity they were intended to make up, could be remarkably invisible to people not. trained to look at the city through those same spectacles. Nor is it the case merely that people fail to perceive the Master Plan through the city: conversely, you do not see the city through the Master Plan. It does not at all parallel the relationship of architectural plans to their buildings: the scale is very different and the subject of depiction infinitely more complex. And it is static: therefore, over time, it distorts our cognisance of the developing real-life city, our normative spectacles filtering out too much of empirical reality. (What the plan leaves out has no business to be there anyway.) Thus the Master Plan records an ideal that the city was originally built to match, but never quite did, which now survives increasingly as myth. In Chandigarh it remains a powerful myth both because of the emotional investment that has been made in it and because of the interests that sustain it.

For many the Chandigarh project still recalls an era of young-nation hope and enthusiasm and its realization, in the rural Punjab of the 1950s, did have an epic quality.[7]

Nehru's words have become a local cliche, but have not lost their ring: 'Let this be a new town symbolic of the freedom of India, unfettered by the traditions of the past... an expression of the nation's faith in the future'. And the hubris of modernism was a concurrent source of energy. Le Corbusier famously said there could not be an especially Indian architecture when we had adopted trousers and democracy. Nehru (rejecting trousers) remained an enthusiastic modernist:

'The past was good – but only when it was the present. We cannot bring it forward and put up a Gothic cathedral and call it a railway terminus...I like the creative approach, not being tied down to what was done by our forefathers but thinking in new terms, of light and air and ground and water and human beings. Therefore, Chandigarh is of enormous importance.' [8]

So these also became formative, exciting times for the architectural profession in India, creating an interest and awareness, and hence opportunities, hitherto lacking. 'Suddenly India was centre-stage', Charles Correa says, speaking of the impact of the Capitol. 'This was adrenaline indeed. ..we got the extraordinary opportunity to be at the cutting-edge of where it was all happening.' [9]

All that is obviously the original source of Chandigarh's enduring mystique. But nowadays there is surprisingly little popular, non-professional appreciation for its architecture. Those in authority are often unimpressed when reminded how well known Chandigarh is: the Department of Culture in the Central Government could not be persuaded to take seriously the idea of proposing any part of Chandigarh for UNESCO listing as a World Heritage Site. One was not able to drum up much enthusiasm for the idea of finally building the Governor's Palace.[10] Worse, the Punjab and Haryana Governments cannot be persuaded to stop glazing over the facades of the Secretariat to gain just a few more feet of working space – when I last saw it half the building had been covered. One wonders whether the modernist aesthetic was not at best a transient fashion here, which continued long after its time to be imposed, in a closely regulated urban regime, by the fidelity of its bureaucracy: Almost invariably – starting with the Punjab Raj Bhavan[11] – the interiors contrast noticeably with the buildings themselves. People want glitz, their taste runs undiscriminatingly to the ornate. The loosening of controls is received with a sense of liberation: 'The faces of residential houses in the city and its outskirts have changed a lot and seem to be getting better. Grandeur is the watchword today.' [12] This 'grandeur' is expressed in entrance gates weighing more than a tonne with' a large variety of intricate designs'. An architect is quoted as saying that he uses pitched roofs and jutting open balconies, admittedly inappropriate for the climate, 'mostly for decoration and for the sake of having something unique... and getting a spectacular effect'. A property dealer welcomes the new liberty: 'It's all part of showing off. We wear good clothes because we want to show off, so why not the same with our houses?' [13]

So love of its architecture is not central to the love of Chandigarh. It is very relevant that our preferences have been shaped by British-Indian bungalows with their vast private compounds in the cantonments and 'civil lines' that the British appended to Indian towns, a form which found its apotheosis in the splendid Bungalow Zone (as it is now called)

of Lutyens's New Delhi. Chandigarh[14] often posses for more of the same in modernist dress, and not without reason:

> *'Of course we pretend that our defence [of Chandigarh] is based on a pious reverence for the ideas of the Great Man. But it is not – it is based on the (near-pathological) awe we have for the lifestyle that prevailed in the cantonment areas which the British created ...long forgotten are the indigenous typologies, e.g. the haveli, wonderful examples of which exist in all our towns and cities...multi-storeyed houses built around courtyards, in patterns which make complete sense both socially and culturally, as well as from considerations of climate and urban form.'* [15]

That is undoubtedly true, and Chandigarh seems willing to find intellectual comfort not merely in Le Corbusier but eclectically in any term that strikes the right emotional chords, 'Garden City' and 'City Beautiful' together. But it is material that Chandigarh, contrasted with the squalor, futh, confusion and mismanagement increasingly associated with most Indian cities, is widely respected as a haven of (relative) order, tranquillity and sanitation. That sustains the Chandigarh mystique: the authorities can still get away with a lot of regulation, sometimes cussed and bloody-minded, on the strength of the threat, 'You don't want Chandigarh to become like Delhi, do you?' The best urban living in India is thought of as clean, green and genteel: you would have to be an intellectual to prefer anything else. Most of the walled city of Delhi, with its dense urban fabric, vivid colours, mixed land use, its traditional life and its narrow lanes, and its considerable wealth and economic activity, has long been notified officially, under the relevant law in force,[16] as 'slum'; its population has been declining for a couple of decades as residents move out and convert their properties to commercial use. One loses count of the number of people asserting that there is no city like Chandigarh: of what avail might it be to tell them to read, say, Jane Jacabs?

But Chandigarh is more than a city of bungalows: it made important innovations, it seriously tried to improve housing standards for its humblest planned residents – and there are stories of how high ranking officials thaught their houses and lawns were too small! Sector 22, which was the first sectar to be developed, contains some very innovative and attractive housing for subordinate Government employees. And this was the first Indian city to envisage running water and water closets in every house. In Chandigarh the bungalow paradigm, inherited from the British Raj, has got conflated with the hygienic modernism (concern for fresh air and sanitation, sun, space and verdure) that can more legitimately be read into the planners' intentions, and this has to be understood in the context of the economic, technological and social environment of the India of nearly half a century ago. Its low-rise architecture and low densities, which have become such an integral part of its image, were not what would have been expected from Le Corbusier and in fact his early sketches for Sector 17 as well as for the Capitol had included high-rise buildings, but he had to compromise here: Moxwell Fry described the project as 'a frontier undertaking carried out with men, women, children, donkeys and camels in place of high overheads and loads of equipment' and as 'a poor state's capital in two dimensions, with no two-grade intersections in our lifetime,' and wrote of the compulsion to 'eschew castly expedients for dealing with traffic and concentrating the occupation of land that distinguished Brasilia'. Chandigarh is thus the modernist city that it was possible to build in the particular place and time that it was built.

Is it worth discussing change, then? Visiting professionals and academics are sometimes nonplussed by the hostility they encounter when they fail to accord to Chandigarh the reverence of its conservatives.[17] But they too may be laoking at the city through the distorting lenses of their own preconceptions, which may merely be more currently fashionable than those of their outraged interlocutors. What are we to make, in particular, of those who seem to think the city's most pressing need is simply to present a more interesting face to them? It is tao easy to reduce what wos a genuine insight into the values of urban life, to an aesthetic rule of thumb: if you see plenty of people in close proximity, you have 'urbanity'. So we get the expert who takes a stroll about the city and says, Ah, not enough urbanity, let's put some housing in Sector 17 (the Town Centre) so we see more people!

Le Corbusier spoke of 'a city offering all amenities to the poorest of its citizens to lead a dignified life' [18] but the most telling criticisms of Chandigarh have been made on behalf of its poorer inhabitants, for its failure to do just that. [19] A fifth af the population are squatters, another fifth live in resettlement camps put up outside the area of the Master Plan in a series of attempted ane-time solutions to the problem of unauthorized housing.

Certainly, there has not been nearly enough low-cost housing, and most of what there is was created to shift and resettle squatters once they were there, not to reduce the necessity for squatting. Perhaps the only defence we can make of Chandigarh here, and it is a weak one, is that this is not a problem any other major city in the developing world has solved either: the logistics of preventing, removing or shifting squatter settlements in any decisive way

are – assuming minimal humanity – simply too daunting; so they become an implicitly accepted feature of the urban scheme, and evolve their own kind of interface with the political system and civic authorities; they are in fact internally organized and regulated, but by means that are at best quasi-legal. Perhaps nothing but development and prosperity, to the point where people do not think it worth their while to live in such conditions for the sake of a livelihood in the city, will abolish them. In the meantime the authorities may have no option but to negotiate a path between the hostility of the majority of vocal citizens and considerations of what is possible and not inhumane, both sides having a political voice: it is a very empirical process.

It is my impression that very probably, relative to other Indian cities, Chandigarh is not unpopular even with its poor:

'Asha ... sells roasted groundnuts at the Plaza in Sector 17. She was born and brought up in Chandigarh. She acknowledges the better opportunities [in] Ludhiana. But "Ludhiana is so dirty. Cannot think of living there." Asha lives in a "jhugg" [i.e. a hut in a squatter colony] in Sector 25.'[20]

Asha does not complain that Chandigarh makes no provision for housing the likes of her: no Indian city does anyway. The Administration has failed to wish away the large informal sector sustaining itself on sundry useful street occupations – roadside teashops, shoe maintenance, bicycle repair, itinerant vending and the like. Writing in 1982, Madhu Sarin recorded that:

'A majority of the senior officials view non-plan [i.e. informal sector] enterprises as an underworld of anti-social elements... Although it is recognized that many resort to such occupations because of poverty... there is a strong impression that a majority have high incomes... [Thus] they harass them to the point where they are unable to consolidate in anyone location, particularly a "desirable" one'.[21]

Despite periodic fits of 'enforcement', such attitudes have softened over the years with the experience of failure to evict the informal sector coupled with the limitations imposed by a political system that does empower all interests to some extent.

We might see the problem as not whether Chandigarh needs to change – since it is changing anyway – but how to cope with, or respond to, the changes that are taking place. Firstly, leaving aside all other questions of the city's functionality, it will be necessary to take stock of its relationship to its geographical surroundings. The tidy suburbless square of the Master Plan, designed for 500,000 people, still gives us our mental picture of Chandigarh, partly because the political boundaries of the Union Territory of Chandigarh roughly accord with it (reflecting the 'status quo' of 1966)[22] and partly just because of its power as myth. This mythical Chandigarh is now actually but the nucleus of a much larger, irregularly shaped urban growth falling in three State jurisdictions, growing rapidly in several directions according to the different and uncoordinated plans of the States concerned (and to no plan at all, as regards the illegal urbanization of the surrounding villages and agricultural lands). The real city never strictly fitted the myth; now the area comprising Chandigarh and its environs including the suburban extensions built independently by Punjab and Haryana has a population of a million and a half. Some Chandigarh conservatives would still, Canute-like, halt what they see as a slum-laden tide engulfing Le Corbusier's sacred ten-mile-deep green agricultural periphery: every new development is still controversial, scandal is still made of it (not without reason) but there's no stopping the emergence, planned or unplanned, of a much larger and more populous 'Greater Chandigarh'. The States of Punjab and Haryana will have an interest in attracting new projects, investments and sources of tax revenue into their own parts of this agglomeration. It is reasonable to speculate that in times to come Le Corbusier's Chandigarh may only be the 'best address' in a much larger, less distinctive but more dynamic urban conglomeration: one thinks of New Delhi in the midst of Delhi.

So the city is in fact changing and evolving in response to the urbanizing pressures overtaking the country and the region and the consequent requirements and demands of a larger, more varied population; of changing tastes and life-styles; and of new economic opportunities which people want the freedom to exploit. The city's growth itself changes its character. There is a long history of gradual modification of the original plans and gradual relaxation of the original strict controls, allowing a few non-residential uses in residential areas; allowing the subdivision of shops in certain areas; constructing a new kind of covered market, with small booths facing internal roads, to sell to 'rehriwallas'[23] at subsidized rates in the hope of resettling them; allowing weekly vegetable markets; even the emergence of new, lower-cost residential areas if only as the result of efforts to resettle squatters. This is a continuous process with more demands and suggestions perpetually under discussion. The political process also, inevitably and rightly, enters into it: by the time Phase II (Sectors 30-47) was beginning to be developed in the early 1980s, it had become politically impossible to acquire and raze whole villages, as had been done for Phase I, so now four such 'urbanized' villages remain, as dense, congested, lively and un-tidy as anything in any Indian city, to break forever the pattern of the sectors they

fall in. In yielding ground, the Administration's objective is usually to contain the forces of change ('Thus far and no further!') but it finds itself in a state of unending strategic retreat. And as encroachments and violations of the by-laws multiply, with the numbers of their perpetrators, the rules by which the city was built begin to lose their sanctity. The city evolves through an incremental process of violation and defensive modification of its rules and begins very, very gradually to look and feel a little more like other Indian cities. Superficial changes (like the groduol breokdown of the controls on advertising) begin to prepare our minds for more radical, less reversible ones: pressure from the haves, not the have-nots, may eventually compel some haphazard 'redensification' of private properties in the spacious older sectors, to cash in on land values; the visual controls, already deteriorating in practice, may one day be abandoned. As this process gathers momentum and its opponents (again very gradually) disappear from the scene, newer foshions in thought will begin to seem respectable. We may be reminded in the end of Le Corbusier's fomous words of resignotion when he saw what the residents of his housing area at Pessac had done to the Purist cubes he had designed for them a generotion earlier: life is right, he said, and the architect wrong.

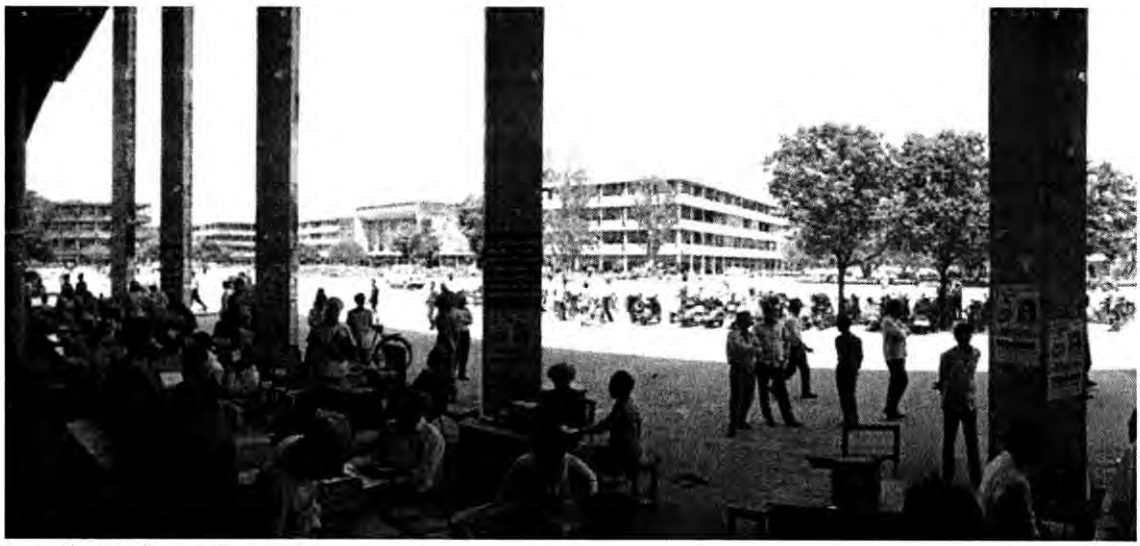

Fig 1 - The central chowk, Chandigarh

Fig 2 - Central Chandigarh

NOTES

[1] This is, I am told, changing under the present dispensotian.

[2] Chandigarh is administered by the Central Gavernment, while shared as their capital by the States of Punjab and Haryana; this unusual arrangement has worked well enough since the partition of the old Punjab in 1965.

[3] The author was Adviser to the Administrator – in effect Chief Executive ofthe Chandigarh Administration, of which the Governar af Punjab is titular Administrator – from February 1997 ta April 1999.

[4] The term did not occur to me at the time: I heard it as a *cliché* much later.

[5] The beds of seasonal streams that flow during the monsoon.

[6] *Statute af the Land.*

[7] A good account of it is to be faund in Ravi Kalia, *Chandigarh:The Making af an Indian City*, Oxford University Press, Delhi 1987.

[8] Quoted in Ravi Kalia, op. cit. pp.28-29.

[9] JaspreetTakhar (ed.), *Celebrating Chandigarh*, Mapin, 2002, p. 194. These are the proceedings of the Conference Celebrating Chandigarh: 50 Years of the Idea, held in Chandigorh in January 1999.

[10] At the insistence of Charles Correa, a full-scale mock-up was erected at the site for the Conference Celebrating Chandigarh held in January, 1999: I hope that is not the closest we ever get to constructing it.

[11] The Governor s residence.

[12] *Chandigarh Tribune*, August 31,2001.

[13] Ibid.

[14] Particularly the northern, older and more sought-after sectors.

[15] Charles Correa in *Celebrating Chandigarh*, p.196.

[16] Slum Areas (Improvement and Clearance) Act, 1956.

[17] Remarks like Correa's provoked howls of protest after the Conference Celebrating Chandigarh in 1999, and the most appalling accusations of bad faith.

[18] *Statute of the Land.*

[19] See Madhu Sarin, *Urban Planning in the Third World: The Chandigarh Experience*, Mansell Publishing, London 1982. Despite its obtrusive ideological perspective, this is a really voluable book that ought to hove had more influence in Chandigarh.

[20] Rajivlochan et al., *Chandigarh Lifescape: Brief Sacial History of a Planned City*, Chandigarh Perspectives, 1999.

[21] Ibid.

[22] In 1966, with the partitioning of Punjab into (moinly) the new States of Punjab and Haryana, Chandigarh became a Union Territory, functioning as the capital af both States but itself administered by the Central Gavernment. This arrangement continues.

[23] Costermongers

KEYWORDS

Le Corbusier, Chandigarh, City Centre, preservation, intervention

Jagdish Sagar, a national of India and a civil servant since 1966, has held various positions involving urban management.

Organised the Conference Celebrating Chandigarh held in January, 1999, while seving in Chandigarh. Earlie, was Principol Secretary, Urban Development, in the Government of Delhi. Currently Chairman of the Delhi Vidyut (i.e. Electricity) Board.

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Paulo Zimbres

Brasilia Facing the Future

Even before 1960, the year of the inauguration of Brasilia, a metropolis started to take shape in the Federal District, having Brasilia as its nucleus, and the satellite-towns and the urban settlements in the adjacent region as its periphery.

Although unwanted by many, this metropolis inexorably developed during the last forty years, following the same patterns of the other Brazilian large cities. The Federal District now has a population of 2,1 million, of which roughly 25% live in the planned area and in its immediate periphery. The remaining 1,55 millian are distributed among the satellite towns and other official settlements, not to speak of the innumeraus illegal developments that insidiously proliferate throughout the territory.

This large and thinly populated metropolis is believed by many to be the true Brasilia, the real capital city of the country. Center and periphery complement each other and become specialized, revealing, as in other Brazilian large cities, a pronounced social stratification that reflects itself in the flagrant discrepancy between the central area and the mast remote urban settlements.

For many years now, both scholars and the general public have acknowledged that this metropolis is best described by the name of "Brasilia". A recent survey, done by a major local newspaper, reveals that, in its great majority, the dwellers of the satellite-towns define themselves as living in Brasilia.

The Brasilia that Lúcio Costa designed in 1956, and that has now been awarded by UNESCO the status of "World Heritage", is now called "Pilot-Plan" by the population, a term that will be adopted in this paper, for simplicity's sake. The people who live in the satellite-towns, when heading to the central areas of the metropolis, often say that they are "going to the Plan", in an involuntarily ironic reference to the fact that they are an "unplanned" population living in "unplanned spaces".

From 1960 to 1996, the urban areas of the Federal District swelled from 25 to 411 square kilometers, which represents on exponsion of approximately 1.650%. Considering that the law prescribes that the Government is responsible for the totolity of land subdivision within the limits of the Federal District, it was expected that the urban expansion would be carried aut in a manner that would reflect a strategy for the occupation of the territory, in conjunction with an economic and social development policy. On the other hand, it would be highly desirable that the different areas created in the course of time would be subjected to a consistent practice af urban design, so that the urban tissue of the city as a whole could become a coherent mosaic of well-articulated and pleasant neighborhoods.

But that has not occurred. The city's administration has lost control over the expansion process of the metropolis that is growing around the Pilot Plan. The "ink-stain" is spreading, mainly in the form of illegal developments, to create a radial city that might eventually blot out the linear design of the Pilot Plan.

However, it is believed that the time and the opportunity still exist for the government to exert, with a stronger determination, it leadership role in the process of ordering the occupation of the territory, and of creating towns/neighborhoods that are both pleasant as living spaces and balanced in terms of the number of residences and jobs.

In this report we will present two projects designed by commission of the Federal District government (GDF): the urbanistic plans for Águas Claras (1993) and the Noroeste Neighborhoad (2000). These two cases exemplify peculiar circumstances of the urbanistic activity in Brasília. They are both concerned with the quality of the urban life, but reflect two specific situations, two different contexts: Águas Claras, located in the expansion area outside the Pilot Plan, is mostly committed to enhancing the metropolis urban farm, whereas the Noroeste Neighborhood stands as one of the few oppartunities of a Pilat Plan's expansion within the "World Heritage" precinct, and it is, therefore, largely committed to the spirit and shape of the capital city created by Lúcio Costa.

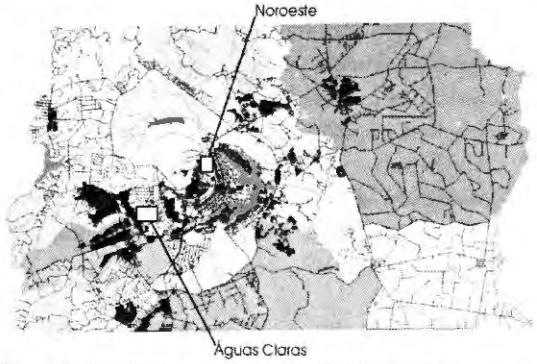

Fig. 1 – Federal district map showing the distribution of urban areas and the locotion of the projects that will be the subject of this report.

Águas Claras

The discontinuous urban occupation of the Federal District imposes a high cost on the quality of life of the city as a whole. The large populotion concentrations of the Federal District, the two poles that confer on the metropolis its functional configurotion, are the complexes Pilot Plan, on one side, and Cruzeiro/Guará and, at a distance of 20 kilometers to the west - Taguatinga/Ceilândia/Samambaia, on the other. In between these two conglomerotions, there existed a territorial gap of substantial dimensions, which represented a very serious obstacle to the systems of transportation and to the networks of public services, and also imposed high saciol costs on the population

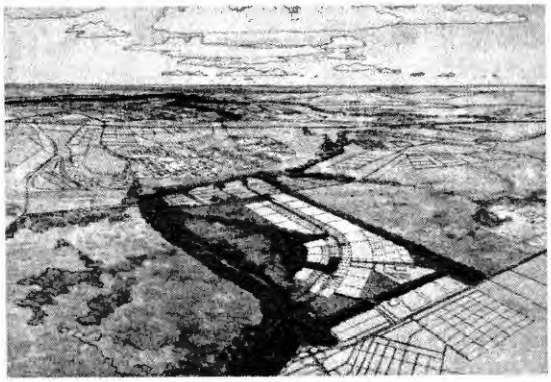

Fig. 2 – The once empty area, divided by the Metro tracks, was occupied by the new neighborhood's development to establish a urban continuum.

The authorities in charge of the construction of the Metro (the subway system) perceived the need and the opportunity of occupying that space, the missing link that would ensure urban continuity along the mass transportation system.

The briefing received by the team in charge of that project demanded the creation of "super-blocks" similor to those of the Pilot Plan, to be distributed along the Metro lines, which, at that moment, had alreody been defined as the structuring elements of the new neighborhood.

The said team, together with the technical staff of the GDF, as a first step, proceeded to work on a deeper formulation of the rationale of the plon. From the very start, it was established that the new urban area would not be another dormitory-neighborhood, but a dynamic metropolitan pole, shaped by the economic, social and cultural forces, so as to house, besides residential areas, spaces intended for other urban activities such as commerce, services, leisure, administration, etc., creating an attractive pole for the various regions of the metropolis and functioning as a powerful job-generator.

Besides, the plan should contemplate the conservation of nature and of the landscape, of great scenic beauty and notable for its valleys, slopes and ciliary woods.

The team responsible for the project intended to start both from an objective evaluation of the vocation of the site, and from a conceptual formulation based on a thirty-year long experience, both professional and academic, in the most part dedicated to Brasilia, the largest and most expressive expression of modernistic urbanism in the whole world. The urbanistic directives to be adopted were subjected to deep considerotion, so as to avoid the thoughtless repetition of the solutions that characterize that great and time honored "model". Giving full attention to the critic of the modernistic urban design, and thoroughly committed to the "doing now", we set out a reasonably coherent framework for working out the plan.

Fig. 3 – General Perspective

At the bottom of the figure shown above we can see port of the central area af Taguatinga, and, on the horizon, the outline of the Pilot Plan, surrounded by the Paranoá Lake. The new neighborhood is located on an empty area four kilometers long, measuring 808 hectares, 460 of which will be occupied by the urban grid.

A Metro junction marks the core of the new neighborhood. The sinuosity af the Metro lines creates a certain degree of formal intrigue, that has set us free from the monotony of an orthogonal road network, fragmenting the urban landscape into segments that propitiate the creation of the desired gregarious scale.

Two large avenues, Araucária and Castanheira, running parallel to the Metro lines, form a binary that defines the urban road network. Running along the total urban extension, these two avenues delimit two distinct urban tissues: the super-blocks, that were distributed along the strips on the outer side of the binary, and the conventional blocks, that form a denser urban tissue, more similar to that of traditional cities, located on its inner side, running along the metro lines. A transversal system of streets structure these blocks, that are intended for residential, institutionol, and commercial uses.

The plan intended to duplicate certain solutions that ore typical of the Pilot Plan, and that have proved positive, such as the super-block; and special attention was given to the creation of pleasant and harmonious spaces intended for community life. To

Fig. 4 – The traditional blocks along the Metro line, the super-blocks in the outside strip; the boulevards reach the stations; bridges for vehicles and pedestrians ensure the integration of the Neighborhood's parts.

that end, arcades, pedestrian streets and squares were designed, forming a system of public spaces in which the population can circulate and meet in conditions of safety and tranquility, without an excess of conflict with the motorized traffic.

In this network of avenues and streets, the pedestrian is given preference. Traffic lights, pedestrian strips and bridges that cross over the Metro lines guarantee their safety and their mobility, thus checking the dominance of the motor vehicles.

Most of the Metro lines are set in trenches, allowing several roads to cross over the tracks, thus providing the necessary communication between the two main avenues. Running along the Metro trenches, a tree lined boulevard giving access to the adjoining buildings was created, allowing the population to reach the stations along shaded paths.

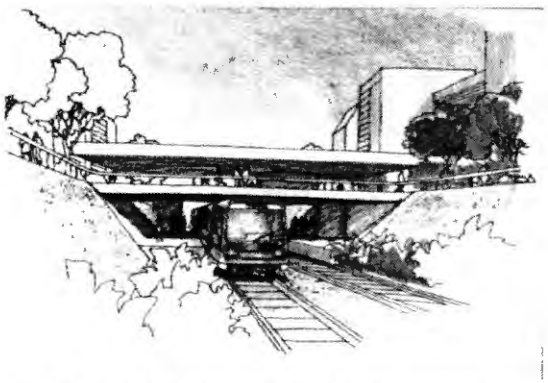

Fig. 5 – The friendly relationship between the Metro, beneath road level, and the boulevards with its buildings.

The activities of commerce, services and leisure will be located next to the Metro stations, both in the central area, around the Águas Claras Station, and in the secondary centers, together with schools, health-care centers and hospitals, thus forming highly dynamic urban spaces. To sum up, the intention is to vitalize the central areas and, simultaneously, to establish a mixed zoning, where different urban activities will share the same space.

Another directive adopted concerned the addition of other ingredients, aiming at enhancing the neighborhood. What was being proposed was the retrieval of a repertoire that is familiar to many Brazilian towns: a privileged network of meeting-places, characterized by an intense and diversified use of the space, is distributed along squares, broad sidewalks, busy street corners, and well-defined avenues and streets.

The aim is to afford freedom of choice, offering the population the broadest range of alternatives possible in choosing locations for residences, commerce, services and leisure activities. A certain degree of zoning will be present, however, in order to provide spaces that are adequate for the different activities. It will be a flexible zoning, however, one that will not prevent the initial plan from gradually adapting to the evolution of society. The formula adopted for the creation of a pleasant town and an agreeable neighborhood was, therefore, the establishment of esthetical, social and functional rules, which, however, should be flexible enough to be adapted to the purposes of the community, as they change in the course of time.

Such was the idea that lay behind the design of this neighborhood- town: a town with 460 hectares of urban areas, for a population around 160.000, with a gross density of 350 inhabitants per hectare. A dense and dynamic town, that should contain both the energy of a metropolitan center and the colloquial scale of the residential areas.

Also rediscussed was the issue of public spaces and green areas. Avoiding the temptation of scattering the buildings along extensive public parks, it was understood that this quasi-rural type of structure does not meet important expectations related to the desired urban character of the neighborhood. Urban vitality, associated with ideas of continuity, contiguity, density and coziness, calls for the right selection and the right arrangement of the repertoire of public spaces and green areas, which should bring together, rather than separate the buildings.

The main green area within the urban fabric is the Águas Claras Urban Park, located in the central area, next to the integration station of the Metro lines. Measuring around twelve hectares, it presents a varied topography, with high promontories and spots of remarkable scenic value. Also, located within walking distance of all the residential areas, is a large Metropolitan Park, with approximately 63 hectares, and associated to the main Unit of Conservation existing within the site, the *Granja Águas Claras*, the official residence of the Governor, which, in the near future, may become an area open to the public.

Also, next to the blocks, 26 public squares will be constructed, adding 9,6 hectares of green areas and leisure facilities which permeate the urban area. Within each of the super-blocks a well-defined square was created for the use of the resident population. These

squares are not the residual product of the geometric exercise of distributing blocks and buildings, but were intentionally located and designed as community assets, to be used and cherished by the population.

In regard to the urban infrastructure, water supply has been treated as the fundamental issue for the development of the Federal District. The resolution of the sanitary problem involves policies of conservation and recovery of the environment, as shall be seen ahead.

Noroeste Neighborhood

In the case of the urban plan for the Águas Claras Neighborhood, our work has developed from an objective examination of the site and the Neighborhood's vocations, with a certain amount of freedom to look for solutions committed to "urbanity". In the case of the Noroeste Neighborhood, however, the project's rationale was already established.

Lúcio Costa, in his document "Brasília Revisited" pondered: "Once the protection of that which is to be preserved is ensured, one must now verify where the occupation – mostly residential – can be convenient in areas close to the Pilot Plan, that is to say, in the Paranoá Basin, and how this occupation should be conducted in order to integrate into that which already exists, in shape and spirit, ratifying the characterization of the park city – "sprawling and concise" - suggested as the differentiating urban outline of the capital." (Costo, 1987)

The project for the new neighborhood was born with a pre-established genetic map. The Pilot Plan's super-blocks stand as a necessary reference, not only because of the recommendations included in the document, but also because they already belong to the collective imagery of the local society.

Nevertheless, the urban plan for the Noroeste Neighborhood was conducted on the basis of some reflections on the urbanistic experience of the Pilot Plan; on successes, deviations, surprises and improvisations, which have left some lessons, surely of great value to future urban projects.

It's important to point out that the protection of Brasília's architectural and urban heritage does not imply an attitude of reproduction and copy of what has been done in the past. For the sake of respect for a work that should be admired and defended, the risk of mechanical or simplistic reproduction of its original conception should be precluded, for it would demerit rather than praise the plan of this World Heritage Site.

Urban Structure

The Neighborhood's urbanistic proposal is based on a quadrangular road grid that defines cells of approximately 500 x 500 meters, which in turn, constitute large Residential Units by means of the clustering of four super-blocks, with 250 x 250 meters each, resembling the ones present in the Pilot Plan. The expectotion was that these clusters, would expand the areas of the pedestrian domain, thus emphasizing the pleasant sensation of living in a park.

These Residential Units are adjacent to the North Ecological Park, whose master plan has been revised. The characteristics of the park city, already consalidated in the super-block concept, will thus be enhanced.

All super blacks, specially those ten bordering the avenue that delimitates the park, will enjoy a privileged situation. Their dwellers will need ta walk no more than 500 meters to reach their recreational, sports and cultural leisure areas. The Park presents itself as an important environmental unit, inserted between the urban networks of the North Wing and the new Neighborhood

Fig. 6 – The Neighborhood touches the park, next to which, twenty super-blocks form the long residential sector. Another narrower strip will house other activities of community interest.

Parallel to the rank of residential blocks, a long strip, 150 meters wide, houses other activities of interest to the inhabitants of the Neighborhood and its region of influence: hospitals, health-care centers, schools, neighborhood clubs, supermarkets, movie theaters, sport yards etc. Basically, these are activities that are now present in the large areas between the super blocks of the Pilot Plan.

The point here is that the neighborhood and its facilities should not be organized merely to configure vicinal spaces.

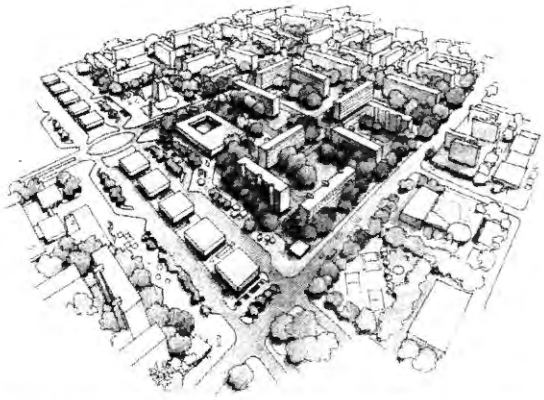

Fig. 7 – Three elements from the proposal: the cluster of four super-blocks, the binary of the local commerce and the longitudinal strip of community facilities.

In the case of the Pilot Plon, Lúcio Costa distributed blocks and facilities in an open and non-restrictive manner. The city Plan, wisely took into account the fact that the social relationships of a city the size of Brasília do not present an essentially parochial feature. The community needs open public places for aggregation and social contact.

The Neighborhood, although having its own identity and character, will enable the constitution of an open community, integrated into the total city. A consequence of this acknowledgment is that the facilities were located in such way that they will serve both the community residents and an outside public, comprising the inhabitants of the immediate neighborhood (North Wing) and the ones living in more remote areas of the city.

Local Commerce

Toward the east-west direction, the large residential units are divided by local commerce strips, served by a binary of one-way roads that will also give access to the super-blocks. Local commerce will be organized in buildings similar to those in the North Wing, on 26 x 26 m plots aligned inside the binary.

In this new proposal for the local commerce, the roads that form the binary are constituted an one side by the commercial blocks and on the other by the super-block social facilities: preschool, primary school, leisure areas and restaurants for the neighborhood unities, arranged along a sidewalk shadowed by the green belt that surrounds each super-block

That's the place for florist shops, newsstands and specially designed kiosks to accommodate locksmiths, dressmakers, shoemakers, plumbers, electricians and so on.

In this way, we tried to overcome the front/rear dichotomy that has been affecting current solutions for the local commerce, both in North and Sauth Win

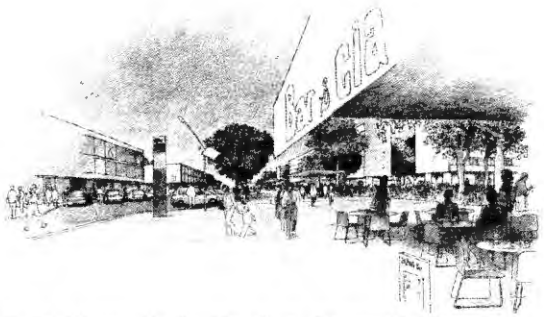

Fig. 8 – On one side, the sidewalk with the super-block's social facilities, on the other, the buildings with commerce and services.

The commercial activities will be accommodated in three-stary buildings (a shop with a mezzanine and two more pavements). Underground parking garages should be provided for the dwellers, store owners and employees. This pattern was also applied to the buildings intended for activities related to security (police post or police stotion), health and worship. Buildings destined to worship will be allowed to have towers and other elements of symbolic and expressive character.

Road Network

We chose to direct the Neighborhood's main traffic system toward the central area of the city, more specifically toward the Monumental Axis, to where the main circulation corridors will be channeled, offering interesting views of its main landmarks, such as the TV Tower and the Sports Gymnasium.

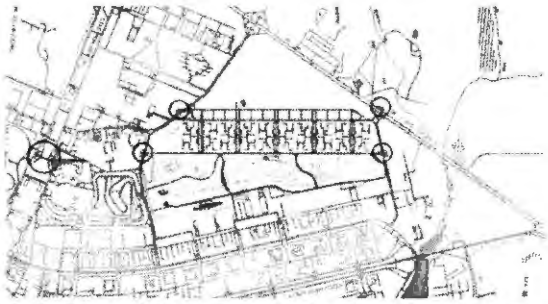

Fig. 9 – Structural, distribution and local roads and the Park's private tracks define the road network of the ensemble, oriented toward the Monumental Axis, parallel to the North Wing.

The road network was structured by means of three north-south avenues: the avenue that delimitates the park and the two avenues that form the binary serving the blocks along the longitudinal strip.

Instead of major road interventions, the plan points to solutions that contribute to the neighborhood's "urbanity", causing minimum environmental impact. The land uses on the strips lining the avenues should be compatible with their features and the intensity of traffic they can hold.

Pedestrian circulation was privileged in the traffic system design. As in Águas Claras, well-defined paths, traffic lights, crosswalks and passages in different levels are included in the repertoire of design solutions for the public space.

Neighborhood Population

With an estimate of 1.800 inhabitants per superblock, the twenty projected super-blocks will accommodate approximately 36.000 dwellers. Adding to this number approximately 3.800 more dwellers, who will live in the commercial and service areas, the estimated population for the future Neighborhood is 40.000 inhabitants. Assuming that the neighborhood was designed for a middle class population with characteristics similar to that of the Pilot Plan, the community facilities, the commercial and service areas will be similarly mixed and dimensioned.

Park Master Plan

An important feature of both projects is the association of the urbanistic plans to the adjacent parks. In the case of the Noroeste Neighborhood, an expressive expansion of an existing park, the Burle Marx Park, was proposed, thus rendering it more visible to the city. Based on a second reading of vocations and on the consequent revision of goals, the new design and zoning expanded the park area from 175 to 300 hectares.

Discarding its present sad role, hidden behind backyards, the park will be an expressive part of the Pilot Plan landscape. A visual and functional continuity with the existing southern park, "Parque da Cidade", will be then achieved, provided that a new landscape treatment for the surroundings of the Racetrack and the Sports Sector is undertaken.

The relationship between the Park and the existing and planned activities in its immediate surroundings, the need to preserve the remaining native vegetation and to promote the recovery of degraded areas, together with the natural relief conformations, provided the specific conditions for the establishment of a new zoning. Five large zones were defined:

Zone 1 - Sports and cultural activities
Zone 2 - Seedling production and environmental recovery
Zone 3 - Administration
Zone 4 - Recreational, scientific and educational activities
Zone 5 - *Preservation*

The Neighborhood's Infrastructure

Concerning infrastructure, the major principle is that cities, like any other human activity, should pursue maximum sustainability and harmony with the environment. Therefore, full advantage should be taken of any opportunity to recover and maintain natural resources, such as the Paranoá basin, whose vulnerability has been acknowledged since the first studies aiming at the construction of the capital.

Fig. 10 – After the expansion of the Park limits and the updating of its activities, a new zoning was produced, respecting the project selected in a public competition. The axis toward the Television Tower organizes the distribution of landmarks and sites.

The simultaneous implementation of the Burle Marx Pork and the Noroeste Neighborhood presents a unique opportunity to engender innumerable solutions for the hydrological resources preservation, both through the reuse of the water from the Paranoá Lake and through the recycling of used water. Nevertheless, the olternatives to sanitation should be conceived in sintony with the water supply and sanitation agencies.

In accordance with the educational function of Burle Marx Park, it's not advisable to use potable water in irrigation, formation or maintenance of the ponds proposed in its land use plan.

This directive strengthens the "ecological" feature of the Park, revealing to the users a more practical and effective side of the quest for the sustainable use of natural resources. The water for those purposes should be obtained from the Paranoá Lake, captured at any point between the mouth of the Bananal stream and the North Wing Sewage Treatment Plant. The water pumped fram the Paranoá Lake should be cast into the first pound, which will act as a polishing tank. Fram this reservoir, it will be directed to other uses, including other projected ponds and fountains.

Finally, I wish to point out that we have, throughout these studies, clearly privileged "urbanity", therefore the two proposals share the quality af providing people with the unique opportunity of living "the magic of the town"; cities and parks should be associated without loosing their integrity and their peculiarities. Their nature should be acknowledged and respected. Furthermore, both solutions are devoted to the protection and appreciation af the environment, taking into consideration the fragilities of the site's hydrographic system.

REFERENCES

These plans were drawn up by commission of the officials and technicians of the Federal District Government, through the Secretary of Urban Development and Housing – SEDUH and the Secretary of Environment and Hydrological Resources - SEMARH.

Collaboration: SINDUSCON, ASBRACO and ADEMI.

Technical Services produced by Zimbres Arquitetos Associados

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Allen Cunningham

The Modern City facing the future

Introduction

The intention of this paper is fourfold - first to outline present circumstonces, second to scan the concept of the 'ideal', third to cite critical commentories and finolly to offer two 'madels' and a provisional checklist for the future.

Present circumstances

In the evolution of architecture and urbanism, the C20 Modern Movement was unique for inventing the idea the future could be 'designed', and that the promise anticipated spiritually and physically improving conditions over those inherited. The optimism generated by this extraordinary intellectual and technical revolution was frustrated by events beyond the cantrol of designers unable to harness the political, ecanomic and social farces which shape aur environment. The declarations emanating from this movement not only adopted an ethical stance, architecture being distinguished from the other arts through its social function, but assumed in a democratic age architecture and planning would actively help to shape new cammon, philosophical and social values, concerns for rational equolity, light, air, hygiene, aspect, prospect, recreation and so on.

Although these could not be realised as coherent entities they did articulate visions that fuel frustration with on urban future increasingly projected in terms of remediol operations rother than visionary concepts. Idealism has yielded to economic power, political expediency and pragmatism, late free-morket capitalism oppearing reluctant to commit itself to ony form of land settlement consistent with the production of an urban form in which its inhabitants can find coherence. In Plato's Republic it wos recognised thot the sum of o number of individually rational decisions results in collective choos. The modern city hos transpired as Tafuri's 'Tool of Capitalism'.

A critical review reveals fundamental flaws in the formal patterns pramoted, and disjunction between the forms, social programmes and political means for realisotion. In an age of liberal capitalism, with no proper framework for co-ordinating 'big' decisions with 'little' decisions, an anti-intellectual climate prevails, ideology appearing to have been displaced by ideas. As Pasqual Maragall, long-time mayor of Barcelona, stated: 'The lesson in humility that we ought to have derived from the overwhelming audacity of our collective pretensions is overwhelming'.

The programme espoused by the Modern Movement proposed harnessing the forces in society for the benefit of future generations, but wherein now lies that promise? Are its ethical ideals outdated, or can the social aspirations and humanist creeds be reformulated to inform a glabal, urban future? Alternative programmes must now be articulated, which exploit the partnership of political ambition and the dynamism of market forces, for the greater good. Our purpose as citizens and professionals should be to alleviate the physical conditions in those cities which have evolved as ghettos of economic greed and ecological disaster and to deliver the promise of urban centres as sources of inspiration and beauty, as places of social, cultural and intellectual development and joy.

The 'Ideal'

When problems are interpreted as crises, fear dominates, economics rule, technology becomes the 'panacea', values are sacrificed. Architecture provides a metaphysical clarity and renders the world less threatening. The city in history is associated with the desire to create life-enhancing, symbolically charged, memorable places.

Helen Rosenau devoted many years to exploration of the Ideal City:

"• The consistent striving for perfection is a clear indication af the recurrent human desire to attain a state inwhich conditioned necessity is replaced by liberty and harmony.

• The desire to attain a perfect physical environment and a more satisfying way of life is characteristic of Western Civilisation, since it possesses dynamic force and incorporates economic and social change and experiment.

• An ideal city represents a religious vision, or a secular view, in which social consciousness and the need of the population is allied with a harmonious conception of artistic unity.

• The perennial theme of art is an intensified vision regarding the quality of life and therefore the subject of ideal cities reaches right into the core of artistic creation.

• *It is characteristic of European history that the concern with merely formal matters recedes in time, and the social function of the city and its inhabitants demands growing expression.*
• *One has to distinguish between the solution of a particular problem in a perfect manner, and the creation of a prototype of a supranational normative character, an ideal plan."*

Since the C18, when Boullé and Ledoux celebrated the advent of Newtonian intellectual rationality with vast, geometrically pure monuments, there has been a tendency to try and overlap the issues of utopianism, and realism, to generate either a 'realistic utopianism' or a 'utopian realism'.

The evolution in utopian form throughout the late19th and early 20th Centuries is characterised by a shift in the nature of their presentation. Having moved from the classical, discrete, geometrically stable ideal 'objects' through the paternalistic, post-industrial solutions proposed in the C19, an increasing secularisation and implementation of democracy became the format for the ideal in C20, from a centralised plan to a grid. Suddenly the boundaries of the imagery alter; instead of a clearly delineated utopia, framed by unspecified wasteland, there appear a series of proposals presented in a way that suggests implementation without boundary. The proposals suddenly appear as arbitrarily selected fragments of a much larger vision, the grid becoming a device very much associated with C20 urbanism.

The ideal models expose the extent to which formal arrangements were devised to express visions of social and ethical absolutes. Symbolism is a key, generating element linking Man to Nature and the Universe, the urbanism in each age reflecting cultural norms. As social programmes became more defined in C19 so its pragmatically orientated 'ideal' urban models eliminated symbolism and the expression emerged as form in the service of profit, the moral focae being work ethic and religion, the latter in C20 yielding to materialism.

Critiques of modern urbanism

The C18 saw Man as essentially rational but blinded by ignorance or superstition whereas in C20 we saw him as deeply irrational, held in check by reason. That reason took the form of what was deemed the certainty of science which, with art, formed an intellectual duality. Robert Maxwell has commented that: "City planning is a modern 'subject', but does it exist as a discipline? If so by what is it prescribed? Is it a science implying rational solutions based upon analytical concepts which may not last very long? Statistics have little effect on appearances - patterns of use are very different from patterns of analysis."

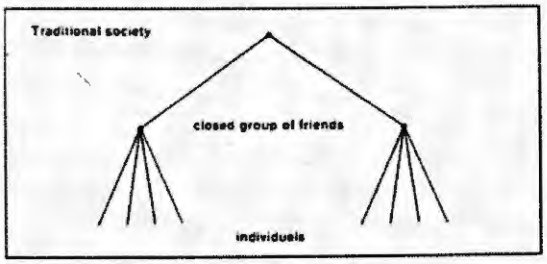
In Russia the urban experiments on a massive scale in the early thirties failed in spite of a centrist regime which could dictate and guarantee implementation - subject, however to political censorship. Ironically Moisei Ginzburg in 1928 commented to Le Corbusier:

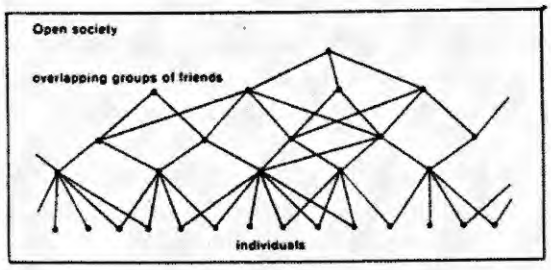
"The unresolved deadlock of Western Functionalism is this; that it is prevented by the social structure it works under and the condition of work that these impose on the architect, from conceiving all individual problems as part of an organic whole ... This cannot be like our Consructivism when we see that outside and beyond the individual architect-loner in those societies there does not exist any kind of social force. There is no single social goal in those societies which can expand their Functionalism to become like our Constructivism ... We are approaching form, not as an end in itself but as a path towards the development of a social goal."

Guardini defined the dialectic of two philosophical worlds, the old world of the Platonic idea and the modern world of existential philosophy. Alan Colquhoun has elaborated this dialectic within the classifications of C20, cities as Process and cities as Form:

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

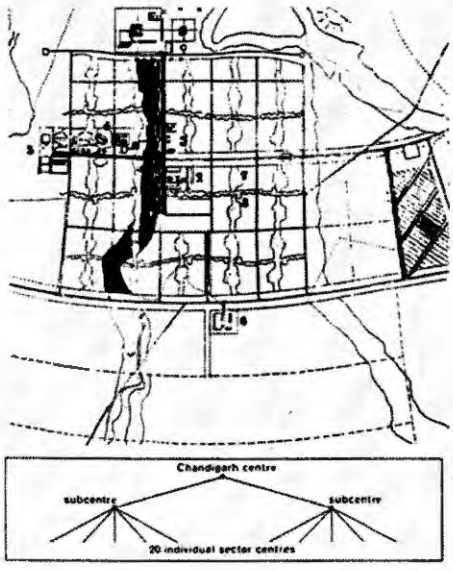
These characteristics were critically examined in mathematical terms by Christopher Alexander in 1965 in a paper entitled 'The City is not a Tree', and applied to specific examples. He elaborated the distinction between 'artificial' cities and 'natural' cities, the first lacking some essential ingredient, the second having acquired the patina of everyday life. He likens these to analytical diagrams familiar to mathematicians the first a 'tree' and the second a 'semi-lattice' (Figure 1). These describe organisational patterns by means of sets, the 'set' being a collection of elements which we think of as belonging together. He states: "Since, as designers we are concerned with the physical, living city and its physical backbone, we restrict ourselves to considering 'sets' which are collections of material elements ... When the elements of a set belong together because they co-operate or work together, we call the set of elements a 'system".



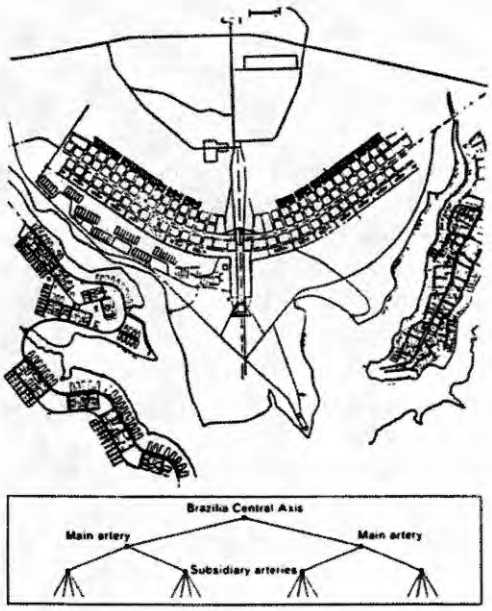


He then illustrated how such perceptions may be transferred to 'tree' and 'semi-lattice' diagrams taken from mathematics. When applied to cities the first eliminates complexity and with it social realities, the latter integrates the complexities of life as understood. He applied his analytical method to several cities, of which I will select only two which have been the subject of discussion at this conference:

"Chandigarh (Figure 2) - the whole city is served by a commercial centre in the middle, linked to the administrative centre at the head. Two subsidiary elongated, commercial cores are strung out along the major arterial roads. Subsidiary to these are further administrative community and commercial centres, one for each of the city's 20 sectors; the structure is a tree.



Brasilia (Figure 3) - the entire form pivots about the central axis, and each of the two halves is served by a single main artery. This main artery is in turn fed by subsidiary arteries parallel to it. Finally, these are fed by the roads which surround the super blocks themselves. The structure is a tree."



These two examples implemented the separation of functions posited by CIAM and that concept has thereby crystallised in our cities. A living, or natural city, he claims, when unconstrained by artificial conceptions, shows itself to be a semi-lattice.

He summarises his thesis as follows:

"When we think in terms of a 'tree' we are trading the humanity and richness of the living city for a conceptual simplicity which benefits only designers, planners, administrators and developers. Every time a piece of a city is torn out, and a 'tree' made to replace the 'semi-lattice' that was there before, the city takes a further step toward dissociation. In any organised object, extreme compartmentalisation and the dissociation of internal elements are the first signs of coming destruction."

Endorsing this thesis, Michael Waltzer has classified urban space into two distinct groups: 'single-minded' and 'open-minded' spaces. "'Single-minded' describes a concept of urban space that has been designed for, and fulfils a single function; 'Open-minded' is conceived as muti-functional and has evolved or been designed for a variety of uses in which everyone can participate."

Turning now from the City as Process to the city as Form, a critique was offered by Colin Rowe in 1979. He characterised the modern city as displaying an extraordinary addiction to towers and unconstructed

spaces which concepts are charactersied by 'physics envy', 'zeitgeist worship', 'object fixation' and 'stradaphobia'.

- 'Physics Envy' is "a state of mind, the idea that architecture could ever be elevated, or reduced, to that most certain of sciences";
- 'Zeitgeist Worship' refers to modern architecture's apologetic, "the conception of the architect as sensitive antenna, humble pencil, obedient planchette, just simply transcribing the mutterings and utterings of the 'spirit of the age' ";
- 'Object Fixation' comments on the pre-occuption of modern architecture with the 'outer angle', in other words the tradition of modern architecture to produce objects rather than spaces - how then, he asks "to make a city if all the buildings proclaim themselves as objects; and how many object/buildings can be aggregated before comprehension fails?";
- 'Stradaphobia' describes the privileging of vehicular movement as the controlling armatures generating modern urbanism devised by "incompletely educated highway engineers".

He summarises the failure of modern urbanism as "'space shyness' ... the city as an accumulation of solids in a largely unmanipulated void".

And then there is the grid, a universal C20 planning device described by Rosalind Krauss as: "the form that is ubiquitous in the art of our century". The seductive power of the grid as a hypothetical planning solution may be partly explained by its very abstraction; she avers: "the grid conveyed one of the basic laws of knowledge - the separation of the perceptual screen from that of the real world". The edges of the images allow their central imagery to fade into undefined obscurity, leaving just enough information to imply infinite extension, witness Garnier's Cité Industrielle.

In the 'Broadacre City' of Frank Lloyd Wright a grid is implicated which is to be laid across the whole of the United States, an instrument of anti-urban ideology as with the Garden City planners and Soviet Decentralists. Corbusier, on the other hand, employs the grid as an ordering device: "Man, by reason of his very nature, practices order". The idea of the grid as an ordering device was taken to its extreme in the work of Superstudio, who proposed the establishment of a global Cartesian grid attaining, as Colin Rowe describes it, "the final emancipation from the tyranny of objects". But a question for this century is, once the grid has been instituted as a framework for ideal planning, is it possible to develop it further? The implications are ultimately democratic and utilitarian, but as Krauss states: "once the grid appears, it seems quite repellent to change ... we have discovered that one of the most modernist things about it is its capacity to serve as a paradigm or model for the anti-developmental, the anti-narrative, the anti-historical".

Future Cities

Alvin Toffler in 'Future Shock' called attention to three basic features of planning in industrial nations: "an obsession with economics to the exclusion of all other concerns; a time bias which regards five years as long range; an elitist character that removes decisions from the ordinary citizen and hands them to remote experts and bureaucrats".

He elaboratet three declarations which I summarise:

Economics Alone Cannot Solve The Crisis

- 'fixed growth rates' and 'full employment' cannot be treated as independent goals
- the crisis cannot be solved by mortgaging the future for the sake of short term gains;
- the idea of a quick economic 'fix' is as dangerous as the notion of a quick, neat technological 'fix';
- economic policies must be combined with compatible policies dealing not only with money supply, wages, prices and balance of payments but also resource use, environment, education, cultural life, transportation, communications etc;

The Post Cannot (and should not) be Recaptured

- the old industrial order cannot be reinstated;

Every great crisis is also on opportunity.

- it is necessary to de-colonise the richest nations as well as the poorest;
- more radical conservation policies require more imagination in order to do more with less;

It is necessary, he concludes, to humanise technology and overhaul the creaking political institutions and imagine fresh personal and political priorities. Cities being the product of power are sustained or destroyed through the exercise of that power; we must, consequently, understand what is the nature of those forces and explore how they may be harnessed in the interests of sustainability.

Two examples are offered which provide evidence that a combination of invention combined with political will and understanding can fulfil not only the ideals which have attended urbanism through history but which are evolving as our global awareness matures. Barcelona is a city of 1.7 million people. It combines the attributes of both Process and Form. In 1999 the RIBA awarded this city its Royal Gold Medal for Architecture. I summarise the citation which stated Barcelona's rejuvenation resulted from:

- collective inspiration;
- a clear political and social agenda shared by

the city outhorities, business interests, designers and citizens;

• on ambitious, progmotic, urbon strotegy;
• transformation of the public realm, expanded amenities, regenerated economy, pride in its citizens and delight for visitors;
• historical buildings benefiting from refurbishment;
• past and present, work and play being intermeshed in a new totality;
• city planners demonstrating sensitivity to what buildings can do to shape the city and give it meaning.

A city of Process is Curitiba, the capital of Parana, which turns problems into sources of inspiration. As in Barcelona an inspirational mayor Jaime Lerner, who is also an architect, 30 years ago started an urban revolution. He gathered a team of creative professionals and developed solutions that were the product of extraordinary lateral-thinking, cost-effective, visually symbolic and politically astute decisions. They created the conditions for all citizens to contribute to a sustainable urban environment. The first Open University of the Environment is sited in a disused quarry, a magical, tree structure constructed of low energy materials. Each school class in Curitiba with its teacher spends a week in the University learning how small scale interventions contribute to the creation of practical benefits. Buildings in other spent quarries are destined to support a permanent festival of the arts. A cultural ethos is thereby evolved which colours every aspect of life in Curitiba. One astonishing innovation is the public transport system which is safe, swift and smart, low priced and is used by 75% of commuters, two millian possengers a day, even though car ownership is higher than in São Paulo. Densities have been concentrated around bus stops and along routes, so land use planning and transport complement each other. Traffic has declined 30% since 1974 although the population has doubled. Appropriate technology has been employed to humanise the environment and the services which sustain life, each problem being solved as it arose, rather than being suffocated by the dogma of a master-plan.

These no doubt imperfect examples provide indication that political, social and economic awareness can be harnessed in the interests of citizens without sacrificing global interests. Whereas C20 imagery centred on the City as Form, the brief for the C21 city must, I contend, be stated in terms of Alan Colquhaun's City as Process. Further confirmation is provided by The Beijing Charter, presented in thot city at the 20th Congress of the International Union of Architects in June 1999.

It states, the coming century calls for:

"• a methodology that guides the architect through all aspects of the built environment;
• a fusion of architecture, landscape architecture and city planning;
• an architectural process which views construction, operation, maintenance, renewal and conservation as a whole;
• multiple technologies that are rooted in indigenous cultures and societies, and are extended to the realm of human feelings;
• regional initiatives that enhance visual and psychological identities;
• incorporation of fine art, craftsmanship and industrial design in architects' work;
• moral conduct that treats society as the ultimate client;
• an open and continuous education programme for professionals, clients and the wider public."

The following items are offered as elaboration of those in the Beijing Charter and Barcelona's citation:

• the obvious must be perpetually repeated, that cities exist first and foremost to satisfy the social needs of communities;
• the conduct of C20 society was predicated on perpetual growth - this is a chimera and a mental adjustment to the reality of finite resources distributed for the greatest benefit of the greatest number is the ideal to which we should aspire;
• the planning of new urban centres must recognise that the bigger communities become, the greater the loss of social coherence;
• environmental conditions should be at the heart of decision-making at all levels, with environmental sustainability as the ethic of modern urban design;
• the planner must be on enabler, not a god;
• educational programmes must be adjusted to include teaching children and adults about their environment so as to equip them to participate in the process of respecting and improving their environment.
• there is a necessity to mobilise creative thinking in general, and among environmental professionals in particular;
• theory is indispensable - it is how we make sense of the world;
• an answer to the crucial question 'are materialism and sustainability antitheticol or compatible?' must be consciously sought in the test-beds which are our urban environments, present and future;
• cities will retrieve quality not by returning to regressive ideologies of nostalgia but by liberating new energies of architectural invention;
• technology is not a panacea - it resembles Macauly's comment on the imagination of a colleague that it

"resembled the wings of an ostrich - it enabled him to run but not to fly";

- the symbolism of public and social realms must be recovered;
- it is imperative that the urgency of resolving strategic objectives in sustainable form be resolved beyond pragmatism, to the level of spirituality which distinguishes architecture from building.

This encapsulation is neither revolutionary or original. It certainly is the case that the Grand Narratives of Progress and Enlightenment must now be adjusted to accommodate a revised agenda. The crucial question to ask as the memory of one century of frustrated ambition is replaced by the presence of another posing problems on a global scale is, what should be the legitimate role of the architect?

In 'Architecture and Disjunction', Bernard Tschumi poses the issue thus;

"Either we could ... 'conserve' our historical role as translators of, and form-givers to, the political and economic priorities of existing societies. Or we could function as critics and commentators of society through writings or other forms of practice ... Finally, we could act as revolutionaries by using our environmental knowledge in order to be part of professional forces trying to arrive at new social and urban structures."

He then asks:

"How could architects avoid seeing architecture and planning as the faithful product of dominant society, viewing their craft, on the contrary, as a catalyst for change? Could architects reverse the proposition and, instead of serving a conservative society that acted upon our cities, have the city itself act upon society? ... Could space be made a peaceful instrument of social transformation, a means of changing the relationship between the individual and society by generating a new lifestyle?"

The City of the Future will become the litmus paper of contemporary culture. FORM had its turn in C20 - now is the moment for PROCESS to benefit from the lessons conveyed by our flawed inheritance.

KEYWORDS

Urban, Form, Process, Future

Allen Cunningham - As an architect, he worked in the UK, the USA, France and Australia with Sir Leslie Martin and Marcel Bruer: As pedogogue he headed a School of Architecture in the heart of London for over twenty years. Now editing a refereed journal he founded, The Journal of Architecture, published by Routledge and the RIBA. Lives in London and Franc'e ond makes Tobleoux Objets.

7TH INTERNATIONAL DOCOMOMO CONFERENCE

Gérard Monnier

Jacques Repiquet

Fabienne Chevallier

Fabienne Chevallier

The reception of Modern Architecture

This paper deals with the reception theory, which will be the subject for the Seventh DOCOMOMO Conference to be held in Paris in September 2002.

On the proposal of the French working party, DOCOMOMO International has decided thot the next issue of the international Conference, which will take place in Paris, will be devoted to the reception of the works of the Modern Movement. The title of the Conference is "The Modern Movement, meaning and controversies. The reception and interpretations of the Modern Movement: Massmedia, myth and social volue"[1]. I believe that this issue will be welcomed by those who shore on ambitious vision of the legacy of Modern Architecture and also assume the complexity of this heritage, which is intimately intertwined with the volues that have been raised and conveyed by Modern Architecture.

Hans Robert Jauss was the founder of the reception theory. In his essays, he is proposing an ambitious method. On the whole, the "reception" consists in analysing the circumstances, the environment in which a particulor work of art is being created, produced, criticized, and judged. Jauss' reseorch was primorily devoted to literature, but his writings on the reception theory address more widely the field of art. When published in the seventies, this theory was carrying the methods in Art History away from the current opposition between methodologies still more or less inspired by the idealist philosophy on one hand, versus methodologies influenced by the various materialist theories concerning the mechanical relationship between art and society that had been in vogue especially since the eorly sixties. Some traits of the onalysis of the reception explain why and how it con be productive in the field of "modern" orchitectural studies. First, after a particular architectural project is being built, there exists a judgement of this building. Judgement is a key concept in Jauss' approoch, which he borrows directly from Emmanuel Kant (Kant, 1790). A first form of judgement is provided by the writings of the critics. Very often irrelevant of the reception by the critics, or even in contradiction with them, there also exists other forms of judgement of the buildings: the number of people visiting the buildings and monuments that are open to the public is one of the forms of the judgement. The way people live in these buildings, the way they are being taken care of, or restored, the preservation of them takes also part af the so-called "reception". All these meanings of the reception have to do with the life cycle of a particular building once it is already built. Gérard Monnier and Jacques Repiquet will cover those forms of reception in their own communicatians.

Also very importantly, the receptian embraces the circumstances from which a particular building takes its sources; the inspirations, the saurces af influence, the economic and social conditians also belong to a less well-spread aspect of the analysis of the reception. The issues involved are intimately related to the values that were raised by and were awarded to Modern Architecture in a particular context, and still are. This question is of general interest for all the people concerned with building, because Modern Architecture has raised a renewal of the farmal language of architecture, an ambitious, social oriented, generous system of values, which is probably without precedent; those meanings and values were brought during a period which, on the whole, bore extreme contrasts between certain periods of Golden Age and others of mere catastrophes, as the historian Eric Hobsbawm has pointed in his book The Age of Extremes *(Hobsbawm, 1994). The destiny of the villa of the Tugendhat family, created by Ludwig Mies van der Rohe in Brno (1928-1930), beors reflection upon those contrasts. They resulted inta a deep transformation of the meaning and use of the villa: after serving anly eight years as a home for the Tugendhat, the villa was confiscated by the Gestapo in 1940, then inhabited by several German people living in Brno; it was severely damaged at the end of the war. After the war, it was owned by the national management service and first served from 1945 until 1950 as a ballet school. It hosted the rehabilitation Deportment af the local Children Hospital in the sixties. Interest in the villa as cultural heritage began in the early sixties as a result of the action of figures of the former Brno Movement, amongst them František Kalivoda. It culminated only in the eighties with the first steps taken for the restoratian af the villa, and in 1995 when the building was granted the "National Cultural Manument" status (Kudelka and Teplý, 2001: pp.18-21).*

International, national and local networks or influences play an important role in Modern Architecture. Those networks bear certain specificities during the period of emergence, development and maturation of the Madern Movement. Migration is one of those factors. Eliel Saarinen's emigration to the United States in 1923 bears major developments in three fields: the architectural debate on the skyscraper type and on city planning theories, and the education of American architects and designers (Chevallier, in Barré-Despont, 1996: pp.139-140; pp.526-527). Saarinen is a case of his own. He emigrated for economic reasons. From 1924 until 1934 another vague of migrations had an ideological founding. German architects, amongst whom Oswald Schneideratus, Eric Mendelsohn and Ernst May accepted works in the USSR; some of them emigrated (Kopp, 1988: pp.253-260). This type of migration, mainly from German origin, also reached Le Corbusier in France, who was chosen at the competition launched for the Centrosoyouz project in Moscow (Cohen, 1992). A major aspect of those human migrations is that they also favoured the migration and reinterpretation of types and models, like in the case of Ernst May's use of modern city planning theories in the USSR. From 1934 on, the third major cause of emigration is well-known. It was the reaction against the nazi regime in Germany and its influences in European countries like Austria, the Czech Republic and Romania. Architects emigrated in the USA, but also in Palestine and in New-Zealand. The second main specificity of the international architectural network is the role played by the Museum of Modern Art. Major traits mark the specificities of this role during the period 1932-1944. First, the MOMA acts as a powerful source of judgement and recognition of European masters; this is a major discriminatory function, which is well illustrated in the recognition of the Finnish designer and architect Alvar Aalto, the only European architect to benefit from an individual exhibition in 1938. At the same token, judgement on European Architecture is directed towards a productive and national impact, because what is expected from this recognition is a renewal of the architectural field in the USA. These traits are present as soon as 1932, as Terence Riley has noted in reference with the famous architectural event "Modern Architecture, International Exhibition" (Riley, 1992), but also very strikingly in Alfred Barr's preface for the catalogue devoted to the Bauhaus in conjunction with the exhibition shown in 1938 at the Museum of Modern Art[2] (Barr in Bayer, Gropius and al., 1938: pp.5-7). A second important trait of the exhibitions held on European Modern Architecture at the Museum of Modern Art in the thirties is that the articles, written by American curators, are full of political and social assumptions: for example Catherine Bauer delivers a high critical appraisal in favour of the social policy of the British Labour Party in the catalogue published in conjunction with the exhibition on "Modern Architecture in England" held in 1937 (Russel-Hitchcock and Bauer, 1937: pp.21-22), whereas the catalogue for the Alvar Aalto' s exhibition in 1938 is reflecting John McAndrew' s and Simon Breines' conceptians on the idea of nation (McAndrew and Breines, 1938; Chevallier, 2000: pp.70-72). The third trait of this period is the fertilization of the American architectural scene and its diffusion through exhibitions; this trait is culminating with the exhibition "Built in the USA 1932-1944", organized by Elizabeth Mock in 1944.

International recognition gained at the Museum of Modern Art during the period 1932-1944 had a powerful impact. Other actors, historians and critics contributed at the time to this international scene of judgement. A local scene was also delivering its judgements sometimes in parallel. The case of Finnish modernism is extremely interesting in this regard; due to the French reception of the Finnish Pavilion at the Paris International Exhibition of 1937 and to the exhibition held at the Museum of Modern Art in 1938, Alvar Aalto was the only Finnish architect to gain international attention, whereas the major architect Erik Bryggman' s reputation was confined to the Finnish audience. These judgements also fixed the forms for the debate on modernity and had local long lasting effect on the architectural scene in Finland in the sixties[3], until now.

The approach of the reception invites us to revisit the various figures active in the field of architecture. Architectural theory often paves the way for an endogen approach of architecture, where the main or unique actors would be the architects themselves and their networks. The situation is more complex, especially in the field of city-planning. For example, the role of the elected representatives and civil servants, both at national and local level, was often of determining nature at the stage of the definition of the projects, and of the conservation of urban surroundings. That is of course well-known in certain national contexts like in the Dutch one, where the role of certain figures of the social-democrat party, like F.M. Wibaut (1859-1936) in Amsterdam were extremely active in urban and social housing issues from 1914 on. In France, Edouard Herriot, the mayor of Lyon, played a major role in major architectural and urban projects between 1905 and the First World War; his close relationship with the architect Tony Garnier is well-known. But in certain contexts, those actors also played a major role for raising urban issues and promote the diffusion of experiences and competence in this field, sometimes on an interna-

tional scale. The period between 1919 and 1930 in France provides examples of such networks. They take their sources primarily in the necessities of the reconstruction, in the hygienist ideals and in the ambitions of providing housing for the poorest categories of the population. Philanthropic ideals are also at stake in this debate. The French review *La Construction Moderne* reports on the activity of those networks, feeding the architectural debate and echoing the problems faced in Paris: insalubrious housing, development of the car traffic, density problems. In 1919, the review records the action of a philanthropic and social oriented society, called "La Renaissance des Cités". The author of the article, Pierre Bourdeix, is the director of Civil Works in the city of Armentières. The aim of this society is to develop urban schemes that would encourage primarily a vision of "social order" that is particularly needed after the disasters of the First World War (Bourdeix, 1919: pp.34-35). In 1920, the inter-Allied Town Planning Conference is reported in the review (Bourdeix, 1920: pp.153-155). The members of the Conference are town planners coming from different countries, amongst which Great Britain, the Unites States, Belgium, the Netherlands, Denmark, Sweden and Norway. Gea Ford, an American town-planner, plays an important role in this Conference as the representative of the American Red Cross in France. This Conference is a major tool for the diffusion of the ideals and practices of town planning in France. Another international event takes place in Paris in 1928: the International Congress on Housing and Urban Planning (Congrès international de l' Habitation et de l' Aménagement des villes) (Descamps, 1928 : pp. pp.597-599). The main actors of this Congress are political representatives. Paul Strauss, a senator, and former French Minister of Hygiene, opens the Conference with the French Minister of Labour, Louis Loucheur[4]. M.G. Montagu Harris, a representative of the British Minister of Hygiene, chairs the committee on " Housing for the poorest ", whereas the French Henri Sellier, the mayor of Suresnes, a political figure very active in urban and social issues, delivers the report on those issues. Ernst May, as the director of the architectural office of Frankfurt, is chairing the committee on city-plans methods and legislation. These committees are an excellent opportunity for the mutualisation of experiences, competences and know-how.

The research on conservation or revitalization of urban schemes also addresses various actors involved in the life of the city. The French context of Vénissieux, in the area of Lyon, provides approaches in this regard. It is addressing a major social and political issue in France: the remedies to bring to the social costs of the so-called "Grands Ensembles". Such "Grands Ensembles" were built in Vénissieux in the sixties as a response to a lack of approximately five hundred apartment buildings resulting from an increasing number of migrant workers (Corbel, 1983: pp. 260-277). Social disturbances appeared in Vénissieux as early as in the seventies. The public strategy developed in the eighties as a response to this problem contrasts with the one developed in the 90's; in the eighties, an ambitious urban competition was held with the aim of proposing multi-dimensional solutions, concerning architecture, the public transportation, the economy, the lack of intellectual and scientific resources. We can observe in such a strategy a strong belief in the myth of the architectural competition as a way to solve the problems of human life, a myth inherited from the glorious years of the Modern Movement. The social response was to take its origin from the architectural field. Since the 90's, the strategy favours a variety of actions at the local level, including the use of the resources of local democracy. Urban memory is seen as a major tool in order to prevent social disturbances: in this context, the idea of Urban Heritage serves primarily a social aim.

The reception theary provides fruitful approaches for a critical appraisal of the Modern Movement, of its various contexts, and of its meaning and legacy.

NOTES

[1] This title was the one adopted by the DOCOMOMO Council in Brasilia when the present paper was delivered. It was changed after the Brasilia Conference during the first working session of the scientific committee. The title of the Conference is now: "The reception of Architecture of the Modern Movement: Image, Usage, Heritage".

[2] Barr's preface provides an educational program in architecture that is borrowed from his own reception of the principles of the Bauhaus (see Barr in Bayer, Gropius and al., 1938: 6)

[3] The reception of "kivikirkko" (the stone church) in Helsinki by Timo and Tuomi Suomalainen, and of the building Dipoli by Reima Pietilä in the sixties illustrates this point, which is borrowed from Roger Connoh (Connah, 1998: pp. 43-47). At the time there existed a latent theoretical scission between two models: "organic" practices, which were acceptable from Aalto, as an isolated figure in the Finnish scene, and an uncompromising abstraction, claimed as fidelity to the Modern Movement and defended by Aulis Blomstedt and Arno Ruusuvuori. The Suomalainen's church and Pietilä's Dipoli did not fit in this scene.

[4] Louis Loucheur was an important politicol figure; a former industrialist, he was nominated as Minister of Labour of the government Raymond Poincaré in June 1928. In 1928, he prepared a law allowing state loans and subsidies in favour of social housing; this law was adopted by the Parliament in July 1928.

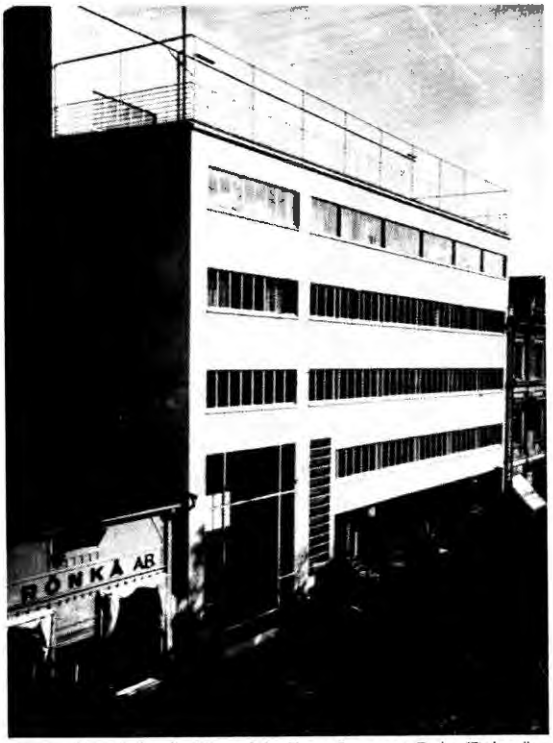


Fig. 1 – Alvar Aalto, building of the Turun Sanomat, Turku (Finland), 1929 (Photograph G. Welin, Museum of Finnish Architecture)

Fig. 2 – Erik Bryggman, villa Warén in Ruissalo (Finland), 1934 (Photograph G. Welin, Museum of Finnish Architecture)

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Keywords

DOCOMOMO International Conference; Reception Theory

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COUNCIL MEETING

Sixth DOCOMOMO International Council Meeting

September 21, 2000, Brasília, Brazil
Minutes (Draft – June 22, 2001)

EC Chairman: Hubert-Jan Henket, The Netherlands
EC Secretary: Wessel de Jonge, The Netherlands
EC Member: Maristella Casciato, Italy
EC Member: Anno Beatriz Galvão (Br)/ Fabienne Chevollier (Fr)

Opening

The chair opens the 6th Council Meeting at 19:30h., and welcomes the representatives of 22 DOCOMOMO Wps. The: Secretary apologises that the minutes of the 5th Council Meeting of September 18, 1998, in Stockholm, Sweden, were omitted from the agenda. The minutes, dated September 17, 2000, have been handed out to the representatives over the past two days.

Council unanimously accepts the minutes of the 5th Council Meeting.

The Chair resumes the agenda for the 6th Council Meeting.

1. Participants in the 6th Council Meeting

1.1 Members of Council

The following countries comply with the 1 O-member minimum rule (exemption for Latvia) and participate in the 2000 Council Meeting:

Argentina (Alfredo Conti)
Australia (Jennifer Hill)
Belgium (Luc Verpoest)
Brazil (Lucio Gomes Machado/Anna Beatriz Galvão)
Canada BC (Bernie Flaman)
Canada Quebec (France Vanlaethem)
Czechia (Iveta Cerna)
Denmark (Ola Wedebrunn)
Estonia (Mart Kalm)
Finland (Maija Kairamo)
France (Fabienne Chevallier/Gerard Monnier)
Greece (Panayotis Tournikiotis)
Iberia (Susana Landrove)
Japan (Kenji Watanabe)
Latvia (Janis Krastins)
The Netherlands (Rob Docter)
Norway (Eirik T. Boe)
Russia (Sergey Tatchenko)
Scotland (Miles Glendinning)
Sweden (Claes Caldenby)
UK (Allen Cunningham)
US (Theodore Prudon)

Norway attends as an auditor (did not meet the 10-member minimum). Not represented are: Austria, Bulgaria, Canada Ontario, Croatia, Dominican Republic (provisional), Germany, Hungary, Ireland, Israel, Italy, Lithuania, Poland, Romania, Slovakia, Slovenia, and Switzerland.

The Chair expresses his regret about the number of member countries absent. Altogether, the representatives of 22 working parties attend the Sixth DOCOMOMO Council Meeting. All stay until the end.

1.2 Voting power

The Secretary has ascertained that the underlined 21 countries can participate as voting members as they alsa comply with the standard regarding the Homework 1998-2000 (ISC/R recommendation). Bulgaria, Germany, Italy and Slovakia da have voting power, but are nat able to consume this right, as they are not represented in Council.

1.3 New Working parties

The Secretory announces that three countries have submitted an application for recognition as a Wp. Before putting their candidacies to vote, the applicant has to meet the 10-member minimum, has to obtain consent from the EC on their plan of Action 2000-2002, and the support of four other Wps.

1.3.1 Australia

The Secretary confirms that Australia met the above requirements. Letters of support are available from the UK and The Netherlands. Oral support is given in Council by Estonia and France.

Council unanimously accepts Australia as a new National Wp and DOCOMOMO Australia is added

to the above list.

The Chair congratulates Australian representative Jennifer Hill on behalf of all delegates.

1.3.2 Austria

The Secretary explains that Austria did not yet meet the above requirements as they have been informed about these conditions too late by the IS, for which he apologises. Still, Austria has been able to submit a provisional application, a preliminary list of members and a draft plan of Action. Oral support is given in Council by Czechia, Denmark, Greece, and Scotland.

The Chair therefore proposes to vote on the Austrian candidacy and allow until December 15, 2000, to submit the requested papers for the EC to approve. Until then, the Austrian group is granted the status of a provisional working party.

Council unanimously accepts this proposal.

[Note: Austria has since submitted the requested documents, which were approved by the EC on December 15, 2000.

Since then, DOCOMOMO Austria is officially recognised as a National Wp.]

1.3.3 Japan

The Secretary confirms that Japan met the above requirements. Letters of support are available from Hungary, Italy and The Netherlands. Oral support is given in Council by Brazil.

Council unanimously accepts Japan as a new National Wp and DOCOMOMO Japan is added to the above list.

The Chair congratulates Japanese representative Kenji Watanabe on behalf of all delegates.

1.3.4 Russia

Sergex Tatchenko (Russia) declares that, in contrast to earlier information, the Russian Wp will remain one group and decided not to split up in regional branches. The Secretary asks Tatchenko to resolve the structure of the Russian Wp before December 15, as it remains unclear to the EC who is actually in charge.

2. International Conferences

2.1 Evaluation of the VI Conference

The Chair invites all participants to complete the conference valuation forms and return them to the Conference Office. Results will be publicised later.

Anna Beatriz Galvão (EC) briefly reflects on the preparatory stage of the Conference. It has taken time and efforts to overcome the initial predominance of the EC over the Brazilian organisation, that she attributes to cultural differences within the DOCOMOMO organisation. She is however pleased that the EC eventually reconfirmed its trust in the organisation and that the Conference has so far been a success.

Galvão resumes that the Conference programme proves a bit overloaded, which has caused some technical problems. The selection procedure for papers has been more objective and focused on the Main Theme this time, as the names of the authors had not been ovailoble to the members of the Scientific Committee (ScC). Though successful, she pleas to allow the ScC more time for this process. The stronger involvement of the respective Chairs in the preparation of the various sessions has been an improvement as well.

Council voices its high appreciation for the organisation of this Conference, and particularly for the large involvement of mony keen students–something that has regrettably been missing at earlier conferences. Regarding the venue, Council agrees that the relaxed atmosphere of Niemeyer's university complex perfectly suits a DOCOMOMO Conference, although the exhibition space and the two conference halls are located far apart. No comments about hotels or the infrastructure of the city are made.

The Chair thanks the Brazilian Wp, and Anna Beatriz Galvão in particular, for their initiative to organise for the first time a conference in the New World.

2.2 VII International Conference in 2002

Fabienne Chevallier (France) briefly elaborates on the First Announcement dated September 15, 2000 (copy), that has been revised since their 1998 proposal, with the theme Receptian of the Modern Movement'. Council delegates express their general appreciation of the theme.

Maristella Casciato (ISC/R) adds that the ISC/R found the topic very inspiring and that two Committee members will prepare a proposal for the session related to the Registers.

Claes Caldenby (Sweden) inquires why the ScC did not involve any members from Northern and Eastern Europe, an observatian that is shared by Mart Kalm (Estonia).

Fabienne Chevollier replies that the French Wp is happy with the interest and positive response from other countries regarding the theme. About the compositian of the ScC, she argues that the selection of members of ScCs in the past had neither involved topographical criteria. The Chair confirms that there has been no such rule so far, but that the issue will be discussed during the first ScC meeting in Paris.

Luc Verpoest (Belgium) inquires why the dates were changed to early September, as this will interfere with exams in Belgium.

Maija Kairamo (Finland) also favours the regular dates in the third week of September.

The Chair puts the issue to vote.

Council prefers to have the Conference on September 16-21, with no votes for the first week, 7 votes in favour of the third week, and 14 abstentions. Chevallier will check with the hosting institution IFA to see whether these dates are possible.

2.3 VIII International Conference in 2004

Theodore Prudon (US) expresses the intent of the US Wp to organise the VIII Conference in 2004. The theme, provisionally labelled 'The Vision of Modernism', may address the particular vision on the Modern Movement in the US, but a decision will require further debate within the US Wp. As the US group is an umbrella for sub-Wps in five large cities, each representing a region within the country, further preparation will take some time. Also, in the US context, the required funding will have to be raised privately. Therefore DOCOMOMO-US claims more time to prepare a comprehensive proposal.

The Chair proposes to grant the US Wp until December 15 to come up with a proposal. Until then, other Wps will have the opportunity to submit a candidacy as well. If only one proposal will be received, the EC will have Councils' mandate to make a decision.

Council agrees with 19 votes in favour and 2 abstentions (US and Australia).

Luc Verpoest (Belgium) pleas for a stronger involvement of delegates from Africa in upcoming Conferences.

The Chair fully underscores this ambition, though the endeavours of the IS to involve African countries in DOCOMOMO so far have not had significant response.

Suggestions to advance African involvement in DOCOMOMO are invited.

3. International Secretariat in 2000-2002

3.1 Report IS 1998-2000

The Secretary briefly elucidates the report and financial account for 1998-2000 (copies). The IS made good use of its financial freedom to assist in the financing special projects like the Register publication and the keynote speakers at the VI Conference. As a result a large part of our financial reserves has now been spent on such projects, and DOCOMOMOs expenditures in 2000-2002 will have to be cut by 20%.

Since September 1999, the services provided by the IS have greatly suffered from its disproportionate involvement in collecting the materials for the Register book. A second volume of this book will only be feasible if the involved Wps show much more discipline, see 7.6.

In order to reduce work and cut expenses, the IS will rely much more on e-mail from now on. All Wps are requested to establish an e-mail connection for their group by January 1, 2001, after which the majority of our communications, including voting procedures related to Council decisions, will be exclusively distributed bye-mail. Wps without an e-mail address may not – or not in time – receive such informations by surface mail, for which the IS cannot be held accountable.

The IS will change to the Euro as the new currency for our financial transactions and membership fees by late 2001, see 6.4.

Council has no further questions and accepts the account as presented by the Secretary.

3.2 Location for the International Secretariat 2000-2002

The Chair confirms that the TU Delft Faculty of Architecture is again prepared to extend their support for the period 2000-2002, but has announced that this responsibility will then be abandoned.

Allen Cunningham (UK) voices his appreciation of the work done by DOCOMOMO staff in Delft, and various Council members express their approval.

Council votes for Delft University as the host for the IS fo 2000-2002, with 20 votes in favour and 1 abstention (Australia).

4. Executive Committee in 2000-2002

4.1 Report 1998-2000

The Chair gives a brief overview of results over the last two years. The Proceedings of the V Conference have been published according to schedule, for which he thanks the Swedish Wp. The ISC/Technology produced Technology Dossiers 3 (Windows and Glass; Copenhagen), and 4 (Wood; Helsinki), and the 5th Technology Seminar, on Colour, that took place last May, in Leuven (Belgium). Also the ISC/Registers has again greatly contributed to the DOCOMOMO effort by continuing the international Register Project. The Register book has been an enormous achievement, see 7.1. The EC intends to co-organise with the WHC/ICOMOS a conference on World Heritage List criteria, see 8.

Council sadly commemorates the late Anna Maria Zorgno, a dedicated member of DOCOMOMO Italy and the ISC/Technology, who represented Italy in Council in 1998.

4.2 Vote on EC Chair

No candidacies have been received. Council re-elects unanimously Hubert- Jan Henket (The Netherlands) as the Chairman for 2000-2002.

4.3 Vote on EC Secretary

No candidacies have been received. Council re-elects unanimously Wessel de Jonge (The Netherlands) as the Secretary for 2000- 2002.

4.4 Vote on EC Member for ISCs

No candidacies have been received. Council re-elects unanimously Maristella Casciato (Italy) as the EC Member for ISCs for 2000-2002.

4.5 Appointment of the EC Member for the 7th Conference

Brazilian representative Anna Beatriz Galvão, after having received an ovation for her splendid work organising the Sixth International Conference, stepped down as the EC Member for Conferences. The EC approved the nomination by the French Wp of Fabienne Chevallier, who is then appointed as the EC Member for the 7th Conference.

[Galvão takes seat of Machado for Brazil, Monnier takes seat of Chevallier for France]

4.6 Executive Committee ofter 2002

4.6.1 Introduction

The Chair reconfirms that the present Chairman and Secretary will step down at the Council Meeting in September 2002. He thanks the French Wp, as they have submitted the only candidacy to take over the Chair and the International Secretariat of DOCOMOMO International as from September 2002. He invites the French representative to elucidate their proposal of 24 August 2000, which has been distributed in advance.

Gerard Monnier (France) extends the invitation to DOCOMOMO International to strengthen its relation with Latin culture, though the French proposal still ensures that the specific character of every member country will be respected.

The working programme is based on co-operation between architects and researchers. The educational programme of DOCOMOMO is proposed to become of much greater importance, and will involve training and actual research programmes. Research on WHL -issues is to be extended in view of our co-operation with the WHC/ICOMOS in Paris.

The content of the programme is based on the French context, but is intended as a starting point and will be elaborated after comments from other countries. Still, the French Wp invites Council to accept the framework of the proposal as it is, since this has already been subject of talks with sponsors and supporting institutions. The French Ministry of Culture will provide the infrastructure for the IS at the National Institute of Art History, and employ a professional as the Secretary as from that moment; it is therefare not yet decided who will take this position. Financial support for accommadating the IS in France will amount about US $ 75,000.-- per annum.

Fabienne Chevallier (France) adds that the issue of the presidency has been complicated. Several candidates have been approached (Sapram, Cohen, Dunnett, Vanlaethem), nane of whom, for various reasons, could accept. Also in view of the changed position of the Secretary (see above), the French Wp eventually proposes the presidency to be split between two vice-presidents and a president, or Chair, each with specific assignments. As a temporary board, until final decisions will be made at the 2002 Council Meeting, is proposed: Gérard Monnier as the Chair; François Picon, as a vice-president for technology; and Fabienne Chevallier, as a vice-president for cultural affairs.

The Chair gives the floor to the delegates to respond to the French proposal, and reconfirms the neutral position of the members of the EC. The extensive debate that follows is summarised below, according to the various themes.

4.6.2 General comments

The comprehensiveness af the French proposal meets great approval of all Council members. Congratulations are extended by the delegates of the UK, Scotland, The Netherlands, Denmark, and US and, further commenting on the French proposal, implicitly by the other delegates. Iberia observes that the proposal may have brought some fear of change but has provoked, for the first time in Council, a fundamental debate an the aims and actions of DOCOMOMO International.

Argentina adds that, in spite of cultural differences, we are friends bound by our concern about the Do and Co of MoMo, and that our open-mindedness will help us not to be afraid of change. Apart from the general approval of the all-inclusiveness and challenging theme of the proposal, several aspects of the proposal excite further comments. Some delegates voice their concern that the complexity and diversity of the varaus aspects of the French proposal may make a vote on the complete package toa complicated.

The UK delegate argues that the proposal should perhaps be mare critical regarding the Eindhoven Statement that, in 1990, has involved just a few of the present 39 countries and may need to be revisited to make it more clear regarding our future alms.

Fabienne Chevallier (France) replies that a revision of the Eindhoven Statement should not be ruled out, as the French indeed want to change tack.

4.6.3 Organisation

Some delegates foresee, that the propasal to create a split presidency may bring the risk of faceless-

ness. In order to ensure a forward looking and effective leadership, the Netherlands delegate favours a strong personal presidency, preferably performed by an architect, or at least backed up by peaple from practice and the field of architectural education.

The latter point is supported by the UK and US delegates.

Fabienne Chevallier (Fronce) replies that the French Wp did not rule out this option in advance but that such strong personalities so far refused the invitation, and the proposal for a split presidency has resulted.

The Greek delegate adds that the move from The Netherlands to France, and the new presidency, will unavoidably pose new challenges, which must be understaod positively. As the cultural diversity of the member countries is sure to remain essential, and this has by no means been affected by the presidency over the past ten years as well, there is na reason to suggest that the essence of DOCOMOMO will change by these new circumstances.

The Brazilian delegate adds that the 'centric' countries of cultural life will have to go through this mutual experience of change, like the culturally 'eccentric' countries such as Brazil have done repeatedly over the past period. She states that it is DOCOMOMO itself rather than any particular country or person that makes it special. In any case, Council will still remain in charge of essential decisions and can interfere in case of unfavourable EC policies.

4.6.4 Theme

If the present proposal is indeed forward looking, a contradiction with the theme far the VII Conference seems evident. The conference theme suggests merely to look back on the 20th Century as a closed period or a quantitative issue, which may curb the ongoing dialogue on living and qualitative issues, such as the technological and ideological aspects of the Modern Movement. (Denmark, Finland) The Finnish delegate adds that this qualitative debate makes DOCOMOMO stand aut from other organisations like ICOMOS, and that a limitation to the 20th Century would be fatal for DOCOMOMO in Finland. The Belgian delegate observes that when working in conservation, our point of view is adapted all the time.

Fabienne Chevallier (France) explains that the theme of the Conference is completely independent fram the general scope of DOCOMOMO International as proposed by the French Wp. After invitation by the Chair, she clarifies that also in the praposal to move DOCOMOMO to France, the relation of the Modern Movement with the 20th Century as a period in history is regarded as a reality.

4.6.5 Interdisciplinarity

In the proposal, a move towards historicism is found by a number af delegates (UK, US, The Netherlands). The representation of practicioners and hands-on researchers, as well as the diversity in professional involvement is regarded essential, but seems to stay behind. Delegates plea for a I stronger position of DOCOMOMO as an umbrella for an amalgamation af disciplines. This is essential to sustain the farward-looking appraoch, which is regarded os vital for the organisation as a whole.

Fabienne Chevallier (France) underscores this position and stresses the importance of the work of all the ISCs, including the ISC/T. The proposal is aimed indeed to strengthen the position of professionals by accumulating their efforts, by stimulating research by third parties, and by involving technology in training and educational programmes.

The Canada Quebec delegate adds, that the contribution of practicioners in the DOCOMOMO working programmes has so far been rather weak, so a change may be legitimate.

4.6.6 Independence

The future position of DOCOMOMO as an independent body or NGO in its relation to the National Institute of Art History (INHA) and the French Ministry of Culture excites questions from a number of delegates (US, Scotland, The Netherlands), followed by an extensive debate.

Fabienne Chevallier (France) explains that the former solution, involving the Delft Faculty of Architecture, would not work in France, as the educational structure in France would not secure a proper balance between design, history, and technalogy. On the other hand, the INHA is perfectly suitable to accommodate DOCOMOMO Intemational os it already hosts many other international institutions independently. After invitation af the she clarifies that the institutions housed by INHA are indeed very diverse, including foreign ones, and these make similar conditions. Tatal independence in substance is secured, even if this would imply, for example, actions against the French Ministry of Culture or its agencies.

Same delegates are concerned that it may be difficult to profile ourselves as a cultural institution amang the numerous bureaucratic cultural institutions in Paris, and that we may loose some of our dynamism as a small organisation, particularly if the relations with WHC and ICOMOS will be strengthened. (Estonia, Finland) The Estanian delegate regrets that there is no alternative propasal fram a smaller country that could avoid this to happen.

4.6.7 Language

Although Monnier's presentation of the French

programme in English is well appreciated, the propasal to add French as a second working language, including bi-lingual editions of the Journal, is feared by some ta entoil more bureaucracy, may not advance efficient work, and will require extensive additional funding. The effect this may have on the workload of the IS may prove prohibitive if more countries in Asia and Africa are to be attracted. (Scotland) Some delegates advocate sustaining a preference for English as a main language in order to secure the international scope of DOCOMOMO also in terms of languages. (US, Latvia) The present conference with lectures in Spanish, Portuguese, French and English is not regarded a positive example in this respect.

Others question the choice for French rather than Spanish, or Portuguese. (Denmark)

Fabienne Chevallier (France) explains that French is only added as a working language, to be used at meetings, for instance those of the EC or the ISCs, according to the preference of those attending. Reports of such meetings may also be in French, but always in English. In addition, bi-linguality will improve communications with the WHC, ICOMOS and UNESCO, as she argues that these have not always proven to be efficient in the past.

Some delegates emphasise the preoccupotion in the present proposal with bi-linguality as an opportunity to open up new regions of the world, such as Africa. (Canada Quebec, Greece) Other delegates olso support the proposal by voicing their preference far a wider choice of working languages if financially feasible. (Belgium, Brazil, Argentina)

4.6.8 Vote

The Chair proposes to put the various issues to vote individually, as the comments on some af the issues have been rather fundamentol, whereas others are of a more 'technical' nature.

Fabienne Chevallier (France) sustains the position of the French proposal as an integral framework that needs to be approved by Council as a starting point in order to proceed. The comments by Council have been heard, and the proposal will later be elaborated after the comments from other countries.

The Chair disagrees with the proposed procedure. As the French Wp sustains its position, the Chair still decides to put the integral proposal, as it is, to vote.

Council rejects the proposal as it is, with 7 votes in favour (Belgium, Brazil, Canada Quebec, Greece, Iberia, and Japan), 8 votes against, and 6 abstentions.

The Chair proposes to invite amendments for vote.

Gerard Monnier (France) states that the negative outcome of the vote does not allow amendments.

The Chair proposes to invite other proposals for taking over DOCOMOMO International from other member countries until December 15, and to have the French proposal stay on until then.

Gerard Monnier (France) states that democratic procedures require the French praposal to be withdrawn.

Allen Cunningham (UK) expresses his regret about this approach, as he feels that Council debates must be seen as consulting procedures.

Ola Wedebrunn (Denmark) voices his appreciation for the French proposal, as it has invited a strong and fundamental debate. He pleas to allow more time to consider the French proposal and asks the French Wp to reconsider to take part in the procedures.

Anna Beatriz Galvão (Brazil) agrees by arguing that, under the circumstances, one vote can nat be regarded as representational.

The Chair regrets to conclude that procedures for new proposals are again open until December 15, 2000. Given the good work done and the overall quality of the French proposal, he hopes that the French Wp will reconsider its position.

If no proposals for taking over DOCOMOMO International will have been received by December 15, 2000, the VII Conference in Paris will be the final action of our organisation.

France Vanlaethem (Canada Quebec) points out that procedures are lacking to allow a debate on such new proposals.

The Chair decides to have a special Council Meeting on February 3rd, 2001, in The Netherlands. Delegates can sent in their comments bye-mail, and only those eligible delegates actually attending the meeting will have the power to vote.

Details will be sorted out later.

5. Constitutional matters

No proposals have been received.

6. Membership of DOCOMOMO International

6.1 Membership and fees 2000-2002

No proposal for a new fee structure has been received.

6.2 Reduction percentages for membership fees

The Chair explains that the remarks of the Latvian delegate in the 1998 Council Meeting resulted in the EC proposal to abolish the 0 % category and move these countries collectively to the 40 % category.

Sergex Tatchenko (Russia) requests for a postponement of this decision, at least as far as Russia is concerned, as the membership fee in foreign currency is mostly prohibitive for Russian members.

Maija Kairamo (Finland) supports the Russian request.

Allen Cunningham (UK) argues that it is hard to make a judgement as we have no idea how the situation in Russia actually is.

Council decides to retain the existing reduction percentages with 6 votes in favour, 5 votes against, and 10 abstentions.

The Chair proposes to include the new countries Australia, Austria and Japan in the 100 % category, which is unanimously accepted by Council.

6.3 Payment

The Secretary informs Council that the IS will change to the Euro as the new currency for our financial transactions and membership fees by late 2001. In order to reduce work and cut expenses, the IS will no longer accept personal cheques or individual banktransfers. Membership fees must preferably be paid collectively per Wp; individual members are requested to pay by credit card.

Maija Kairamo (Finland) inquires if the membership fees could be collected annually.

The Chair confirms that this is already the case, but that within the individual Wps the two-year structure can also remain to be used in view of the discount on the biannual conferences.

7. International Specialist Committees

7.1 ISC/Registers

7.1.1 Report 1998-2000

The Committee Chair Maristella Casciato (Italy) briefly reports about pragress made with the international Register Project and related matters. The Committee will continue its activities for the New International Selection and reminds all the Wps that the revised fiche can be found on the DOCOMOMO Website. The Committee hopes that through the Registers, the work of the Wps will be strengthened. The Register publication, a main achievement of DOCOMOMO International resulting from the International Register, is an the agenda under 7.6. The report will be elaborated for publication in the Jaurnal 24.

7.1.2 Vote on membership of the ISC/R

Current members are willing to continue, except for Tony Merchell (US West Coast) who decided to step down. Casciato thanks him for his work for the Committee over the last two years. Council agrees unanimously to continue current membership.

At their pre-conference meeting, the ISC/R decided on the formal nomination of Celestino Garcia Brana (Iberia) as a new member of the ISC/R for approval of the EC (obtained) and vote in Council. Council ogrees to accept Brona os a new member of the ISC/R, with one abstention (Iberia).

7.1.3 Vote on ISC/R Chair

Maristella Casciato (Italy) is unanimously re-elected as the Committee Chair.

7.1.4 Vote on ISC/R Secretary

Marieke Kuipers (The Netherlands) is re-elected as the Committee Secretary, with one abstention (The Netherlands).

7.1.5 Resolutions by the ISC/R

No resolutions by the ISC/R have been received.

7.1.6 Plan of Action 2000-2002

For 2000- 2002, the ISC/R consists of Maristella Casciato (Chair, Italy), Marieke Kuipers (Secretary, The Netherlands), Luc Verpoest (Belgium), France Vanlaethem (Canada Quebec), Panayotis Tournikiotis (Greece), Andras Ferkai (Hungary), Celestino Garcia Brana (Iberia), David Witham (Scotland), Dennis Sharp (UK), David Fixler (US), and Jorge Gazaneo (ex-ufficio, Argentina).

The 2000-2002 plan of Actian of the ISC/R is presented as a separate document with the Agenda. In brief, it concerns:

- The elaboration of a digital format Minimum Fiche, to prepare for the International Selection on the DOCOMOMO Website.
- To encourage Wps to extend their scope, network and means of communication.
- To encourage Wps to involve landscape and urbanism in their register efforts.
- To investigate the possibilities for an International Seminar on documentotion methodology, strategic use of the Registers and the use of Ia, probably in Mantreal.
- To investigate the release of DOCOMOMO Certificates for selected items.
- To introduce a section for the Miscellaneous in the Register for items in non-member countries.
- Portication of the Wps in the Register Project will alsa be the Homework for 2000-2002, see 9.

The 2000-2002 plan of Actian of the ISC/R is unanimously accepted by Council, and will be elaborated for publication in Jaurnal 24.

7.2 ISC/Education

7.2.1 Report 1998-2000

The Committee Chair Allen Cunningham (UK) briefly reports about progress made with the ISC/E+T. The report will be elaboroted for publication in Journal 24. The Committee Chair welcomes the involvement of large amounts af students in the present Conference.

7.2.2 Vote on membership of the ISC/E+ T

Stefan Slachta (Slovakia) and Penio Stolarov (Bulgaria) have not responded to communications from the Committee Chair since 1996 and it is recommended their membership of the Committee be discontinued. Other current members have expressed, or are assumed, to be willing to continue their participation, which is unanimously accepted by Council.

At its pre-conference meeting, the ISC/E+ T decided on the formal nomination of Kaisa Broner-Bauer (Finland) and Jeon Marc Basyn (Belgium) as a new members of the ISC/E+ T for approval of the EC (obtained) and vote in Council.

Council agrees to accept both as new members of the ISC/E+T, with two abstentions (Belgium and Finland).

7.2.3 Vote on ISC/E+ T Chair

Allen Cunningham (UK) repeoted his intention to resign as the Committee Chair. By absence of a candidate successor, he was re-elected as the Committee Chair, with ane abstention (UK). A new chairperson is however needed and candidates are invited to contact him.

7.2.4 Vate an ISC/E+ T Secretary

The position of Arie Sivan (Israel) as the Committee Secretary remains unclear as no information has been received on his willingness to keep this position. It is assumed that Sivan will remain available and he is unanimously re-elected as the Committee Secretary.

7.2.5 Resolutians by the ISC/E + T

No resolutions by the ISC/E+ T have been received.

7.2.6 Plan of Action 2000-2002

For 2000-2002, the ISC/E+T consists of Allen Cunningham (Chair, UK), Arie Sivan (Secretary, Israel), Mabel Scarone (Argentina), Jean Marc Basyn (Belgium), Luc Verpoest (Belgium), Daniel Bernstein (France), Kaisa Broner-Bauer (Finland), Catherine Cooke (UK), and corresponding member Ben Rebel (The Netherlands).

The Committee Chair urgently requests the members to respond to his communications.

Luc Verpoest (Belgium) can't remember to have received anything since 1998, which appears to be due to a mistake in the mailing list.

Theodore Prudon (US) offers to explore possible participation of a US member.

The Committee Chair presents a modest programme for the 2000-2002 Plan of Actian, as the formula for 'action and progress' of the Committee have not yet been found and the results of the ISC/E+T have so far been limited. Th programme involves an Epistemology identifying two strands:History and Theory; and a project to identify current schools and post graduate programmes that will include the various institutes working in the field of MoMo conservation world-wide. The Committee Chair hopes to establish a chapter of the Website on educational programmes, but so far resources are lacking. A seminar on MoMo conservation education is considered for the longer term.

The 2000-2002 plan of Action of the ISC/E+T is unanimously accepted by Council, and will be elaborated for publication in Journal 24.

7.3 ISC/Technology

7.3.1 Report 1998-2000

The Committee Chair ala Wedebrunn (Denmark) remembers the late Ana Maria Zorgno, who represented Italy in the ISC/T since 1998. Her participation in the Committee kept many promises, but had not yet fully developed. wedebrunn hopes another member from Italy may be able to take her place in the near future.

Wedebrunn resumes by briefly presenting the results over the past two years, which include two more seminars, on Wood (Helsinki, June 1999) and on Colour Technology (Leuven, May 2000), and the publication of two more Technology Dossiers, dossier 3 on Windows and Glass (April 2000) and dassier 4 on wood (August 2000). The extension of the DOCOMOMO Technology database as well as the technology bibliography project is insufficiently developing so far and the Committee Chair intends to start a campaign to re-activate the Wps. His account will be elaborated for publication in Journal 24.

7.3.2 Vote on membership of the ISC/T

Hans Jurgen Kiehl (Norway), Tony Walker (UK), and Jadwiga Urbanik (Poland) have not responded to communications from the Committee Chair since 1996 and they will be addressed to see whether their membership of the Committee be discontinued. Other current members have expressed, or are assumed, to be willing to continue their participation, which is unanimously accepted by Council.

At its pre-conference meeting, the ISC/T decided on the formal nomination of Yiveta Cerna (Czechia) as a new members of the ISC/T for approval of the EC (obtained) and vote in Council.

Council agrees to accept Cerna as a new member of the ISC/T, with ane abstention (Czechia).

7.3.3 Vote on ISC/T Chair

Ola Wedebrunn (Denmark) is re-elected as the Committee Chair, with one abstention (Denmark).

7.3.4 Vote on ISC/T Secretary

Els claessens (Belgium) is willing to continue her

position and she is re-elected as the Committee Secretary, with one abstention (Belgium).

7.3.5 Resolutions by the ISC/T
No resolutions by the ISC/T have been received.

7.3.6 Plan of Action 2000-2002
For 2000-2002, the ISC/T consists of Ola Wedebrunn (Chair, Denmark), Els Claessens (Secretary, Belgium), Susan MacDonald (Australia), Yiveta Cerna (Czechia), Juha Lemstrom (Finland), Jos Tomlow (Germany), Mariel Polman (The Netherlands), Wessel de Jonge (The Netherlands), and until decided otherwise, Jadwiga Urbanik (Paland), Tony Walker (UK) and Hans Jurgen Kiehl (Norway).
The ISC/T working programme 2000-2002 involves the publication of a fifth technology dossier on Modern Colour Technology, and further technology seminars are scheduled on thin stone claddings; interior finishings; building physics and adaptation; and space and structure. Updates on previous seminars are considered as well. As part of the 2000-2002 homework the ISC/T proposes to invite the Wps to add experts from their country to the MoMo Technology database.
The 2000-2002 Plan of Action af the ISC/T is unanimously accepted by Council, and will be elaborated for publication in Journal 24.

7.4. ISC/Urbanism and Landscape
7.4.1 Report 1998-2000
Committee Member Rob Docter (The Netherlands) briefly reports obout results over the past term, which include the publication by its members of The Clone City (Miles Glendinning) and The Modern Historic City (Paul Meurs), and a contribution to The Modern City Revisited (Rob Docter).
Despite these achievements, the ISC/U+L has not completely executed its plan of Action.

7.4.2 Vote on the membership of the ISC/U+L
Before the vote on the committee members, Council is informed about the Committee's proposal to agoin merge the two sub-committees again into one ISC/Urbanism+Landscape, which is unanimously accepted by Council.
All members of the previous subcommittees are willing to continue for 2000-2002, which is unanimously accepted by Council. No new members have been nominated.

7.4.3 Vate on the ISC/U+L Choir
Paul Meurs (The Netherlands) is nominated by the new Committee and approved as a candidate by the EC. Council elects Meurs as the Committee Chair, with one abstention (The Netherlands).

7.4.4 Vote on the ISC/U+L Secretary Rob Docter (The Netherlands) is nominated by the new Committee and approved as a candidate by the EC. Council elects Docter as the Committee Secretary, with ane abstention (The Netherlands).

7.4.5 Resolutions by the ISC/U+L
No resolutions have been received

7.4.6 Plan of Action 2000-2002
The ISC/U+L proposes the following actions:

- Expanding the network and intensifying activities, also through a new website page.
- A major competition project for young designers to 'Re-invent the Madern City', inspired by the present Conference.

The Chair recommends the competition project to be linked to the ISC/E+T and ta be developed in co-operation with Maristella Casciato, as the EC Member for ISCs.
Cunningham (ISC/E+T) and Prudon (US) offer their assistance, the latter through the American College of Schools of Architecture (ACSA).
Council unanimously agrees on the Committee's plan of Action, which will be elaborated for publication in Journal 24.

7.5 ISS/Landscapes + Gardens
The ISS/L+G has now merged with the ISC/U+L, see 7.4.

7.6 ISC/Publications
7.6.1 Report 1998-2000
The Chair, implicitly also the Committee Chair, reports on the result of the Publication Programme of DOCOMOMO International. Four Journals have been produced by the IS, three of which were thematic editions, respectively on 'Windows', 'Modern Houses' and the 'Modern City'. Two Technology Dossiers have been produced, on 'Windows' and 'Glass and on Wood', the first by the IS, the second by DOCOMOMO Finland. Also the website has been renovated and updated, and a new general information leaflet on DOCOMOMO has been produced.
The main achievement of DOCOMOMO International however, has been the publication of 'The Modern Movement in Architecture. Selections form the DOCOMOMO Registers'.
The Chair extensively credits Dennis Sharp and Catherine Cocke, the editor and co-editor of the bock, for the greot job they did in moulding so much rough material into a comprehensive publication. He thanks graphic designer Malcalm Frost and publisher Hans Oldewarris of 010 Publishers in

Rotterdam, for their efforts and patience. At the same time the Chair, on behalf of both editors, the EC, and the ISC/R, voices his aggravation about the poor performance of a number of member countries, that has caused an enormous amount of extra work for the editors and the IS, see 3.1.

In particular: no motivation texts had been received from Germany, Iceland and Iberia; no images had been sent by France and Brazil; and Finland did not respond at all. It has required a lot of improvisation to still include these countries in the bock at all. In general, the picture quality was rather poor. Good exceptions were also noted, porticularly the new Wp of Australia did a goad job, and helped to produce one of the most convincing chapters of the bock. The Chair concludes that such procedures will not be repeated, and any further volume of the bock will require much more discipline from the participating countries.

In case of a second volume, further debate may be required on whether such a bock should be on architecture influenced by MoMo, or rather on architects who influenced MoMo themselves -as keynote lecturer Kisho Kurokawa rightly put forward in the course of preparing for this conference. This issue, the Chair proposes, will be debated in more detail in the Journal.

Susana Landrove (Iberia) observed that the main text in the Iberian chapter inappropriately focuses an the Catalan region; she requires a letter of excuse from the Chair. The Chair explains that, by lack of any text from the Wp itself, and in view of the deadline, the IS had sent the editars copies of the introductory texts from books produced by the Iberian Wp earlier on. Under time pressure, these texts may not have been sufficiently checked. Under the circumstances, the Chair is not prepared to apologise, but proposes to co-ordinate with the Iberian representative an appropriate letter to be sent to the chair of the Wp.

France Vanlaethem (Canada Quebec) is disappointed about the graphic work and the layout. Requested proofs were never received by the Wp, so mistakes and missing photographs went unnoticed. Like the Iberian Wp, also the Quebec Wp will refuse to take their offprints. The Chair regrets that promised proofs were indeed not send, as the enormous delays due to the lacking material from many other countries did not allow any more time, in order to get the book ready for this Conference.

Gerard Monnier (France) complains about mirrored pictures also in the French section. As the French Wp never sent in pictures themselves, the Chair again speaks in favour of the editors.

The Chair concludes that the production of this book apparently has caused a lot of frustration with mony parties, but that the very achievement to produce a book with 300 members of 32 participating countries world-wide, guided by the ISC/R over a period of six years, is worth noting.

The Choir has had to decide to have 1000 offprints produced of every section, without consulting the respective Wps who ordered smaller omounts, or none at all. In the production phase of the book, any other option appeared unfeasible. To cut down the price, the additional covers were abandoned.

The EC has decided that these leaflets will be sent to the Wps anyway, and hopes that countries who did not order them, or smaller numbers, will consider to still pay for the expenses whenever possible. The cost price has consequently been reduced from US $ 0.80 to US $ 0.70 per copy, and the same discount percentages as for the membership fees apply, as has I been agreed in 1998.

7.6.2 Appointment of the membership of the ISC/P

Council decided earlier that members of the ISC/P are qualitate quo the members of the EC, and the Chairs of the other ISCs. The members of the ISC/P are therefore: Hubert-Jan Henket (Chair, EC), Wessel de Jonge (EC), Maristella Casciato (EC, ISC/R), Allen Cunningham (Secretary, ISC/E+T), Ola Wedebrunn (ISC/T), and Paul Meurs (ISC/U+L). Council re-appointed Dennis Sharp (UK) and Jorge Gazanea (Argentina) as expert consultants to the ISC/P.

7.6.3 Appointment of the ISC/P Chair

Council decided earlier that the EC Chair will qualitate quo be the ISC/P Chair as well. Therefore, Hubert- Jan Henket will act as the Chair of the ISC/P.

7.6.4 Vote on the ISC/P Secretary

Allen Cunningham is prepared to continue and his nomination is approved by the EC. He is unanimously elected by Council, with one abstention (UK).

7.6.5 Plan of Action 2000-2002

The ISC/P Plan of Action involves to investigate the possible publication of a volume with selected lectures from the Conference, next to the Conference Proceedings, entitled 'Modern Cities Facing the Future', featuring additional papers on cities that were not presented at the Conference.

Secondly, the ISC/P will consider an eventual second volume of the Register book, which will largely depend on the input ofthe Wps themselves.

7.7 New ISCs

As an auditor, Nic Tummers is invited by Council to explain his idea about an ISC on the Visual Arts in their relation to the built environment. Council agrees unonimously that this would be an interest-

ing topic and supports the ideo, provided that Tummers will take the initiative himself. The Journal will be the proper meons to voice his ideas. Any proposal received before December 15 can be put up for vote at the special Council Meeting in February 2001.

8. Co-operation ICOMOS/World Heritage Committee

The Chair reminds Council about the proceedings in Stockholm when the ICOMOS president Silva claimed not to have received our report 'The Modern Movement and the World Heritage List'. Since, the Chairman has contacted the Secretariat of the World Heritage Centre. In view of the DOCOMOMO Report, the WHC is careful in widening their scope, also regarding the sheer amount of items that can be expected for nomination. Also the hegemony of Western civilization on the WHL is presently under debate, which makes careful operation necessary.

The EC is negotiating a symposium to be organised in co-aperation with the WHC and ICOMOS in Paris sometime in 2001. A DOCOMOMO proposal regarding such a debate has been received positively.

Delegates Alfredo Conti (Argentina), Janis Krastins (Latvia), Theo Prudon (US), and Lucio Gomes Machado (Brazil) all have long-term involvement in ICOMOS and offer their assistance in developing further proposals for the symposium.

9. Homework 2000-2002

As the homework for all Wps, enabling them the right to vote at the 2002 Council Meeting, is unanimously accepted by Council:

- To start a national or regional website by each Wp;
- To produce the digital minimum fiches for the future register website;
- To complement their registers with items of urbanism and landscape;
- To make an inventory of MoMo technology experts to be included in the Technology Website Database.

In due course, the ISC/R and the ISC/T will inform the Wps on details through the Journal.

10. Miscellaneous

10.1 Villa E-1027

The Secretary informs Council that the campaign for Villa E-1027 by Eileen Grey in Roquebrun Cap Martin has been successful, after seven years of efforts from many people and organisations, including DOCOMOMO. The house has been acquired by the city, and the restoration will be partly funded by the French State. It will be appropriately re-used as a centre for architectural studies and reseorch.

10.2 Preserving the Recent Past 2

Theodore Prudon (US) informs Council about the upcoming second edition of the Preserving the Recent Past Conference, in early October in Philadelphia. The Conference will be sponsored by DOCOMOMO International and DOCOMOMO-US.

10.3 Brasilia

As an auditor, Alejandra Muñoz (Brazil) is invited by Council to explain on the current threat of the *Plano pilato* as a result of the recent abolishment of the Brasilia Department of Architectural Heritage by the Ministry of Culture. A petition can be signed during the Conference to protest against this situation.

11. Closing

The Chair concludes by voicing his appreciation for the civilised way the debate on some delicate issues has been conducted by Council. He closes the Sixth DOCOMOMO Council Meeting at 23:30h and wishes the delegates good night.

Delft, June 22, 2001

The Secretary,
Wessel de Jonge

Appendices

1. First Announcement for 7th Conference 'Reception of the Modern Movement' in Paris 2002, dated September 15, 2000
2. DOCOMOMO International Secretariat -Account 1998-2000, dated September 1, 2000, with appendix 1: The International Secretariat in Numbers, dated September 1, 2000; appendix 2: Financial Overview 1998-1999, dated September 12, 2000; appendix 3: Budget 2000, dated September 12, 2000.
3. ISC/R plan of Action 2000-2002: the New International Selection as a worldwide information resource, dated September 2000.
4. List of reduction percentages membership fees, dated June 22, 2001.

APPENDICES

Conference Photographs

Alejandra Muñoz, Pasqualino Magnavita, Milton Santos, Hubert-Jan Henket, Ana Fernandes and Frederico de Holando

Conference Auditorium: Brasília Session

Posters Exhibition Opening

History and Theory Session

Coffee Break

Itamarati Palace: the fantastic Marcelo Bratke recital. See Burle Marx tapicerie.

Brazilian Session: Matheus Gorovitz; Frederico de Holanda and Sarah Feldman

Itamarati Paloce: Marcela Bratke (left) and a group from Bahia.

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