Why Does Modernism Refuse to Die?
Conference Proceedings

McGill

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Foreword

Why does modernism refuse to die?

In choosing the theme for the ACSA Northeast Regional Conference, my colleagues from McGill and I considered a number of ideas. Most felt that the notion that modernism – as a theory, practice or act related to the present – should be dying or was already dead was timely, challenging and worthy of academic debate, particularly since many schools of architecture remain allied with modernist teaching. Museums and opinion-makers are busy promoting arch-modernist projects; from Siam to Sweden, Canada to China modernism is thriving.

We also realized that we were very late in getting started for this conference. Our announcement could be included only in the last issue of the ACSA Newsletter, so the call for papers went out in April 2002. With the end of the academic year and the intervening summer break rapidly approaching, the concern was that we might not get a reasonable response. My hope was that scholars from other schools would react as positively to this theme as my colleagues from McGill had. And indeed your response was great. For this conference we received more than 60 abstracts, many of them from outside the region; they were peer-reviewed and 39 were chosen to submit full papers, of which 33 are included in these proceedings.

For historians, modern signifies of or relating to the period of history after the Middle Ages, from c. 1450 A.D. to the present. Architecturally, however, it could be argued that the rule of the moderns began in the early 1900s and that the movement itself started to decline during the last quarter of the 20th century. Schools of architecture – the birthplace of post-modernism – played an instrumental role in challenging the hegemony of modernism. But as Mark Twain would have put it, "the reports of modernism's death are greatly exaggerated." The remarkable persistence of modernism is worthy of serious debate, and the following papers, organized in six categories, make a fine contribution to this discourse.

Cultural Traditions and Modernity: The finest examples of modernist design, although trans-cultural, are found in projects that respond to local and cultural traditions. The first selection of papers in this volume explore how and where modernism has successfully transcended its roots.

Modernism and Design Education: Why in the age of digital media, is studio- and workshop-based design education, championed by the founders of Bauhaus, still with us? This and several other issues such as what modernism did and can contribute to contemporary architectural education are debated in the second part of the proceedings.

Modernism and Research: The modernist faith in the idea of progress and change guided architectural research for a long time; papers included in this section of the proceedings recognize the limits of this conviction while searching for other avenues for new answers.

International Modern: One no longer differentiates between East and West, North and South in the international order of communication and commerce. Is international contemporary architecture a victim or a vehicle for this condition? It is interesting to note that a number of presenters whose papers are included in this section suggest that while serving dotcoms and global economic forces, good international architecture could and should stand its own ground.

Modern Vernacular: The remarkable acceptance of the language of modernism in popular architecture is

analyzed by a number of our contributors and forms part of section five.

Persistent Modernisms: Depth, vigour and common sense are the forces behind the success of modernism, and the critiques of several scholars form the final section of these proceedings.

The valuable support of a number of institutions and the hard work and help of friends and colleagues has made this event possible, and I would like to take this opportunity to acknowledge their contribution. Architect Bing Thom, in spite of his busy practice and international travel schedule, kindly accepted the invitation to be the keynote speaker for the conference; thank you, Bing. I am truly grateful to the following people and institutions. The ACSA's Michelle Rinehart, Senior Project Manager, and Judith Bing, ACSA Northeast Director, for their help and guidance in organizing this event. The Canadian Centre for Architecture (CCA) for receiving the delegates of the ACSA Northeast Regional Meeting; in particular, Nancy Dunton, Head, University and Professional Programs, for arranging the tour of the CCA. The John Bland Canadian Architecture Collection of McGill University Libraries for arranging the display of early Modernists' work, and in particular Irena Murray, Chief Curator, Rare Books and Special Collections Division, and Julie Korman, Assistant Curator, for organizing a tour of the premises and for allowing us to have lunch there. The members of the Executive of the McGill Architecture Students Association (ASA), especially Diana Biggs, VP Communications, for getting the word out to the students to participate in this conference. As always, walking a tight timeline, David Morin, Architect, who helped us with the publicity material for this conference and with the design and publication of the proceedings. Professors

Radoslav Zuk, Bruce Anderson, Alberto Pérez-Gómez, Ricardo Castro, Pieter Sijpkes, Annmarie Adams, and Robert Mellin who served as the moderators of the conference; they and Professor Adrian Sheppard also helped me with the planning and organization of this meeting, and I owe them special thanks. Professor David Covo, Director of the School of Architecture, for his support and for overseeing everything. I would also like to thank student helpers: Nicholas Hanna and Louise Koo, for audio-visual assistance; and Lisa Landrum, for help with registration and the packages handed out to the participants. Last but not least, I would like to acknowledge the outstanding support of David Krawitz, administrative coordinator of the School, who worked closely with me in organizing this event.

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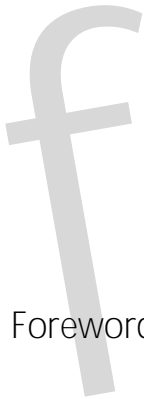
Session 1

Cultural Traditions and Modernity

Moderator: Professor Radoslav Zuk

The New Montreal Architecture: Preserving the tradition of modernism

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Introduction

In this presentation, I intend to offer an interpretation of the Old City of Montreal as a modern inspiration for the present architecture. Here, modern is far away from Beaudelaire's Spleen and from the optimistic attitude changed into anxiety of the pioneers of the movement. The idea of modernity, its spirit, is in the artifacts, History embedded in forms and materials, rather than in manifestoes. The new Montreal architecture stands as an exemplar way of making architecture with inherited material from the recent past and the possibility it gives for facing contradictions of the real world. Nothing virtual nor actual, but things moving as life, always at the limit of another possibility within urban commune culture and contemporary aesthetic dialogue between ends and forms. To say it, using Henry-Russell Hitchcock words, our living architecture may well be called merely modern (1). I shall conduct my presentation like an urban walk, tracing back the course of the century from early pre-modern structures to the latest works by contemporary architects'.

Coming from the River:
the Sources of Modern Architecture

With a single peripheral glance, pedestrians strolling along the new raised promenade on Rue de la Commune can take in a particular style of architecture, peculiar to Montreal, unique in North America. Past and future mingle with equal vitality in each of the elements that constitute this architecture. By one of the curious turns of history, we are plunged into the movement of the birth of modern architectural forms. If contemporary architecture, as French Canadian historian Gérard Morrisset hoped in 1949, truly marked "the exhaustion of archaeological imitations" (2) and the affirmation of technical solutions produced by science and industry, this is the show to which we are invited. The sources of modern architecture, at least those that celebrate the marriage of art and industry, as Nikolaus Pevsner noted, are before us. Here, the urban landscape illustrates the unending story of the century that has just ended.

Let us follow one stroller. In the distance, toward the St. Laurent River, beyond the long piers and the large sheds sitting on them, she or he can distinguish the powerful steel silhouette of Jacques-Cartier Bridge, with its distinctive Art Deco–inspired pillars, built by the contractor Dufresne in 1928. On St. Helen's Island, a geodesic dome sparkles: it was designed by Richard Buckminster Fuller for the United States pavilion for the 1967 world fair. To the south, on the MacKay pier, a housing project designed by the young Moshe Safdie during the same period rises. Habitat 67 evokes both the happy disorder of Mediterranean buildings and carefully piled containers about to be loaded onto ships headed for destinations unknown. Symbols of new times, these structures conveyed the dreams of architects and fired the imagination of students, and they continue to attract intrigued tourists. They are related to the gigantism of silo no. 5 at the entrance to the Lachine Canal. Designed by an engineering firm from Chicago and built in a number of phases from 1906 to 1958, in steel then concrete, this proud structure stands tall between the port and the city, solidly establishing the border of the Le Havre district.

Leaving this "scene of life in the future" and turning toward the city, the stroller sees rising before her or him a rigorous alignment of greystone buildings. The entire city seems to be supported on this built façade, punctuated to the east by Marché Bonsecours. Restored several times since 1850, this building displays its carefully decorated façade and its dome, which emphasizes its civic function, to the St-Laurent River. Between its cast-iron columns, cast in England, merchandise accumulated in transit for London for the

great fair of 1851. To the west, on the site cleared by Champlain in 1611, rises L'Éperon du Musée de la Pointe-à-Callière, opened in 1992. In this sector, we find an imposing ensemble of commercial architecture, composed of proto-rationalist buildings from the late nineteenth century. These examples of the Chicago School are better preserved here than in the city of their conception.

We have just gotten off the boat and we are facing an eloquent built heritage, magnificent under a blue summer sky. In the background, the new *Centre des affaires* shows off its large and high buildings, with their glass-and-metal façades. Perched on the city's lower terrace and rising gradually toward the Sherbrooke terrace, these buildings arrogantly challenge Mount Royal, which dominates the center of the island from its altitude of 234 meters. *Faubourgs*, parishes, new neighborhoods – the city freed itself of its heritage to launch its conquest of the territory, always pushing farther inland. More than the topography, signs of abandonment – empty lots, idle infrastructure, isolated buildings – signaled the radical schism between the historical city bordering the river and the new city fleeing toward the interior of the country. And yet, our stroller has before her or him a built ensemble in which city, landscape, and architecture seem so propitious to urban life that she has difficulty understanding what could have led builders to let these places, which embody so well the encounter between tradition and invention, deteriorate during such a long time.

Looking back: the Great Forgotten City
Pushed inland by demographic and economic development, the City searched for a center of gravity between Old Montreal and Mount Royal. During the colonial expansion, the "petites patries" (little homelands) provided a counterweight to the commercial hold on the river's shores, the industrialization of the *faubourgs*, and the establishment of political, religious, and economic power within the walls of the historical city. The urban maintained its distance from the "habitants." Deliberate and practical urban planning based on the logic of occupancy and supply anticipated functionalist planning. Land transport, annexations, and demolition of the fortifications, completed in 1821, reconfigured the urban landscape in a city whose cadastral plan gave rise to the street layout. The transition from rural to urban was a simple formality as contractors invented original residential typologies based on the geometry of the lots in the St. Laurent Valley, which were adapted directly to shape Victorian city blocks.

The urban fabric – the tectonic characteristics of the housing, the major commercial arteries, squares and public places, the solid banks and public buildings designed according to the stylistic rules of the Beaux-Arts school, the lively boulevards and tree-lined avenues – everything suggested that a new harmony had been born between architecture and the city. Paradoxically, this urban formation, which celebrated the art of living by adapting the wealth of public spaces for the enjoyment of the citizens, was lost in real estate chaos. Modernization was the utopian word of the day that drove the years after the Second World War. By 1950, neither the time nor the effort was being made to adapt urban and architectural models. In the name of progress, speculators did not burden themselves with the cultural significance of the built context.

In fact, the city became an indoor city, with underground public spaces, buildings became multifunctional, and suburban structures devoured the countryside. Sandwiched between the new business district, where "international style" triumphed, and the area around the port, Old Montreal found itself downgraded by the real estate economy.

In the early 1960s, a municipal regulation set the borders of the historical sector destined to be preserved and restored, while the *faubourgs* began to look like an undefined borderland. In Old Montreal, a movement emerged to protect the built heritage, and citizens were increasingly mobilized over the following decade. Old Montreal became, in a way, a cultural sanctuary; an untouchable island, separated by the trench of a new expressway, dedicated to memory and to the tourism industry. Gradually, contemporary architecture became divorced from the architecture of the past. On the one hand, the public was not interested in what was most often a caricature of the modern spirit, or the gigantism and destructive effects of facilities and infrastructure projects alarmed it. On the other hand, buildings of the past, even the recent past, seemed to represent the only real architecture with an artistic and cultural content. This urban collage encouraged a relativist attitude, and it was without regret that people observed the arrival of a postmodern architecture whose archaeological references are superficial but sufficient to stimulate nostalgia and transport them back to the good feeling of common culture.

The tragic interlude during which the city of the nineteenth century was swept away by urbanization came to an end with the desire of a return to traditional urban forms. Beyond objectives that were labeled populist, neo-modern, regionalist, or historicist, what was at work was a radical critique of the modern movement – or at least of the stereotypes and standards within which economic rationality had frozen it, denying any expressive capacity other than arrogance vis-à-vis the daily culture of citizens. In 1980, Melvin Charney, an architect, artist, professor at Université de Montréal's architecture school published his famous article, "The Montrealness of Montreal," in the London magazine *The Architectural Review*. He noted that two cities now coexisted, one within the other. But "the urban figures" were enclosed in the traditional city, which "forms the inner urban awareness of residents." He concluded, in a lapidary fashion, "Montreal is one of the great cities of the world with the destiny of an urban culture profoundly inscribed in its form." He defined, in a way, the agenda for the new Montreal architecture (3). In a search for itself, architecture was to find in the urban and architectural forms of the historical city the fertile knowledge and know-how that could reconcile practice with citizens' aspirations.

This new movement in architectural thought was conveyed in various ways. Based on the know-how of Montrealers, the work of defenders of urban architecture had a direct influence on how development professionals revitalized the urban composition. While some architects limited themselves to imitation pure and simple, or to a normative approach to integration of new buildings, others saw an opportunity to demonstrate that contemporary architecture is significant to the extent that it takes into account the architecture that preceded it. This was in fact the critical lesson of some of the pioneers of the modern movement, such as Adolf Loos, who drew their inventive strength from architectural sources. Architecture within architecture: this is what Old Montreal shows us through its buildings.

Two projects were to break the immobility into which fate had plunged Old Montreal. First in 1977, a group of 200 housing units was built in the recycled vacant warehouses on Rue Le Royer. The firm Desnoyers Mercure et associés, designed the project Cours Le Royer. These Victorian buildings with beautiful stone façades, which concealed wooden frames, floors, and columns, could not have been converted into housing and offices under the regulations in existence at the time. Politicians and granting agencies had to be mobilized in order to obtain all the variances needed, and the architects were patient but determined advocates of an urban, architectural, and social approach. This project led to others, opening the door to reclamation of vacant commercial buildings. The loft, as a spatial type, responded well to all programs – housing, offices, businesses, and studios. Like those in the famous Soho neighborhood in Manhattan, the proto-rationalist buildings of Old Montreal were perfectly adapted to modern life. It can be observed today that the loft is not solely a recycled industrial space, but a housing form offered in new housing projects.

The other architectural project that made its mark on this period was the Musée de la Pointe-à-Callière, particularly l'Éperon, designed by Dan Hanganu in collaboration with Provencher Roy. Because of its symbolic positioning at the site of the foundation of Montreal, the context of the celebrations of the 350th anniversary of that event, and mainly because it involved constructing a contemporary building on the traces of a building that had disappeared but maintained a mythical status, this project was to open the old city to the creative interventions of our times. It is significant that Dan Hanganu had been the architect around whom a new vision of Montreal architecture had formed following his modernist design for typical houses on Rue de Gaspé on Île des Sœurs in 1980. Between two cultures, two cities, two architectures, and between masonry and metal, Hanganu has become one of the great figures of Canadian Architecture.

In the Pointe-à-Callière project, Hanganu found a unique opportunity to demonstrate that the past and the future, like the classical city and the industrial city, can be united in an architectural work in the same way as they are in the consciousness of users. L'Éperon has a solid presence. Its slender tower is a constructed metaphor of an unfinished history, evolving both the huge harbor silos and the tower of the old Royal Insurance Company building, demolished in 1947. Its precise triangular geometry, with limestone masonry typical of buildings of the old city, its large window that brings the port into the great hall – everything combines in a great simplicity that evidences an artistic mastery of building craft. The interior spaces, suspended over the vestiges of the old foundations and the crypt, offer visitors an archaeological tour in which the sacred and the profane actively mingle.

The Remake of the City: a New Architecture

During the 1990s, the idea of a new architecture in the old city was stimulated by a number of urban projects that embraced strategic sectors and encouraged be creative at the same time as a long-awaited urban plan for the city was being developed.

It was probably the Faubourg Québec project that put Montreal on the same footing as the great European cities, such as Paris, Berlin, and Barcelona. These cities had chosen to rely on the architectural and urban knowledge within their own histories to address the "critical reconstruction" of their neighbourhoods and urbanize the industrial wastelands that they contained. In its approach, the Bureau de projet du Faubourg Québec overturned the usual sectarian logic. Politicians, professionals, and technical services combined their efforts to give meaning to the very idea of the project. This search for convergence between actors enabled a plan to be structured around proposed public spaces, defining city blocks open to interpretation within the context of rules establishing a relatively homogeneous density of proposed residential buildings. The framework of the project was the reconstruction of a raised Rue Notre-Dame, which, with Rue de la Commune, would ensure urban continuity with Old Montreal.

The pièce de résistance, the point of departure for realization of the project, was the block defined by Rue Berri, Rue de la Commune, Dalhousie Square, and Rue Saint-Hubert. The fragile situation of this first construction project constituted a test for the method as a whole. The land was adjacent to the old Dalhousie train station at the edge of the old fortifications and the bottom of Rue Berri, which had been recycled into the École Nationale de Cirque by architect Vianney Bergeron of SIMPA, in 1989. The new promenade on Rue de la Commune, designed by Jacques Rousseau, was close to the spot of the old Porte de Québec. The land was rich in archaeological vestiges. The architects Saucier Perrotte, associated with Provencher Roy, won an architecture competition. There was then the question of a contractor and promoter who would be up to meeting the proposed challenge. Execution of the first phase was a disappointment for both the architects and the public, and the scope of this major project was cut dramatically. A political change at the municipal level accelerated the dissolution of the Bureau de projet. To the west, the success and opulence of 1 Rue McGill, by architects Cardinal Hardy, in partnership with Desmarais Pilon Cousineau Yaghjian St-Jean et Marchand, a building

occupying a similar strategic location but in a pre-existing built context, demonstrated the excessive hopes for Faubourg Québec. Since the success of this major urban project was dependent on hypothetical improvement of the public spaces and contribution of public institutions for social housing, it could not offer a life in an invisible city.

It wasn't until 1998 that a new promoter entered the scene and gave the architects Boutros et Pratte the mandate to complete the first block. The firm had made its mark in 1992 with a modest, discreet project, 110 Rue Sainte-Thérèse, in Old Montreal. In a sense, this project coalesced the architects' particular approach. It involved recycling into an office building an old stone-and-brick house dating from the eighteenth century, itself absorbed by a large warehouse built beside and over it in 1913. This juxtaposition of additions has been generously highlighted, as one can see in its façades the double nature of the building; the tectonic stratification is revealed in an interior passage, where the concrete of the new structure emphasizes the historical layers that compose the ensemble.

Although the urban continuity between Old Montreal and the new district imagined by the designers of Faubourg Québec once again came into question, it nevertheless was evident in two other projects on Rue Notre-Dame, which were dedicated to a return to housing in the historical city. The Chaussegros-de-Léry project was a competition won in 1987 by a group of architects and urban planners, Dan Hanganu, Provencher Roy, and Cardinal Hardy. Designed as a perimeter block located where Côteau Saint-Louis descends toward Rue Saint-Antoine, this project includes a large underground parking lot, an annex to City Hall, and offices, businesses, and housing units with a varied typology. A few steps from it, the Berri-Bonsecours project, designed by architects Dupuis and Le Tourneux and built almost ten years later, contains transversal two-level housing units and conveys both simplicity and a duality between the historical and the contemporary. These two projects illustrate well the validity of the hypotheses that had been advanced for Faubourg Québec and portray the interest in a strategy of densification with buildings on a courtyard and a higher quality of interior spaces, as evidenced by the two-floor units and transversal layout.

The Chaussegros-de-Léry, Berri-Bonsecours projects and 1 Rue McGill, have in common an attentive reading of urban forms and a capacity to integrate the architectural values of the modernist built heritage into

ensembles that meet the criteria of a high-density urban context. Stone, metal, and masonry in which the structural frame, strict alignment, and hierarchy of the composition clearly differentiate the street level, the body of the building, and the upper floors, are positive responses to the possibilities opened by the interpretation of History to design a habitable architecture for our times.

A number of projects helped to revitalize the art of landscape composition. The Old Port and Rue de la Commune are a concrete illustration of the notion of "public works." What many call the saga of the Old Port began in the 1970s. It was after exemplary public consultation and an international idea competition that the architects Cardinal Hardy, with Peter Rose, Groupe Lestage, and JLP associés proposed a master plan for this vast site in 1991. Two development sectors were distinguished: Bassin-Bonsecours to the east, Les Écluses to the west. The master plan was presented as a strategy for interpretation, using as a reference the port at the time of its apogee, from 1930 to 1960. While the Eastern sector was presented as an evocative site where plantings and constructions played analogically, the Western sector was seen as a vast public industrial-archaeology excavation site. The composition is more narrative and gives much importance to the entrance to the Lachine Canal and to the locks, which have been repaired. At the foot of the silo no. 5 grouping, the site includes Maison des éclusiers, a modest building that adroitly develops an architectural lexicon inspired by industrial artifacts.

On the King Edward pier is the Centre interactif des sciences de Montréal. Developed by the architectural consortium Gauthier Daoust Lestage/Faucher Aubertin Brodeur Gauthier, this project followed the interpretation strategy of the master plan for the Old Port. The two existing large sheds, one devoted to the Centre and much of the other to parking, were recycled with great simplicity. Applying the principle that a building is composed of its program, its structure, and its envelope, the architects used refinements to give the buildings an extreme, almost minimalist, formal rigor, which makes the viewer forget the gigantic scale of the project. Inside, the structure is apparent, always easy to understand, combining a technical lesson with aesthetic pleasure. Posed delicately on the pier, almost transparent, displaying the colorful graphics of the old numbering of loading areas, these two buildings define a new site between the city and the islands. They provide a context for a long urban promenade, the first truly successful attempt to unite the system of streets in Old Montreal and port traffic heading to the river.

Conclusion

Modern architecture is not as progressive as we used to think. It is now part of History and as such it is persistent like has been the Classical tradition. To keep architecture alive, to be modern in that sense that modernity is built on that contradiction in times, is to enter into a dialectic relation with what was modern. The real challenge is to escape caricature. Ignasi De Solà-Morales Rubio has suggested an interesting approach for the conducts of architectural projects in historical context: "As an aesthetic operation, the intervention is the imaginative, arbitrary, and free proposal by which one seeks not only to recognize the significant structures of the existing historical material but also to use them as analogical marks of the new construction"(4). One could say that the paradox of Post- Modernism was to prepare the return of Modern Architecture.

Notes:
1   Henry-Russell Hitchcock, "The International Style Twenty Years After," *Architectural Record* (1951)
2   Gérard Morisset, *L'architecture en Nouvelle-France*, Éditions du Pélican, Québec, 1949
3   Melvin Charney, "The Montrealness of Montreal," *Architectural Review 499* (1980)
4   Ignasi Solà Morales Rubio, "From contrast to analogy," *Lotus International 46* (1985)

Modernism and Tradition in Contemporary Non Western Architecture

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Introduction

The latter half of the 20th century was witness to the birth of many newly independent nations. For many of these nations modernist architecture and the international style in particular provided the architectural image that represented growth, progress and advancement. The trend, for the most part, in these newly independent non western states was generally toward image and gargantuan size. The skylines of cities such as Singapore or Kuala Lumpur are testimony to this fascination with western architecture and Modernism. The proliferation of the international style all over the world obliterated many traditional built environments and created a proliferation of buildings and environments that had very little connection to place and whose monotonous sameness all over the globe obliterated any references to local culture, tradition, climate or identity. The initial responses to this loss of local, regional or national architectural identity was for architects to 'dress up' modern international style designs with architectural forms or materials that suggested references to local architectural traditions and cultural contexts. These responses were stylistic in nature and were merely based upon image-making. More recently, as the architectural profession in these non western societies has matured, local architects have begun to take more interest in their own vernacular and traditional architecture as sources for design. The new architectural styles that have been immerging continue to be based on the modernist paradigms of functionalism, rationalism and efficiency but they are also created from understanding the roots of local architectural traditions.

Some of the more well known examples of this fusion of modernity and local cultural traditions are seen in the works of architects such as Doshi and others from the Indian sub-continent. However there are others whose works are commendable examples of innovative modernist designs that respond to local conditions, draw from an understanding of indigenous architectural and cultural traditions and that make use of local materials. In the light of the discussion on the prevalence and persistence of Modernism, this paper discusses some contemporary works drawn from Southeast Asia and Southern Africa. The author uses these examples to illustrate that although the designs vary greatly in appearance and respond to very different local contexts, they are all modernist in nature. They serve to illustrate that even in the quest for regional architectural identity the modernist paradigm continues to prevail perhaps because Modernism is rooted in the same ideas of functionalism, rationalism, appropriate technology, etc. that are also at the roots of the indigenous architectural and building traditions from which these works are derived.

Modern Architecture

The idea of 'modern architecture' was a western one[1]. It was a response to the legacy of 18th century developments in Europe which triggered the loss in confidence in the Renaissance tradition and the theories that supported it. Curtis writes that while modern architecture was a response to several conditions at the end of the 18th century the principle impetus was the "idea of progress". Another major force in the development and realization of the idea of modern architecture was the Industrial Revolution which provided new materials, created new patrons, building types and problems, suggested new forms and introduced new methods of construction. As the ideas of modern architecture developed they were also greatly influenced by "profound changes in the social and technological realms" of 19th century Europe[2].

Also embedded in the notion of modern architecture was the idea that the past must be understood for its principles and that the more important features of the buildings of the past were their proportions and arrangements and not merely their use of formal stylistic elements such as classical columns, pediments or pointed arches. This notion enabled many of the great masters of modern architecture to draw upon tradition in creating their modernist vocabularies. According to Curtis, these modern masters did not throw away tradition but they jettisoned the idea of "slavish, superficial and irrelevant adherence to it"[3]. As the modern movement developed so also did new ideas in architectural education, namely the Bauhaus. Rather than imitate the styles and practices of the past the Bauhaus promoted inquiry and understanding of basic principles and architectural form that was based upon function and technology.

Modernity and non western architecture
Opportunities to apply the ideas and new forms of modern architecture in Europe increased dramatically after WW II when vast regions of Europe required rebuilding. That period also saw the collapse of western colonization all over the world and the birth of newly independent countries in the non western world. The newly independent non western states found in modern architecture and Modernism a way to divest themselves of the vestiges of colonization and to create new built environments that conveyed that freedom from their immediate past. Factors such as social, economic, technological, political, etc. which were responsible for the birth and development of modern architecture-in the west were now present in non western nations at this time. By this time in the history of modern architecture in the west, the international style and Modernism were also well established and had become associated with the new age of technological and economic progress as well as freedom from the oppressive buildings, regimes and styles of the past.

Modernism provided a means for newly independent non western nations during the middle part of the 20th century to create architecture that represented progress but was free of the stylistic vocabularies and images associated with western colonization. It is interesting to note however that while Modernism was viewed by non western societies as a means of creating an identity free of western colonial images, that Modernism itself was a western idea. In this way western domination actually

continued. The old colonial styles of architecture were not acceptable as models for the new independent nations and indigenous or traditional architecture was viewed as primitive, rural and backward. Modernism therefore became a popular choice that provided the progressive images that were being sought. This is particularly true in the case of the widespread proliferation of the international style in the form of the high-rise glass, steel and concrete buildings all over the non western world. Unfortunately these buildings had little or nothing to do with culture, climate, lifestyle and other local conditions.

Modernism was also adopted by non western societies because formal architectural education during the last century or so all over the non western world was (and for the most part still continues) to be based on western models. Until about a half century ago architects in many non western societies were either educated in the west or received a local education that was set up during western colonial times or modeled on western systems soon after independence from colonization. Therefore architectural styles such as Modernism were quickly and easily embraced. In some places such as India for example, influential and leading western modernist architects such as Corbusier and Khan were invited to undertake huge architectural projects such as Chandigarh. These architects and their projects greatly influenced the ideas and mentalities of architects and architectural education in those countriesy. Additionally, the glass skyscrapers and high-rise housing blocks designed by western architects particularly in the Middle East and Southeast Asia during the 1960's and 70's, also influenced non western societies to adopt Modernism. While the skyscraper provided images that represented progress, industry and power to national and corporate patrons, the high-rise apartments blocks provided much needed housing in rapidly growing cities.

Tradition and Modernism in non western architecture
As Modernism and the international style spread and as unique traditional environments began disappearing, architects in non western countries, began to question the authenticity and relevance of this form of architecture that was devoid of reference or relevance to local or regional culture, climate, historical traditions etc. Also, the sameness of buildings all over the world was becoming very apparent and regionalism and expression of local identity became factors in architectural practice

as well as architectural education in non western societies. Early responses to regionalism were mostly superficial and copyist in nature. Traditional forms, colors, motifs etc were merely applied to the facades of international style designs. Numerous examples of this appliqué are seen in the Middle East, Singapore, Malaysia etc, during the 1960s and 70s. The search for regionalist expression initiated an interest in the study of local and historical non western architectural traditions. Traditional non western architecture which was formerly viewed as primitive and backward now began to be studied and understood for their underlying principles as well as their social, cultural formal and environmental relevance. Today the study and investigation of local and regional architectural traditions has now become part of architectural education in most non western countries. Globally the situation has elevated the position of traditional non western architecture. Slowly a new form of non western architecture that draws from tradition through understanding and innovation rather than superficial application of form began to evolve.

It was inevitable that non western architects would arrive at this point. Modernism and its emphases on design that was derived from abstraction of ideas, understanding of basic principles, clarity of structure, technology and response to function has given architects a new frame work to view and understand non western architectural traditions. The framework of Modernism has made it possible for architects to transfer the ideas, principles, forms etc of traditional non western architecture to contemporary buildings and settlements. The design processes of Modernism rely on the understanding of materials, their properties, and their limits. Designs are derived from function and technology. In these respects Modernism has many parallels in traditional non western architecture. These similarities have made it possible to achieve a fusion of traditional principles with contemporary materials, technologies and needs.

Like the early western modernists, architects in non western societies during the latter part of the 20th century have begun to draw upon tradition in order to formulate designs that are suited to local materials, appropriate local technology, climate, lifestyle etc. In so doing, contemporary architecture in many parts of the non western world today illustrates a synthesis of ideas and forms that are simultaneously modern and traditional. Many of the Aga Khan Award winners during the past few years are good examples of this melding of tradition and modernity. The fusion of modernity and tradition in architecture has also become an issue in architectural education in non western contexts. While the theories of Modernism continue to play an important role in architectural education in non western societies research and understanding of traditional built environments that were previously viewed as inferior are now actively studied. Most traditional architecture in non western contexts however is rural and the forms cannot easily be applied in urban contexts. This has been one of the primary challenges to architects.

Some non western architects such as Doshi and Correa in India, Rasem Badran of Jordan, Jeffery Bawa of Sri Lanka and others are now internationally renowned for their work which is derived out of this fusion of modernism and the lessons of traditional architecture. These architects have designed buildings and settlements that are modern in every respect but which are also unique to place, context, climate, local life style and culture. They have drawn heavily upon the study and understanding of architectural traditions in their respective countries and regions in order to create such works. Today there are several other architects in non western societies who are not so internationally known but whose works are also good examples of this fusion. Five such works will be presented and discussed. The examples are taken from a variety of non western contexts. They illustrate the similarities in the basic principles of traditional architecture and those of Modernism and show how the fusion of the two forms of architecture is possible. In the case of the examples from Zimbabwe climate, economics and function were driving forces in the designs whereas in the example from Bali continuity of local character was an additional emphasis. Although the forms and contexts of these buildings are very different they are all based on an understanding of both Modernism as well as the underlying principles of local architectural traditions, local materials and available technologies.

Case Studies
The following are the case studies that are discussed in a slide presentation.

1 Ethandweni SAI Children's Home, Whitewaters, Matobo, Matabeleland South, Architects Partnership, Harare, Zimbabwe
2 Action Magazine Offices, Mukuvisi Woodlands, Harare, Architects Partnership, Harare, Zimbabwe

3   Amandari Hotel, Sayan, Bali, Peter Muller, Architect
4   Guesthouse, Bedulu, Bali, Robi Sularto, Architect

References
1   Curtis, William J. R., *Modern Architecture Since 1900*, Oxford,
     Phaidon, 1982, p. 14.
2   Ibid, p. 16.
3   Ibid, p. 19.

Transcending Limitations: Modern Possibilities

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Introduction in the form of a Question

"Why does modernism refuse to die?" is provocative but deceptive question. It is not modernism that refuses to die but rather the *modern*. The former is a stylistic category useful for locating one "ism" among others. The latter relates to a condition of being in a present one way or another distinct from the past. The divide between ancient and modern is somewhat mobile. In history it tends to reside between the end of the Medieval and what comes after. For architecture, the divide between pre-modern and emergent modern drifts between 1700 and 1900.[1] "Isms" come and go yet we continue to inhabit the modern. Consequently, while the hubris of heroic modernism (1925-1960) is no longer tenable, the relevance of a modern architecture persists.

There are at least two kinds of modernity, and modern architecture has done a better job embodying one rather than the other: the first is associated with progress as an end in itself, and with a reduction of cultural life according to the requirements of economy and efficiency driven by an extreme rationalism. Modernity of this sort arises alongside modern techno-science.[2] The other modernity is associated with developments during the latter half of the nineteenth century, especially the *discovery* of an unconscious by Freud, which facilitated Surrealist thought and practice. Awareness of an unconscious suggests the possibility of collapsing the divide between rationality and dreams. An unconscious, Surrealism and collapse between rational waking thought and the wonder of dreams are now as much associable with the poetics of modernity as with philosophical post-modernist desires to recuperate holism (especially as elaborated by G. Vattimo).[3] These two *modernities* struggle for dominance in thought if not in action. The first is reductive and is motivated by cost-cutting dreams of total organization, the second inspires an idea of richness that turns on a synthesis capable of

domesticating the modern world and its trappings by bringing these within the domain of humanism. A domesticated modernity makes possible a setting where the machine, machine production, and scientific reason could be embraced as human creations, not feared as torments heralding from some abstract and anonymous force from above.

To explore these ideas in some detail, I examine three late-modern works constructed between 1957 and 1965: Le Corbusier's La Tourette, Louis I. Kahn's Salk Institute, and Aldo van Eyck's Amsterdam Orphanage. In many important ways, these three structures recuperate the promise of early modern architecture at the moment when orthodox modern architecture began slipping toward decline as it was institutionalized at the hands of CIAM (so crucial originally for the emergence of modern architecture). Its capture as an International Style, and the unfortunate identification of its most abstract qualities as appropriate for imaging emergent corporate capitalism, also helped to dissociate modern architecture from its radical origins. The three structures listed above are also worth considering in light of the inability of stylistic Post-Modernist architecture to deliver on its promise of a more comprehensible, thus humane, environment. For this reason, and many others besides, modern architecture will not die.

The state of modern architecture during the postwar years from 1946 to 1965 are as well documented in thoughts about the future of architecture as they are in the three buildings noted above. Consequently, texts by Summerson, Giedion, Rykwert, Le Corbusier, Kahn, and van Eyck, as well as buildings from these years inform the present discussion, the ultimate aim of which is to suggest that *another* modern architecture, capable of exceptional richness, is a real possibility only tentatively entered upon to-date. It is an architecture as indebted

to the past as it is to early twentieth-century theories of art, such as were elaborated by Breton and Mondrian.

End of a New Beginning

The tragedy of World War I inspired a turn from negation of existing conditions toward affirmation of an alternative way of being modern.[4] With this, Dadaists transformed to Surrealists. But if the First World War inspired a rejection both of negation and the limits of extreme reason taken to absurdity, the Second World War showed the extreme danger of techno-science unhinged from any ethical restraint. Consequently, at its zenith, positivist overconfidence—come to be known as modern—revealed its limitations with tragic clarity. Curiously, it was at this very moment that orthodox Modern Architecture, as represented by CIAM, came into its own as the official style of business and government alike. This new position of authority was, ultimately, behind the curve.

By the end of the Second World War, the modern project deriving from nineteenth-century positivism—revealed early in the diaphanous haze of Paxton's modularized Crystal Palace assembly and developed by way of mechanized warfare (most emphatically in atomic bombs, blitzkriegs, and death camps)—was irreparably cracked. Instrumentalized reason, the logic of positivist social science, and reality disciplined by economy and efficiency could no longer pretend to contain the full spectrum of human desire. Thus, modern architecture and the logic of positivist modernism are revealed, at the moment of apotheosis, to be inadequate, which is why the best architects of the 1950s appealed to dreams, fantasies, fairy tales, the past, other cultures, and to an alternative, maybe authentic, modernity, represented less by techno-science than by the achievements of earlier twentieth-century artists, as well as Marx, Freud, and Einstein. Abstraction may be the great achievement of modern art, but abstraction doesn't free art from content or meaning, rather it frees art from representation. In architecture, this plays out with architects finally being potentially free of the style obsession that obtained (in one form or another) since the end of the Baroque. An abstract architecture presents a number of problems. If its autonomy from everyday life is too complete, it will be incomprehensible. If it is weakly abstract, it will constantly encourage comparison to previous styles, or the search for represented content. For an abstract modern architecture to be both free of style obsession and to have content it must operate through reference or analogy. Its elements will need to carry a charge comprehensible at the moment of perception, even if only vaguely so.

The Mischievous Analogy: Architecture and Painting

Summerson elaborates on how architecture freed itself from the styles in his essay "The Mischievous Analogy,"[5] and he showed in the essay "Architecture, Painting, and Le Corbusier,"[6] how Le Corbusier transformed the logic of modernist abstract painting into the basis of an architecture that was strange enough to make it wonderful, yet comprehensible enough to make it usable. Yet, the limitations of Summerson's argument in both essays render them potentially confusing in terms of architectural invention. In "The Mischievous Analogy," he argues that architecture could only become modern once it gave up attempting to analogize past styles. So while he is correct in how architecture loosed the grip of the styles, his rejection of analogy seems too complete, extending to a prohibition against acknowledging that architecture can be informed from beyond the discipline, which could obscure that although architecture has its own ways of thinking and doing, it does not come from within itself. And while architecture can reasonably only address architectural concerns, it cannot free itself from being a setting for social life at all scales. Unfortunately, it is possible to come away from Summerson's essay thinking that analogy itself, and not the analogizing of historical styles, is the problem. Yet, analogy seems to be the very way to make an abstract architecture meaningful, thus comprehensible.

In "Architecture, Painting, and Le Corbusier," Summerson accurately identifies Le Corbusier's debt to modern abstract painting, but he appears to get bogged down in a formalist—conventionally compare and contrast—reading. For example, he suggests that Le Corbusier's architecture is like Picasso's Cubist work because it *looks* like it, which seems to return the problem back to one of representation. What, though, if Le Corbusier's architecture shows the influence of modern art movements (more likely Surrealism than Cubism) not in terms of appearance but in terms of thought, that is, on a theoretical, rather than a representational level? If this is the case, then it might be possible not only to expose the relation of twentieth-century architecture to modern art movements, representing an *authentic modernity* and freed from nineteenth-century positivism by way of poetic reason, but also to show how such an

understanding reveals the possibility of an abstract architecture that is as free of the styles as it is full of meaning. In the present discussion I will consider Breton's Surrealist theory and Mondrian's theory of *abstract reality* to the degree that they reveal a method in the work of modern architects that is both comprehensible and far from being spent.

Abstract Reality and Surrealism

Breton's conception of Surrealism and Mondrian's idea of Abstract Reality share an early twentieth century preoccupation with reconciliation.[7] For Breton it would be a reconciliation of waking reality with dreams; for Modrian it would be a reconciliation of the mind-matter dualism. The bringing together of apparent opposites that both shared was expressed differently but revealed a shared desire for an augmented reality (and consciousness) that could redeem individuals from the leveling excesses of nineteenth-century materialism. If Breton sought the roots of creative invention in the access dreams give to unconsciousness, Mondrian sought to unveil the primordial relationships, which he argued forms the basis of all meaning that, according to him, naturalism conceals. Both conceptions of reconciliation harbor great consequences for architecture that has already been provisionally explored in the strongest modern work. In a way, Mondrian's project for abstraction as a form of revelation helps to release the Surrealist project from interpretations stuck on its most provocative imagery. For abstract reality to be comprehensible, access to unconscious perception at the moment of experience must at least be entertained as a real possibility.

According to Mondrian, abstraction is an un-veiling of relationships that carry a charge, which naturalism (representation) either conceals or confuses. Repose, for example, is the outcome of such relationships; it can be expressed by a flat land, a broad horizon in the distance, with the disc of the moon high above—all abstracted by the fall of night. Expression of repose can be purged of all its representational (naturalistic) appearances and still convey the outcome of repose, which is a condition of peacefulness and tranquility. If this is correct, the beauty—sense of balanced calm—of a beach with the ocean beyond and a bright big moon above is as much the outcome of charms specific to a particular beach under unique circumstances as it is a direct apprehension of meaning at the moment when the relationship between the flat swath, broad horizon, and illuminated disk above—which emphasizes the counterpoint of the first two—is experienced. In abstraction, the trick is to purge the assemblage of its representational naturalism without losing its referential content. Ultimately, it is not what it *looks* like but rather what it *feels* like. The reason such a statement might sound woolly is because rationality overvalues what is seen, thus documentable, and ultimately countable. The felt of emotional states resist quantification thus evading concretization through verbalization or recording. But that does not make emotion any less real than its quantifiable counterpart, which is why the barely conscious intangible that resists explicit expression is more fully the architect's occupation than simply the measurable, or re-presentable.

Mondrian's consideration of repose offers a convenient way to nudge abstract reality towards architecture: for example, the architectural correlate of repose is horizontality. The very word repose carries with it the idea of horizontality: *to lie or lay something at rest.* Consequently, a setting of (or for) rest, that is, a place that analogizes rest, would emphasize horizontality over other arrangements, especially verticality. But horizontality in relationship with verticality, depending on the proportion of each to the other, actually increases the experience of repose through counterpoint. Horizontal also carries with it horizon, the implication of which is a limit where earth and sky meet, but also the sky-dome itself, defined at its lower limit by an apparent plane—the ground or earth. Building also participates in this drama by constantly attempting to reconcile the horizontal and vertical in terms of a upward thrust carrying a potentially crushing load, or through the preparation of a horizontal building platform ready to receive and support vertical elements of construction. Frampton suggests that this is the drama of the tectonic, which is ultimately a poem of construction revolving around the downward pull of earth and the upward thrust of sky.[8]

In all its forms, this drama of gravity and resistance of it refers to the experience of the body at rest, play, work, and even in death. It is thus possible to argue that emotional states are traceable to bodily states. For example, a body at rest on a bed (or on some correlate to a bed, such as a rug or a beach) appears to best express the condition of repose, which expresses peacefulness or tranquility that horizontality conveys. Repose is comprehensible at the moment of its perception precisely because rest (or sleep) is so crucial for emotional and physical well-being. Rest is always in mind, sleep is when

the day is shaken off and dreams intrude upon consciousness. To summarize: abstraction reveals the relationships naturalism conceals. It reveals also the outcome of those relationships. More accurately, it analogizes them. In doing this, abstraction can overcome representation without a loss of content. A content that communicates through reference rather than representation is *experienced* rather than *read.*

Meaning and Building.
Or, How to Enrich Modern Architecture

By the latter half of the 1950s, it had become obvious to some that the attempt by architects to align themselves with positivist social scientists and with the methods of the hard sciences was resulting in a reduced environment increasingly incomprehensible to the people who actually inhabit buildings. Reflection on the failure of a scientism applied to architecture was in no way a call for architects to beat a path back to the *styles;* rather, it was an attempt to elaborate on how modern architecture might be expanded and enriched. It was in this spirit that, in 1957, Joseph Rykwert argued for "a semantic study of the environment," which could reveal how "every building, whole cities even . . . carry declarations, confessions, avowals." Such conviction ran counter to conventional ideas about the built environment at the time. Orthodox Modern Architecture was concerned primarily with problems of quantity, planning, economy, computerization, and especially prefabrication, as well as with the design of functional cities and minimum dwellings.[9]

By the mid-1950s, the emotional potential of architecture had mostly been overwhelmed by attempts to render design a fully rationalized and quantified process, a preoccupation that risked devaluation of designers as their work became less and less comprehensible. Rykwert argued that to redeem their efforts, "architects must acknowledge the emotional power of their work; this recognition depends on the methodical investigation of content, even of a referential content in architecture. . . . rationalism is not enough . . . over and over again it has failed."[10] Argument against a fully rationalized design method turns on the incapacity of such an approach to contribute to a multivalent environment available for improvised use by a diversity of occupants. In fact, a design method that sticks too close to technical data in an effort to simply fulfill functional requirements tends toward results arrived at

by the most commercial architects, who claim to only be supplying a container for predetermined activities.[11]

Concern with emotional criteria, the qualitative and the intangible, ought to preoccupy architects because decisions are never made on rational grounds alone. Individuals seem to seek two things: something which locates them in their own time, and something that binds them to a distant, even primitive, past. Things that harbor both—the modern and the ancient—are most capable of carrying a charge to which emotion and desire is responsive, even as more rationalist function is met. Each of the "many parts which compose our environment . . . carries a proportionate charge of group memories and associations. The designer's responsibility, then, whether he knows it or not, is to create order not only in terms of a sensible arrangement of physical function, but also out of the all-but-living objects which we use and inhabit." Ultimately, economic considerations are but a small part of what sways people.[12]

Architecture responsive to the actual richness of the multi-varied needs individuals have is only possible by an intermingling rational functionalism and an extended emotional functionalism. But such architecture is not so much representational, in the sense of resemblance to something familiar or to a past architecture, as it is capable of analogizing states of being both archetypal and contemporary. Rykwert explains such a capacity as follows:

In [the strongest] pictures [by Mondrian] abstraction has been left behind—they are images constructed out of autonomous and artificial elements. In these pictures figuration is not resemblance but analogy. Mondrian is the key. Here all the threads I have toyed with: psychology and anthropology, perception study and ergonomics, come together at last to be given a form. What that form shall be can only be worked out in time. But I believe we have come to the end of a non-figurative architecture and that we must now look to the scattered material which psychologists and anthropologists have been gathering. Not only myth and poetry, but the fantasies of psychopaths await our investigation. All the elements of our work: pavement, threshold, door, window, wall, roof, house, factory, school—all these have their poetry; and it is a poetry we must learn to draw from the programmes our clients hand us, not to impose it

by a cheap melodramatisation, but to spell it from the commonplace elements which we fit together.[13]

A figurative architecture is, then, an articulation of figures arranged into a particular form; it is non-literal and does not embody or convey meaning by way of melodramatization; it uses neither stereotyped characters, nor exaggerated emotions; it is not simplistic, and the conflicts it purports to resolve are not reductive. A figurative architecture operates with metaphor and analogy—the building *is* a body, and the building *is like* a body. The figures out of which figurative architecture is configured are all the elements of architecture, including the parts, or materials, of a building fitted together through construction, the spatial themes of a building experienced through sentient occupation, and the institutions that make up and house society. The difference between an architecture of technical functionalism and one of emotional functionalism is that the first simply attempts to get the job done with a minimum of effort as it appeals to reason alone; the second is technically functional in *addition* to establishing a place for dreams, desires, and intangible needs.

The emotionally functionalist architect is capable of looking at building assembly, not simply as a combinative process guided by economy and efficiency, but rather is *also* able to de-familiarize construction, occupation, and institutions so that the wonder hidden by such commonplaces is revealed as an ever present immanence, which overconfident rationality conceals. The emotionally functionalist architect gets at the apparently hidden marvelous dimension of the commonplace by appealing to faculties beyond waking reason alone; dreams, unconscious thought, and even

Campidoglio (photo by author)

madness can reveal the wonder that an apparently firmly established banality conceals. It is here that Surrealist thought shows itself as informing an architecture of extended modernism. And just as Breton argued that Dante and Shakespeare are notable for the *sur-reality* they elaborated in their literary efforts, the architecture of Michelangelo and Borromini participate in a similar expression of the richness reconciliation between waking reason and dreams (between the conscious and the unconscious) facilitates.

Rykwert went so far as to argue that the real functionality of a building turns on acknowledgement of emotional elements beyond reason alone: "we should acknowledge the unconscious element in man through our methods of work and make it a criterion of the workability of our buildings."[14] Accordingly, architecture as a *counterform* to the unconscious, by being responsive to it and by making a place for it, ought not be thought of as an added value that only the *best* architects bring to their work, rather it is a basic responsibility of architects—a capacity to be cultivated in schools of architecture—as valuable as the professional skills that make graduates employable. If such is the architect's primary responsibility and its character is so little understood, some way of integrating awareness of the unconscious into things architects can know and do must come to preoccupy us. One way to approach the knowledge beyond the confines of a limiting reason is through a semantic study of the environment.[15]

This charge may seem a large one, even as grandiose as the overconfidence that characterized architects' forays into positivist social science. Yet, although it has long been shown that architecture cannot form behavior, architects, and the architecture they make, can be responsive to human emotion; even though individuals themselves are barely conscious of their own desires. After all, isn't that what we expect of our poets, painters, and sculptors: the ability to reveal the hidden, to make conscious the unconscious, to bridge the rationalist divide between dream and reality—to reveal some truth about existence? Why should we expect (or accept) any less from architects?[16] Only through the cultivation of a knowledge surpassing the limitations of logic could an architect gain access to what for most people only ever vaguely intrudes upon consciousness. Yet, just such an ability appears essential if architecture is to again take its place as the stage for playing out life in all its depth.[17]

Abstract Reality and Surrealism Realized:
La Tourette, Salk Institute, Amsterdam Orphanage

La Tourette is notable for its roughness, partial enclosure, and play of Corbusian forms. At first glance, Le Corbusier appears to have defeated monastic enclosure (especially in the cloister) with a series of cruel jokes that renders it meaningless. But this is not the case. La Tourette is often called a monastery, which it is not; it is a convent. The significance of this resides in the different kind of community housed by each religious structure. Monasteries house fully enclosed communities, convents—especially Dominican houses—do not. Yet, by de-familiarizing monastic forms, through displacement and surprise, Le Corbusier has made La Tourette an appropriate setting for an order of preachers who traditionally lived in urban centers, particularly university towns, and took no vows of silence or enclosure. In point of fact, La Tourette, in its play with monastic analogy opened up by cosmopolitanism, becomes a setting uniquely suited to the struggle Dominicans have long engaged in—finding a balance between the certainty of enclosure and monastic order and the temptations of the world for preachers ministering to society at large.

If partial enclosure is comprehensible as an opening up of monasticism toward cosmopolitanism, the roughness of La Tourette is immediately understandable as an architectural correlate to vows of poverty. The Corbusian forms that clutter the cloister, and the overall arrangement of the complex, quickly inform us that things are not exactly as they appear: convents are not monasteries. And religious orders, with their commitment to faith and charity, still might have something to share with *rootless* cosmopolitans, even if the complex is on a hill in the countryside beyond the city.

The refinement of the concrete at the Salk Institute is notable, particularly in contrast to the roughness of La Tourette, but smoothness is not so much an expression of affluence or technique as it is an attempt to offer the West Coast of the United States a building it has no business having—a ruin suspended in time and occupied with vital wonder. Salk's objective was one of transcendence, which he shared with Kahn and is why they were able to invent such a surprising structure. A spirit of inquiry, the objective of which was to collapse the divide between scientific and poetic reason, motivated both scientist and architect. Architects and scientists are both preoccupied with invention, and the invention of one analogizes the inventions of the other, and the creations of both are analogous to birth.

The Salk is a center for biological research, thus it is preoccupied as much with discovery as with birth: the Institute building analogizes this. It also looks, as does La Tourette, backward toward monastic enclosure for clues as to how a place of inquiry on the edge of a continent can be open in one direction and closed in the other—open in a welcoming manner, both to the researchers and the spirit of scientific discovery contained by ethical restraint, and closed to too much worldly distraction and the piercing sun. An honorific quiet descents upon the Salk, but if the water channel is followed westward, toward the setting sun, and the ocean (the womb of all life), to the point where it falls to the lower plaza, one is struck by the noise of the water and the researchers who cheerfully occupy a deck facing outward: toward the sea, toward wonder, toward the horizon—where Western techno science falls, nearly undiscernibly, into a meeting with the infiniteness of dreams.

La Tourette and the Salk Institute embody a backward glance to achieve a forward-looking recuperative effort.

La Tourette (photo by author)

Salk Institute (photo by author)

Both are realizations of dreamlike de-familiarizations of ordinary program types abstracted to the point where representation is replaced by reference, and the elements that form both are comprehensible at the moment of perception as a bodily experience. The same can be said for van Eyck's Amsterdam Orphanage, though here de-familiarization and displacement are more overtly employed in an attempt to break open an institutional form so as to redeem it. Van Eyck achieved this by establishing an exceptionally strong initial element depicting the drama of load and support. This figure refers as much to the body as to a primordial past of original construction, which binds it as much to Stonehenge, as to Laugier's Primitive Hut, as to Le Corbusier's constructive system drawn from both. The persistence of this figure derives, no doubt, from its reference to the body's defiance of gravity and to the thresholds humans pass through—physically and psychologically—throughout their lives.

All three buildings extend modern architecture by making it more fully modern. They do this by bridging the illusory divide between *waking reality* and the *reality of dreams*, resulting in what van Eyck called an *authentic modernity*. It is a modernity infused with the unconscious that can redeem wonder as it surpasses the limitations of the nineteenth century's grasp at certainty—the shadow of which we continue to inhabit. Re-presentation and the *styles* are left behind, but modern building materials and methods are softened by abstraction, which, in these examples, reveals meaning directly to the body.
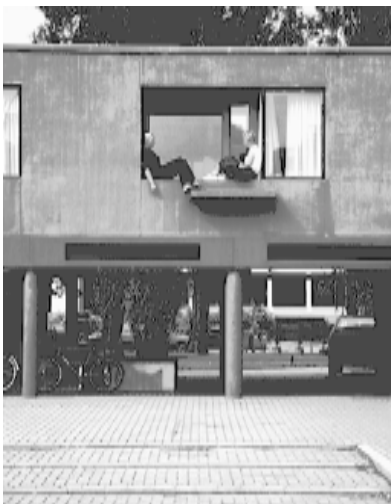
Amsterdam Orphanage (photo by author)

Notes:

1 See Joseph Rykwert, *The First Moderns* (Cambridge, MA: MIT,), See also Kenneth Frampton, *Modern Architecture: A Critical History* (London:Thames and Hudson,).

2 For an introduction to this idea of the modern see, Jürgen Habermas, "Modern and Postmodern Architecture," reprinted in, *Rethinking Architecture: A Reader in Cultural Theory*, Ed. Neil Leach (London: Routledge, 1997), 227-235; Alberto Pérez-Gómez, *Architecture and the Crisis of Modern Science* (Cambridge, MA: MIT, 1983); Gianni Vattimo, *The End of Modernity*, Trans. Jon R. Snyder (Baltimore: Johns Hopkins, 1988.

3 See especially, Gianni Vattimo, *The Transparent Society*, Trans. David Webb (Baltimore: Johns Hopkins, 1992). See also, Gianni Vattimo, *Beyond Interpretation*, Trans. David Webb (California: Stamford, 1997).

4 The best introduction to the Surrealist project is by Breton himself. See, André Breton, "What is Surrealism?" (1934); available from http://pers-www.wlv.ac.uk/~fa1871/whatsurr.html; Internet; accessed 6 August 2002.

5 John Summerson, "The Mischievous Analogy (1941)," reprinted with revisions in, *Heavenly Mansions and Other Essays on Architecture* (New York: W. W. Norton & Co., 1963), pp. 195-218

6 John Summerson, "Architecture, Painting and Le Corbusier (1947)," reprinted with revisions in, *Heavenly Mansions and Other Essays on Architecture* (New York: W. W. Norton & Co., 1963), pp. 177-194

7 For a concise discussion of Surrealism, see André Breton, "What is Surrealism?" (1934); available from http://pers-www.wlv.ac.uk/~fa1871/whatsurr.html; Internet; accessed 6 August 2002; André Breton, "Limits not Frontiers of Surrealism," in *Surrealism* (1937), Ed. Herbert Read (New York: Praeger, 1971), pp. 93-116. And André Breton, "Surrealism and Painting (1928)," reprinted in *Theories of Modern Art*, Ed. Herschell B. Chipp (Berkeley: University of California, 1968), pp. 402-409. For a concise discussion of Abstract Reality, See Mondrian, *Natural reality and Abstract Reality* (1919-20), Trans. Martin S. James (New York: George Braziller, 1995); Mondrian, "Plastic Art and Pure Plastic Art (1937), in *Modern Artists on Art*, Ed. Robert L. Herbert (New Jersey: Prentice-Hall, 1964), pp. 114-130; Mondrian, "Statement (c. 1943)," reprinted in *Theories of Modern Art*, Ed. Herschell B. Chipp (Berkeley: University of California, 1968), pp. 362-364

8 Kenneth Frampton, *Studies in Tectonic Culture* (Cambridge, MA: MIT, 1995)

9 Joseph Rykwert, "Meaning and Building (1957)," reprinted in, *The Necessity of Artifice* (New York: Rizzoli, 1982) p. 09

10 Ibid, p. 10, 12

11 Ibid, p. 12

12 Ibid, p. 13, 14, 15

13 Ibid, p. 15,16

14 Ibid, p. 16

15 Ibid, p. 16

16 Ibid, p. 16

17 Ibid, p. 16

Uncrating Kahn's Fisher House

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Dr. Fisher tells an amusing story about the house that Louis Kahn designed for him and his wife in Hatboro, just outside Philadelphia. Soon after its completion, two of Fisher's new neighbors walked past, pausing for a moment to consider this unusual double-cube structure. One condemned the flat-roofed house made of vertically hung natural wood siding, thinking it out of place in a neighborhood of traditional dwellings of white-painted clapboard and stone. The other reserved judgment. "I'll wait and offer my opinion," he declared, "when the thing is uncrated."

The comment is not without insight for boxes and machines were certainly among the most prevalent paradigms of Modern architecture, and one might well imagine the vertical boards of the Fisher house stripped away only to reveal a porcelain-enameled, (Richard) Meier-esque 'washing machine for living in'. Kahn's buildings often assumed a 'box with contents' *parti* and it was Kahn himself who likened his Fort Wayne auditorium to a violin in a violin case. Indeed, preliminary sketches indicate that this is exactly how Kahn initially conceived the Fisher house. Next to a wood-framed cube, he placed a cube of stone, hollowing from its interior a cylindrical void. At their narrowest, stonewalls were to be two feet thick. Preliminary cost estimates rendered this scheme absurd, and Kahn was compelled to build in a manner conventional to American residential construction: concealed wood-stud framing—a manner at odds with Modern movement dicta that seemed to insist on honest expression of structure and material. It was Kahn's religious adherence to such dicta that had brought to his work a gravity, a weight, an order, an authenticity that few Twentieth Century structures had achieved. And if at Hatboro he were to reluctantly give up his thick walls, he would not so easily give up their effects.

Now it seems to me that one of the essential aspects of a 'box within a box' *parti* such as that which Kahn devised for Fort Wayne is that one might inhabit the walls. I mean by this that there is the principal 'room'—in the case of Fort Wayne, the auditorium —and there is surrounding this room a space that is not a room. This space that is not a room is the space between the exterior walls of the inner box and the interior walls of the exterior box. To inhabit this in-between space, is to dwell within the building's wall. At Fort Wayne, the ostensible function of the building perfectly accommodates the 'box within a box' *parti*, for an auditorium demands to be surrounded by circulation space, the space of movement. The clarity of the scheme in this large volume one-story structure is readily evident. The same *parti*, though somewhat more complex and therefore less apparent, is employed at Rochester and at Dacca (clearly a variation on Rochester) at Bryn Mawr and most ingeniously at Exeter. At Rochester [L & R], Kahn surrounded the sacred, principal room with a corridor and then with another very thick wall, a wall that houses all the other functions of a Unitarian church. When inside the building, the thickened wall is hardly perceived as such. One understands this wall as a series of rooms off a common corridor. From the outside, however, the thick surrounding wall is made visible by Kahn's cutting and removing of each of its corners. The resulting end walls Kahn rendered as impenetrable masonry, a motif he extended to the open front walls in the form of deep, closely spaced sunscreens. All conspire to give an overall impression from the outside of massive brick walls, surrounding—perhaps, buttressing—a big box, a big box in the latter stages of decay. And something of the same might be said of Kahn's dormitories at Bryn Mawr [L & R], though here the big box is multiplied by three and is far more submerged in the surrounding walls, walls which again are inhabited. The inhabited 'walls' are the dormitory

rooms themselves; the inner boxes are the three atria that they surround. This *parti*, however, lacks clear articulation. As at Rochester, the rooms are severed from the inner boxes by a corridor, but multiple levels complicate and confuse the order. In addition, the inner boxes lack definition. In their attempt to accommodate diverse functions and movements, their form is eroded.

At Exeter, Kahn perfected the 'box within a box' *parti*. Here the inner box is a void, a cube of light, absence itself made manifest. This inner box is not an object, and yet it has four facades. Unlike Fort Wayne or Bryn Mawr, the place it offers us is not habitable. It is ideal space made manifest, a space traversed by light alone. Surrounding this light is the dense, dark core of books. And surrounding this solid core are the inhabited walls, now made very visible as such. All of this is obvious from the outside, where Kahn has again clipped the corners to render the walls massive, thick brick piers; yet here he has welded the walls together with balconies and in so doing maintained the integrity of the cube. The building can thus be perceived *both* as four hollowed walls—the pergola at the top and arcade at the bottom delineating this hollowness—strapped together at the corners with balconies, *and* as a solid cube with chamfered corners. The reading depends largely on the way in which the building is lighted as the sun moves through the sky. But the inhabited wall motif is now made visible on the inside too, for here the space of the wall is a *vertical* channel—a channel that echoes the verticality of the wall as we know it from the outside. That the wall presents itself as a wall, that it contains space is absolutely imperative. That it illuminates the space it defines is equally important. The two would seem to be in conflict, and it is the real genius of Kahn at Exeter that both are accomplished together, that the opening of the wall makes visible the wall itself.

So at Exeter Kahn perfected a *parti* that he had deployed in many of his most renowned institutional buildings. He turns Fort Wayne inside out, surrounding space with solid, solid hollowed out to allow for inhabitation. Readers in this library dwell in the fabric of its construction and by contrast, the cube of absence that is its center, its reason for being, is rendered visible. The building is never diagrammatic, each of its elements—whether solid or void—is inextricably woven into a whole far greater than the sum of its parts. In this, and in the clarity of its insistence on the (philosophical?) centrality of emptiness—that is, of the unknowable and inexplicable—it stands in marked contrast to a building

that assumes a very similar *parti*, Gordon Bunshaft's Beinecke Rare Book Library at Yale. If Kahn, as Robert Venturi once remarked, is neither a modernist nor a post-modernist, certainly *this* Bunshaft building, can only be considered American Modern Movement *par excellence* [L & R]. I introduce it here only because I believe it persuasively indicates how radical Kahn's vision was when compared to that of his contemporaries. Within an elevated box of translucent marble, Bunshaft placed at its center another box, a hermetically sealed glass box that he filled with the renowned rare book collection. This glass box is luminous; it glows in the orange light of the library. The display is fetishistic; the books are there to be worshiped as objects. An extensive comparison might be made between Bunshaft's manifestation and that by Kahn at Exeter, and from such a comparison, I suppose, we would begin to understand how terribly different Kahn's work was from that of his contemporaries, and how truly revolutionary was the building that he built in New Hampshire.

But I recall that my declared subject was the Fisher house, and I began by suggesting that in his preliminary design for that house—a stone cube containing a cylindrical interior—Kahn simultaneously incorporated the two notions so essential to his institutional work: a 'box within a box' and 'the inhabited wall'. Clearly the two notions work as one and, as we have seen, Kahn's direct and uncompromising use of materials helps to articulate both. But, no matter how tight the weave of this 'box within a box' might be, there is a redundancy in this multiple layering that can be sustained in a large institutional building, but that necessarily must seem superfluous and less than 'economical' in the case of a
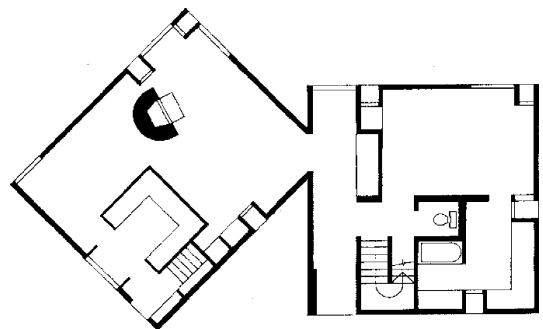

First Floor Plan [1]

relatively small, modest dwelling. With this in mind, I will examine the more curious features of the Fisher house. These features, as I see it, are two: First, there are two cubes (or near cubes) and these cubes are 'joined at the hip'. Second, there are the 'windows'—if I dare call them that—and unlike most Philadelphia bay windows, these windows project *into* the house, not out of the house, as can be seen on the plan.

Now 'two cubes joined at the hip' is a variation on a theme that Kahn adopted in the early fifties when he abandoned his Breuer-esque approach to residential design; and the inverted window, I would argue, grows directly from Kahn's rigorous subscription to that theme. At that time he chose the square as a basic datum, and from this square—almost always 26 feet on a side—each of his residential designs is generated. Thus there is the three-square Fruchter house project of 1952, and the six-square Devore house plan of 1954-55 , looking a bit like a poorer, 'servantless' version of Richards Medical Laboratories. Next there is the 5-square Adler house plan and here the columns, too, have become squares,—grown to the size of walls, firmly articulating the corners as mass, while eliminating the corner as space. Chimneys find their place as Kahn's first servants, poised outside glazed openings and therefore visible from the inside, a place they will occupy in successive residences right up until Kahn's last work, the Korman house. The width of the column-piers in the Adler scheme affects the 'field' generated by the articulation of structure. No longer is that field a simple Cartesian line grid, but now becomes a Scottish plaid Tartan grid, defining a swatch of space wide enough to accommodate staircases and toilet rooms. If this mention of piers, corners and tartan grids

'Garden' facade of 'living' cube elevated on masonry base [2]

all sounds a bit Wrightian, the similarities are indeed there and well worth pursuing, though certainly not at the present time. At the present time we push on to Trenton where the corner piers of the Adler scheme become inhabitable, which is to say that it is here that the idea of *poché* space emerges in Kahn's work in a fully modern sense. It emerges, and though it may later be clarified by a study of historic structure, and though, too, it may well have lurked in Kahn's Beaux Arts consciousness, here it is grown from within, a direct result of his disciplined pursuit. And after all, how else to enter the walled-off dressing courts; and where else to put the plumbing? So servant and served, *poché* space, inhabitation of the wall: all emerge complete at Trenton. And together with them—the yang that makes the ying visible—at Trenton, perhaps purely by chance, Kahn discovered the inner courtyard, the synergetic appearance of a fifth square (which is a void) from four squares (which are solids) has something to do with the need to eliminate redundancy and thus to allow each solid, pyramided roof to share two piers with its neighbors. But the real inner courtyard, the true Kahn court, is not the roofless, fifth square, but the roofed dressing rooms. Here the pyramidal roof does not meet the wall, and light spills in from above. (Here again we might remember Wright, for certainly this is what Kahn recognized in Wright's great workroom at Johnson Wax). The space is entirely enclosed and we are made keenly aware of the wall, of the apparent heaviness of the roof suspended above, and of 'light'. As the sun traverses the sky, successive walls are highlighted. The order of the building registers celestial movements. This is a registration Kahn will conjure up again and again in all of his great space: in the Rochester church, in the Salk plaza, in the vaults of the Kimball, at Exeter and in the courts of the British Art Center.

One could continue this review and move on to the weather-proofed version of Trenton, the Clever house , where an obviously Palladian plan is married (perhaps more by the Rev. Anne Tyng than by Rabbi Lou Kahn?) to Bruce Goffian elevations and details. From here we would go to the Esherick and Shapiro houses (the immediate predecessors to the Fisher house) and to the preliminary sketch for a 'box within a box' that gave rise to the present inquiry. Earlier along the road we would have run into the Esherick studio where a skewed geometry resulted in a 'joined at the hip' motif, not unlike that at the Fisher house—or that exhibited more famously in early American building, most notably at the Ephrata
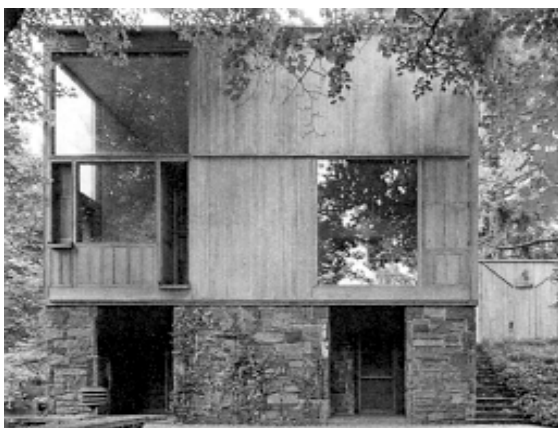
Cloisters. Earlier still, we would have come across Kahn's structural *parti* made explicit, his Maison Dom-Ino as it were, the Trenton day camp, four pavilions loosely arranged around an outdoor hearth. The day camp is a forerunner of the articulated pavilions in Hatboro, but without the need for enclosure or for easy movement from box to box. But just as with the Bath House in Trenton, it is exactly such need that drives Kahn on. With each new solution, comes a new discovery. You see, Kahn could not have placed the cubes side by side allowing them to share a common wall as at the Esherick house; and, having long ago dismissed the corridor as coercive, he certainly could not have introduced a third element, a connector between the two buildings. Connectors and corridors belonged to his Breuer-esque phase before Kahn became Kahn with his acceptance of the elementary square as generator of architectural form. What else then could he have done? He joined the buildings at the hip, and, within the solid cube—for certainly the bedroom box is this—he cored a space of entry, a place that might approach a corridor in its configuration were it not emptied entirely of its coerciveness by its opening completely both onto the landscape and into the living cube beyond. This joined-at-the-hip motif, having successfully percolated through this persistent investigation, is subsequently offered to the next work that Kahn conceives.

Briefly I return to the inverted bay windows and to the notion of inhabiting the wall. In his residential architecture this idea is crystallized not at Hatboro but with Kahn's last work, the Korman house. Here he builds a masonry fireplace that one can sit in and a masonry kitchen as extension of the dining room hearth. The effect is so very early American, as is the all-wood staircase hidden within the fabric of the house and the deep window recesses that show up in many Kahn works, including the bedrooms at the Fisher house. It is this depth that is essential to Kahn, this feeling for a surrounding massiveness not easily attained in three-and-half-inch thick concealed wood stud framing. So at Hatboro Kahn introduces the inverted bay window to remedy this. It runs the full height of the cube and suggests that, despite the exterior horizontal banding that divides the box into upper and lower layers, the interior volume is a single cell. This, of course, *is* the case, but with only one of the cubes, that which houses the living, dining, and kitchen spaces. The other cube, where the bedrooms are housed, is divided into two levels; yet here, too, vertical slits suggest it to be a single cell. Too, this slit gives the impression of very thick walls, exactly as at Rochester, Bryn Mawr, and Exeter; yet here, on the street side at least, Kahn leaves the corners in tact. Indeed the corners are *reinforced* and the building seems as though it might be made up of solid pieces, as here the thick pier-columns of the Adler house re-appear if only fleetingly. On the inside, the inverted bays serve to thicken the wall too. Like the piers of the Adler house they bring to the project a tartan field. A zone is created exactly as if the cube had been built of heavy timbers. And it is this sensation of a truly heavy frame—a suggestion both reinforced by the massive stone foundation, for instance, and occasionally denied by the larger taut glass openings in which a phenomenal world is found in reflections —that Kahn again offers to his later creations.

And this then takes me back to the box and machine paradigms with which I opened. For certainly these devices can be found in play in Modern works contemporary with the Fisher house, as well as in buildings that belong to the local landscape of Philadelphia. And certainly exactly these paradigms *were* portrayed as early as the first two decades of this century (and here I remind the reader of Walter Gropius' renowned 1913 *Jahrbuch des Deutschen Werkbund* article in which he offers for our consideration two American building types, the silo and the factory, in other words, the machine and the box, or in more cuddly local jargon, the duck and the decorated shed). And certainly these paradigms have many Philadelphia connections, buildings that seem to have anticipated much of what Kahn accomplished late in his life. But if one accepts the analysis here offered, if one understands Kahn's astounding accomplishment as coming from within, as a result of a firm adherence to a program intended to legitimize the production of architectural form, then one might begin to understand that Kahn's buildings are always *more* than machines or boxes, ducks or decorated sheds, and one might begin to more fully appreciate the truly vast qualitative differences that separated Kahn's work from that of his contemporaries.

Notes:
1   R. Giurgola and J. Mehta, *Louis I. Kahn Architect* (Boulder, CO: Westview Press, 1975)
2   David Brownlee and David DeLong, *Louis I. Kahn: In the Realm of Architecture* (NY: Rizzoli, 1991)

Integration and Abstraction in the Modern Movement

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Background

It is a well-documented fact that the rate of change in the Western Hemisphere, accelerated year after year from the middle of the 18th century until the First World War. New technological devices, together with new materials and methods of construction, were introduced continuously only to be replaced by ever-newer technologies and systems. Industrialization changed the patterns of production, consumption, transportation, human inhabitation, politics and warfare to name a few of the many spheres of rapid transformation. Among those spheres of change was architecture.

Inherited styles and revivals initially coped with change by absorbing new materials and technologies while keeping their outward appearances. Those opposed to change even tried to go back in time to rescue traditional building patterns from the onslaught of modernity. One way or another, it was an inescapable fact that the so-called modern progress was there to stay, and that there was little choice but to engage in the adventure of modernism.

Revolutions in one area of activity (such as industrialization or politics), stimulates change in many others seemingly disconnected pursuits such as religion, philosophy and the arts. Because this network of motions demands continuous adaptations, traditional styles could not be flexible enough to adjust to the vast array of programmatic, technical and expressive demands that the new conditions imposed.

The project of modernity then became a search for a highly adaptable matrix of expression that could allow for endless experimentation and integration of new programs, technologies and ways of thinking.

Iconic moments as the discovery of the "free plan" and "universal space" seem to have responded to the need for that flexible matrix of operation.

Although the two world wars dramatically decreased the rate of development in Europe and in most parts of the industrialized world, they were also agents of change that destabilized even the most resilient pockets of conservatism that still remained at the beginning of the Twentieth Century. The formula of modernity emerged victorious after the Second World War: politically, for the West it was the triumph of democratic capitalism with its free market economy. For architecture it was the spread of functionalism, a highly pragmatic approach to architecture using new technologies that valued simplicity, speed and economy of construction over many other design considerations.

The conditions that promoted modernism in the first place are even more active today than a century ago. The revolution in global communications has produced an unprecedented flood of new ideas and concepts with no signs of appeasement in sight. The demand for a highly adaptable matrix of expression becomes more relevant as the spread of global capitalism compels transcultural integrations. The persistence of modernism resides in great part, in its extraordinary ability of adaptation to new conditions, its facility to change into different modes of expression and its open capacity to integrate new programs and technologies.

Perhaps the most important tool that the modern movement invented to achieve formal flexibility was the use of abstraction. Through abstraction, different components, (be it spatial, material, or technological), are reduced to a common denominator of simplicity allowing for seamless new combinations.

Problems

Many of the failures of modern architecture are also tied to the insensitive extremes of variety and abstraction. Extreme variety of expression makes it difficult to produce harmonious realms when agreements are necessary

among different components. Extreme variety can easily lead to disorder and cacophony.

Extreme abstraction on the other hand, may greatly impoverish the richness of human experience. Insensitive simplification may remove differences related to place and culture and/or to the nuances of individual and collective behaviors. It can substitute common sense reality with theoretical constructs that exist only within the realm of learned minds. Diluted abstractions may produce bland and generic environments with little character and interest.

Both extremes did occur after the Second World War. We can still see their effects in the poorly planned, cheaply built reconstructions on some the most important German cities, in the endless government housing schemes of the Soviet Union, and in the so called (housing) "projects" in the United States during the 50's and 60's.

Abstraction is the key element in the development of Western philosophy and science. To abstract is akin as to extract, to draw away, to take from, to reduce and simplify in order to reveal the principles behind phenomena, to separate superfluous accident from universal truth. As an adjective, abstraction is also related to being insufficiently factual, difficult to understand, something theoretical and impersonally detached.

As an heir of modern thinking, modern architecture also embarked in the abstraction of traditional styles in order to find universal truths. "Less is more" is the quasi-religious slogan that epitomizes this belief in hidden truths.

Like science, modern architecture analyzed building components independent of the totality of their surroundings, often removing the particulars that distinguish and characterize them. Off-site engineered buildings, prefabricated components and standardized pieces may perform well from the point of view of economy, speed of construction and durability but may also produce characterless ensembles.

The modern appeal for scientific cleanness, universality and coherence can also lead to boredom and placelessness.

Jacques Monod, molecular biologist, Nobel Prize winner and political revolutionary in an often-quoted passage about modern science, writes:

"Cold and austere proposing no explanation but imposing an ascetic renunciation of all spiritual fare … by a single stroke, it (science) claimed to sweep away the tradition of a hundred thousand years which had become one with human nature itself. It wrote an end to the ancient animist covenant between man and nature, leaving nothing in place of that precious bond but an anxious quest in a frozen universe of solitude. With nothing to recommend it but a certain Puritan arrogance, how could such an idea win acceptance? It did not; it still has not. It has however commended recognition; but that is because, solely because of its prodigious power of performance". (1)

Performance as for economy, speed of construction, functionality and human comfort may explain why the territory of modern architecture is usually limited to large modern programs such as airports, and commercial and institutional buildings. When it comes to the more intimate structures such as private homes, the penetration of modernism has still encountered great resistance.

Herman Hesse in *Steppenwolf*, writing on the extreme duality of his main character, contends that his protagonist can't see the richness of life because of his obsessive personalities; in a critical paragraph he explains:

"Man designs for himself a garden with a hundred kinds of trees, a thousand kinds of flowers, a hundred kinds of fruits and vegetables. Suppose then that the gardener of this garden knew no other distinction than between edible and inedible, nine-tenth of this garden would be useless to him. He would pull up the most enchanting flowers and hew down the noblest trees and even regard them with a loathing and envious eye" (2)

The gardener of this tale may be the modern architect if nature and humanity are secondary to his uncritical tendency for design simplification.

Successful Integrations
Fortunately there are felicitous moments as well. Abstraction and integration can succeed in bringing new totalities of great emotional and discursive content with superior technical advantages and without disregarding the impact on their surroundings.

Successful abstraction seeks to find essences not simplifications for their own sake. An essence is related to the core properties that make identities, to the real and ultimate nature of things. Essence is found in the totality of the object or organization in question, and most likely it is a system of relations including its surroundings.

Abstraction as the quest for the essential is then a patient and critical search, to remove the superfluous from the fundamental totality of beings. Since essences are purifications and condensations of entities, their combinations may retain the original strength of the individual components.

To exemplify these points, I have chosen three residential projects involving transcultural integrations:

1) Alvar Aalto's Villa Mairea is an excellent example of abstraction and integration because the objective was to find the essence of place for a contemporary country villa in Finland.

While pursuing an abstract exploration of contemporary expression without precedents, Aalto entertained another, a study of vernacular form as the key to the nature of material, most specifically the wooden architecture of Finland. The project therefore is rich in juxtapositions only held by the overall atmosphere that was desired.

The forested site holds the central theme. The grove of trees outside the main façade is abstracted into columns and poles of various sizes and locations in a way that it looks like if the natural forest became geometrized to penetrate though the house ending in a meadow, (represented by the backyard), with a miniature lake, (represented by the swimming pool), next to a
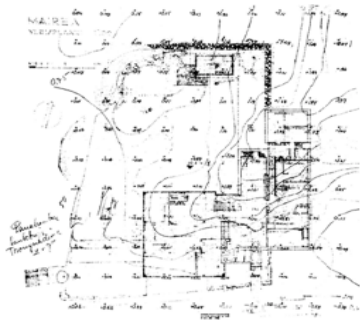

Fig. 1 Contours inform the shape of the swimming pool and entrance.

Fig. 2 Main entrance.

Fig. 3 Columns as geometrized forest.

Fig. 4 Swimming pool and sauna.

traditional wooden cabin (represented by the sauna pavilion).

An ideal Finish landscape is created to be part of the villa, which has a modern two-story white brick front but progressively turns into a vernacular wooden cabin at the back. Aalto's ability for simultaneous considerations of multiple variables allows the structure to integrate: the international and the regional, the industrial and the hand-crafted, the archaic and the modern, frame with wall, wood with white brick, nature with culture.

2) In Mexico City, the "Plaza of the Three Cultures" represents Mexico's greatest cultural influences: the Indian, the colonial, and the modern international.

Luis Barragan synthesized these three traditions by finding an essential common denominator among them: the monumental masonry wall.

In Barragan's designs, the Indian wall is made of irregular black lava stones, like the Aztec pyramids. Poetically set to modulate the volcanic landscape of "El Pedregal", his famed subdivision, they seem to either emanate from the ground (that has the same material), or like a modern day ruin, return to the ground as most of the pre-Hispanic past.

The colonial wall is used to produce secluded courtyards and quietly introverted interiors. The simplicity and great height of these walls is not without warmth and sentiment. Coarse handcrafted stucco adds texture and depth, and Barragan's "Mexican" colors make them transcend into the emotional realm.

Finally the modern wall becomes a freestanding gesture in the landscape. A modulator of light, shade and space. A monument to contemplation set different than nature but where trees can cast their shadows.

The three types of walls are used in the Prieto Lopez house in El Pedregal where Mexican architecture sings to the world.

3) Tadao Ando's Koshino house near Osaka is an example of a different approach to abstraction and integration.

From his self-conscious cross-cultural position, Ando sees reinforced concrete frame as a universal twentieth century technique. At the same time he regards the wall as a protective shield that is categorically opposed to the infinite space-field of the modern megalopolis.

The essence of his architecture is ascetic order that he sees as a provider of a calm character-forming restorative domain where the individual may escape the noisy turmoil of the consumerist city.

Abstract and ascetic order is coupled with a subtle sensuality of materials. He tries to take the intrinsic character of any given material and enhance its expressive potential to the highest possible level, to bring the essential, indisputable density or radiance.

Taoist and Zen philosophies tame Western technology in Ando's work. The normally considered secondary or negative effects of buildings such as shadows and voids are of his utmost concern. This oriental/occidental dyad crops up in unexpected ways throughout Ando's architecture.

Fig. 5 Garden in "El Pedregal" subdivision.

Fig.6 "Las Arboledas" subdivision.

For the Koshino house: the masses split to form a corridor-like void between the main volumes recalling the oriental *roji*, or narrow alley, as drawn from the residential labyrinth of the traditional Japanese city. The idea of gap or void is constantly present in all of Ando's architecture. When exposed to the elements, these voids bring changes of light and climate that become part of the ethos of the space itself. This is close to the idea of *yugen* in Japanese poetry, wherein the ineffable presence of living nature is sensed through such things as a faint drizzle or a sudden unexpected breeze, the outset of twilight or the premonition of dawn. (Note 3)

Conclusion:

While abstraction and integration are still two of the most important tools behind the extraordinary flexibility and adaptability of modern architecture, they may also produce cacophonic and characterless environments. Successful use of abstraction and integration demand a search for the essential totality of integrative components and their setting. A sensitive search for essentials looks into the nuances of nature and culture and the symbolic armature associated with them. Successful transcultural integrations teach us that such operations are possible when the abstracted components maintain the condensed strength that made then identifiable and attractive to us in the first place. Such integrations bring the vital syntheses of components with distilled power and beauty.

Alvar Aalto, in a lecture given in 1957 at a Sweedish city planners meeting, best concluded that:

"Architecture has an ulterior motive … the thought of creating a paradise… If we did not always carry this thought around with us all our houses would become simpler and more trivial…Victories … are won by concentrating on human happiness. In each detail a chance for joy is welcome. But we have to discard as much as possible of the dead weight that keep us from creating a humane architecture."

Notes:
1   Jaques Monod, *Chance and Necessity* (New York; Vintage Books, 1972)
2   Herman Hesse, *Steppenwolf* (New York, Henry Holt and Company, 1972)
3   Kenneth Frampton, *Tadao Ando* (The Museum of Modern Art. New York; Distributed by Harry N. Abrams Inc., 1991)

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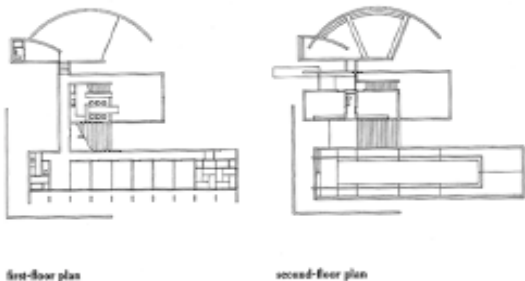
Fig. 7 Koshino House, plan.

Fig. 8 Koshino House, narrow alley between main volumes