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

Save Hassan Fathy's New Gourna

Le Corbusier's Color Keyboards

CANADA MODERN

March 2008 N° 38

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Cover: *Turcot Interchange*, Montreal, 1967.
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The first quarter of 2008 has proved quite sensational for twentieth century heritage. Several occurrences show that the future of modern architecture, despite the improvement of the debates and increasing number of modern buildings that gain the status of modern monuments, is still under serious threat.

Firstly, let us consider the presentation, in Paris on January 28, 2008, of a group of Le Corbusier's works for inscription on Unesco's World Heritage List. The French Ministry of Culture and Communication will coordinate the submission that concerns several countries. Although the number of twentieth century properties featured on the List is growing, Le Corbusier's work is shockingly absent despite his seminal importance; likewise with other key buildings of modernism and modernization such as the works of Aalto and Frank Lloyd Wright.

In 2004 the Fondation Le Corbusier, based in Paris, took the initiative of organizing a collective nomination meant to include as many buildings as possible in as many countries as possible. After some negotiations the list finally submitted to the World Heritage Committee includes seven countries (Argentina, Belgium, France, Germany, India, Japan, and Switzerland) and 23 properties, representing a first ensemble of buildings to be extended in the future, as is the rule of such groupings. The decision is expected by the end of 2008. Secondly, we wish to draw international attention to three cases that confirm the amplitude of the threat to modern heritage, in Western and non Western countries alike.

The first case concerns Robert Smithson's masterpiece, his Spiral Jetty (1970)—1,500 feet of black basalt and limestone rocks and earth that curl into the Great Salt Lake in Utah—that is seriously exposed because of the plan to drill for oil in the vicinity. This palpably underscores the colliding interests of our concern for sustainability and environment, one of the banners of the safeguarding of modernism, and of conventional energy's economic requirements.

As for the second case, Docomomo would like to support the listing of Alison and Peter Smithson's Robin Hood Gardens, built between 1966 and 1973. Needless to say that they represent a major example of public housing that shows the impact of the debate that began at CIAM in 1953, following the construction of Corbu's Unité d'Habitation in Marseilles.

And last but not least is the case of the Tagore Theater in Chandigarh which, designed by Aditya Prakash, member of the new capital's design team under Pierre Jeanneret, opened in 1961. One of the major cultural facilities of the city, the theater should in all likelihood either be drastically altered to be turned into a lecture hall, or be completely dismantled.

Quite plainly and loudly, Docomomo wishes to reassert its most pressing objective: to preserve the authenticity of modern buildings jeopardized by thoughtless changes.

MARISTELLA CASCIATO

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La version française de ce numéro sera publiée par Docomomo Québec à l'occasion de la 16^{ème} conférence internationale de l'Icomos qui se tiendra à Québec en septembre 2008.

Save Hassan Fathy's New Gournia

To a somewhat general indifference, a modern Egyptian village of outstanding artistic and heritage value is shamelessly neglected and allowed to decay and crumble. But architect Hassan Fathy's New Gournia village should not disappear. There, an extraordinary formal modern architectural language emphasizes the lessons of know-how, human solidarity and appropriate technology placed in the hands of an underprivileged community. New Gournia really ought to live on in order to show future generations, as the architect would have wished, the possibilities of well-reasoned development in an emergent country.

■ LEILA EL-WAKIL
AND NADIA RADWAN

HASSAN FATHY

Hassan Fathy (1900–1989) was among the most important architects of Africa and the Middle East. As an intellectual, writer, humanist, architect and scientist, he considerably influenced generations of architects and engineers throughout the world. He was born in Alexandria and worked mainly in Egypt except for the five years he spent in Greece where he worked in the very cosmopolitan Doxiades Agency in Athens (1957–1962). He became internationally famous after the publication of *Gournia, a Tale of two Villages* in 1969, published again in 1973 under the title of *Architecture for the Poor: An Experiment in Rural Egypt*.

The tremendous impact of the book shook the world and had significant repercussions in Western academic circles.

The depth of Hassan Fathy's anthropological thinking, his genuine social concern and the wisdom of the reasoning underlying his architectural experience were internationally acclaimed but still need to be fully absorbed in the age of sustainable development we are presently entering. The notion of "appropriate technology" formulated by Fathy at the twilight of his life has not

been sufficiently acknowledged, in particular in emergent countries.

Fathy was prolific and passionately involved in many subjects. His projects were varied, from his 1930s reinforced concrete constructions and private residences built with stone to projects for an 'Ideal City' in Baghdad and Karachi during his Greek period. He addressed all types of briefs such as villas, farms, mosques, social health centers, schools, theaters, peasant villages and tourist villages. As a researcher in the field of architecture and construction, he devised construction technologies solutions for hot and arid climates.

Fathy, driven by a very strong social involvement underpinned by nationalist feelings, strived to work out adequate low-cost schemes drawn from the ancestral genius of the place, primarily for Egypt and then for the Arab and African countries where he was commissioned. The notion of 'situated architecture' finds in him one of its champions. His unvarying concern was the integration of the building to its environment, finding inspiration in any possible heritage and answering the conditions imposed by the site. Fathy defended traditional

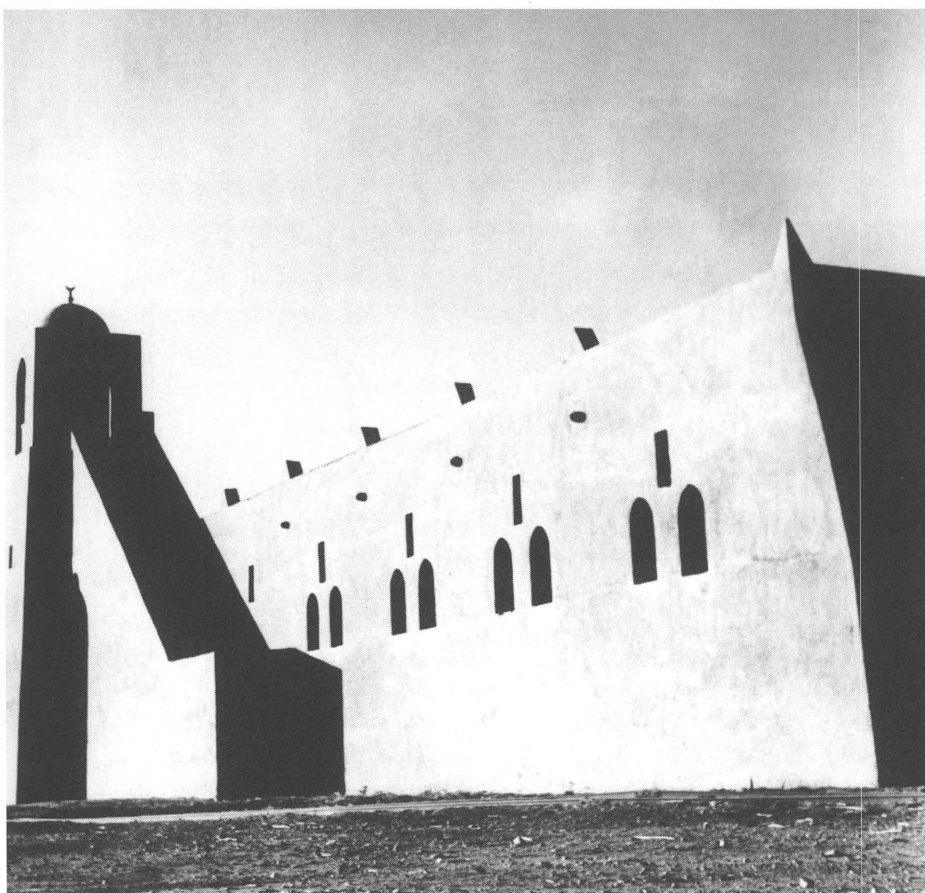


Fig. 1. **Hassan Fathy**, *New Gurna Mosque*, circa 1950

know-how and native crafts which were threatened by industrialized products imported from the West. Ideologically close to the artists of his time, such as the Friends of Art and Life group founded in the 1930s around the personality of Hamed Saïd, he preferred techniques which required the hand of man, believing these could bring happiness and dignity to man.

Conscious of the importance of educating his compatriots and contemporaries, he wrote many books and reports and gave a multitude of conferences. The innumerable memos, drafts, booklets scribbled with notes, notebooks and sketches constitute the most considerable part of the archives currently conserved at the Rare Books Library and Special Collections (RBLSC) of the American University of Cairo. The ongoing cataloging of this material broadens the knowledge of his vast and prolific production that failed to be fully recognized during his lifetime, although every day in the architect's later years, strangers

from the world over, anxious to benefit from his precepts, visited his house in Darb el Labana. In his country Fathy was marginalized but he was definitely connected to the international intelligentsias and part of his career was dedicated to expertise in the field of development, as well as African architecture and heritage. The thousands of photographs conserved at the RBLSC show that he traveled in many countries in Africa, Asia, the Middle East, Europe and in the United States. As a consultant for international organizations and UN agencies he implemented projects for countries such as Egypt, Iraq, Palestine and Pakistan. During his travels, the close study of local architecture, whether modern or vernacular, and native crafts, sustained his theoretical and architectural thinking. He thus often illustrated his conferences and articles with examples of architecture or town-planning he had discovered abroad. Bad fortune cruelly affects Fathy's production, as several significant

buildings have already disappeared: Bosphore Casino (1932), commissioned by the Koudsy brothers on Train Station Square (Bab el-Hadid) in Cairo, has fallen; several art deco villas from the 1930s have been torn down and the villa he built for his wife, Aziza Hassanein, was destroyed during the creation of the Maadi waterfront road. At present, the legendary house of artist and potter Hamed Saïd in el-Marg has become surrounded by a hostile environment and the villa Toussoun Abu Gabal is threatened by the progress of land-bank in the surroundings of the new Four Seasons hotel. Furthermore, two houses built in the village of New Bariz (Kharga) have recently undergone renovations which have totally altered them.

Fathy embodies the Egyptian genius, along with such contemporary figures as Nagib Mahfouz, Um Kalthoum or Yussef Shahin. But today, although no one would think of letting the Mahfouz's Trilogy, Um Kalthoum's songs or Shahin's cinematographic heritage disappear, the outstanding realizations of a prominent architect are falling one after the other and New Gurna is gradually vanishing.

NEW GOURNA: AN INNOVATIVE CONCEPTION

Hassan Fathy's owes his international recognition to the publication of *Gourna, a Tale of two Villages*, which recounts the adventure of the construction of the New Gurna village. The project and building of this pilot-project of a village for a traditional rural community, in the early 1950s, is an experience without precedent in Egypt. Although the book narrating this experience still has an international echo today, the village which bears witness to this unique and original effort is in an advanced state of dilapidation. In 1945, Fathy was entrusted by the Department of Antiquities and the Director of Excavations with the building of a new village upstream of the old village

of Gourna, behind the Memnon Colossuses. This pilot-project was planned to relocate the inhabitants of Old Gourna far from the Pharaonic sites but the Gournis opposed a strong resistance to this displacement. More than half a century later, those still living in Old Gourna had to be evacuated by force before their houses were destroyed by bulldozers.

This project, designed for the modest Egyptian peasantry, should be considered in parallel with the research led by modern European architects of the inter- or postwar period: in the field of social housing for the working-class (Britz or Siemensstadt in Berlin by H. Sharoun, Walter Gropius, Bruno Taut or the Kieftshook housing project in Rotterdam by J.J.P. Oud) or in the field of model-villages of the reconstruction period which are just starting to be seriously studied (Bousquet in France by Bossu, or projects by Thomas Sharp in Britain).

Before planning anything, Fathy analyzed the existing situation in order to improve the sanitary facilities and enhance the living conditions of the Gourni fellahs while preserving their cultural traditions. Observing the functioning of Old Gourna, he carried out a meticulous ethnographic study of the Gourni family (*badana*) and social structure of its clans and tribes, and their way of life. These observations dictated the principles underlying the village's planning. He also analyzed the Gournis' production activities: in addition to an insufficiently yielding agriculture were the licit income drawn from traditional crafts and the illicit drawn from the fraudulent commerce of antiquities. The latter prompted his wish to promote a large variety of handicrafts in the new village by perpetrating existing local traditions and reintroducing ancestral know-how. Searching for low-cost building solutions, Fathy developed the mudbrick technology—using a costless material and a technique still mastered by the Nubians—which he had already successfully experimented in many

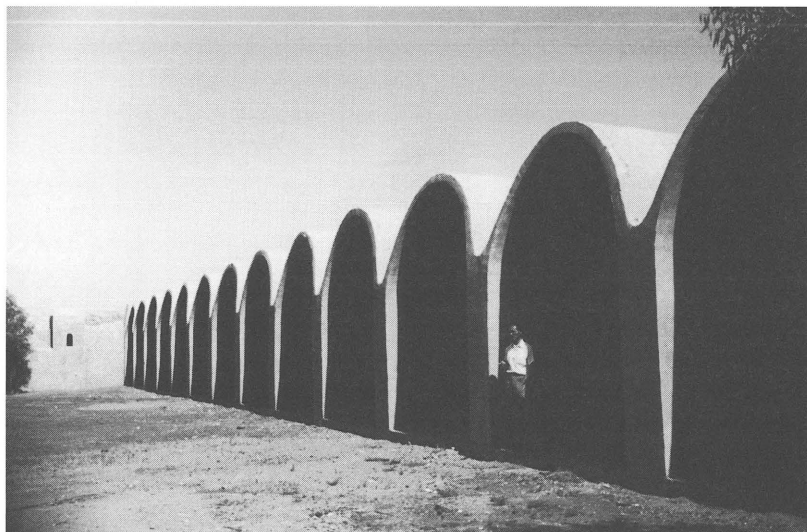


Fig. 2. **Hassan Fathy**, *New Gourna Market vaults*, Dimitri Papadimou, circa 1950

circumstances. He wished to pass on this knowledge to the Gournis to enable them to build their houses themselves without the costly services of an architect or a mason, which in the long-run would ensure the village's sustainability. This pilot-project was to serve as a model for the construction of other low-cost villages in Egypt's underprivileged rural areas.

AN OUTSTANDING REALIZATION

The site of Gourna is located on the western bank of the Nile at the level of Luxor with which it forms Ancient Thebes. The western bank shelters the pharaoh's necropolises (the Valley of the Kings, the Valley of the Queens and the Tombs of the Nobles), which number among the most visited sites in Egypt. Since the eighteenth century, dwellings have been built close to the tombs, in what we call today the Old Gourna, which has been undergoing demolition since December 2006 in spite of international protests.

Fathy designed the project on a flat parcel in a 50 arpen *hosh* of farmable land (approx. 50 acres), bought from Boulos Hanna Pasha, protected by dykes and situated close to the main road and the railway. The village was meant to relocate 7,000 Gournis, but only part of the designed plan was carried out between 1946 and 1949 when works were suspended for lack of political support.

The village neither resembles traditional villages nor other attempts to design modern Egyptian villages. It can be qualified as an ideal village, in the same way as Claude-Nicolas Ledoux's Salines de Chaux were considered an ideal industrial town at the end of the Enlightenment. Fathy built Gourna in keeping with his (fine) idea of the mid-twentieth century Egyptian village. The profoundly humanist program of New Gourna constitutes a unicum in the history of village planning and resulted in a very ambitious project, maybe too ambitious for its time and place.

The fellah was to be housed with his family and animals in a dwelling designed according to his specific needs. He was to breed his stock, cultivate the land in the surroundings of the village and also produce handcraft (weaving, pottery, etc.) at the crafts' school and the khan. He would sell his harvest in a pleasantly shaded market and his handcrafts in a hall built to this purpose. He would practice his faith either in the pure lines of the mosque or in the copt church (which was in fact never built). He would dispose of a meeting place for celebrations and feasts. His children would be sent to two distinct schools for girls and boys. He would participate in the folk events taking place at the theater or on the esplanade located just behind it. Part of the facilities (mosque, theater, *khan*, market, etc.)

still exist today without appearing over-sized considering the possible population growth of 20,000 inhabitants that Fathy had anticipated. New Gourni was planned around a vast, irregular central public square surrounded by the principal civic or public buildings: the mosque, mayor's house, theater, native crafts exhibition hall and khan. At the village entrance, nearby the railway station, is the open-air market bordered by hall rooms to welcome visitors.

The village's design, purposely irregular by merging the grid and radio-centric systems, was meant to develop the imagination and encourage a rich and varied architecture. The village is divided into four main districts for each Gourni tribe, separated by streets at least 10 meters wide. A system of secondary streets, not larger than 6 meters, shields the badanas' privacy and discourages strangers from going any further. The inner court houses are assembled in more or less complex sectors open at the angles. This design clearly shuns systematic or symmetrical character and repetitions which lead, in Fathy's words, "to boring rows of identical houses that are considered to be what the poor deserve" and are harmful to the well-being of men. To solve the economic question of the rural village program, Fathy used raw brick. This choice was determined by his knowledge of the architecture and monuments of Upper Egypt, a region which is poor in wood, where other roofing systems had to be devised. The raw brick vaults and cupolas, such as in the Ramasseum, Bagawat and Fatimid mausoleums, served as models to cover his first experimental farms, and the houses in New Gourni. In every period, the elementary technology of mudbrick has been used in Egypt, particularly in rural areas. The material itself, immediately at hand, and the production of the mudbricks, sun dried, is simple and inexpensive. By applying the system of catenary vaults which he improved, Hassan Fathy was able to build a house entirely

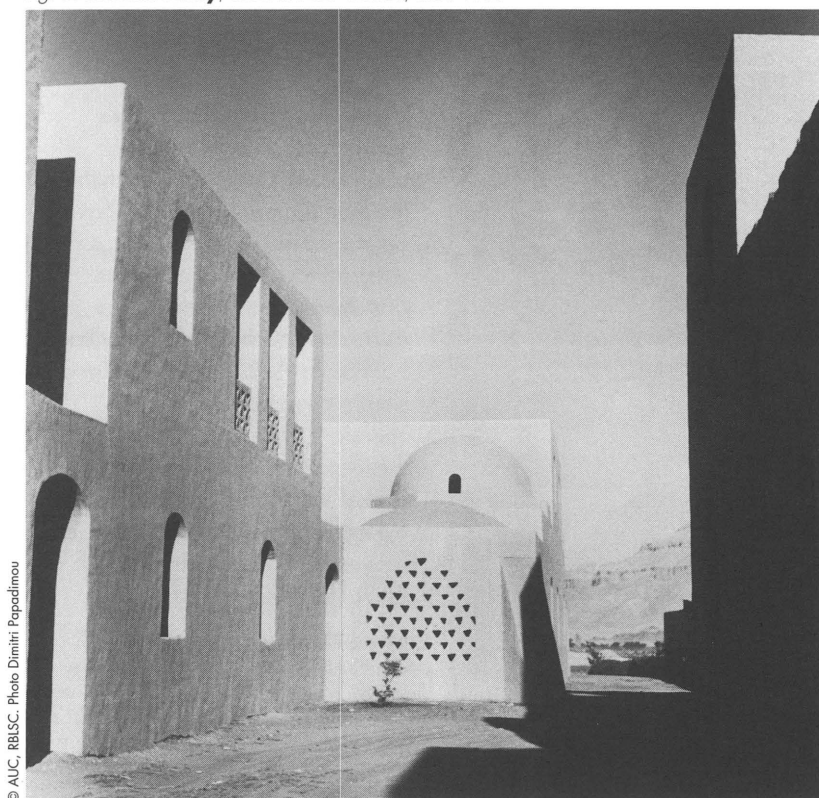
in mudbrick. Furthermore, the construction of such a house required only two people. The thermal inertia of raw brick walls has been studied and we know that it is superior to a wall in fired brick, stone or concrete. Consequently, the choice of this material for New Gourni, in an extreme desert climate, is totally appropriate. The negative connotations of mudbrick as being archaic and of poor quality partly account for New Gourni's unenthusiastic reception by the people to whom it was destined, who aspired (as often in emergent countries) to industrialized technologies as a sign of wealth even if a material such as concrete was totally inappropriate to the climatic and economic situation. With his raw brick technology Fathy created a particular formal language of thick walls with small openings, of houses covered by domes and vaults. In drawing his inspiration from an ancestral technical tradition, he managed to invent a dwelling typology which was totally original although it also referred to the classic Islamic distribution of space. The volumes and special qualities of the ensemble

have nothing to envy modern Western architecture and magnificently illustrate Le Corbusier's famous words: "l'architecture est le jeu correct, savant et magnifique des volumes sous la lumière." A simple and refined geometry harmoniously governs the architectural conception. The aesthetics of the village, shown by Dimitri Papadimou's photographs just after (partial) completion, evoke the geometric formalism of German and Dutch architects. Hassan Fathy's formal language, innovative at the time of the village's creation, has been of enduring influence in Egypt and around the Mediterranean. Today in Egypt one commonly refers to the "Hassan Fathy style" even if it does not specifically design raw brick constructions, but somewhat inaccurately any architecture using vaults and domes, frequently employed in many tourist settlements and holiday houses.

A UNIQUE HERITAGE

In the post World War II context, the village of New Gourni was an experience without precedent. It was both unique in its time and premonitory of the preoccupations

Fig. 3. **Hassan Fathy**, *Street in New Gourni*, circa 1950



© AUC, RBISC. Photo Dimitri Papadimou



Fig. 4. **Hassan Fathy**, *New Gourni Khan*, general view, January 2007

that were to come. The idea of a self-construction system allowing peasants to build their own houses adjusted to the climate with a simple and economical technology was the only one of its kind. As an architect and as a man Fathy was sensitive to the question of social housing and sincerely wished to improve the living conditions of the peasants. He invented a housing type drawing from a wide range of constructive and typological historical Egyptian models. In recovering lost traditional knowledge and skills,

Fathy was a forerunner of the theories underlying the question of sustainable development.

Owing to the abundance of heritage from all times, Egypt is essentially preoccupied with artifacts from ancient or classic civilizations, or with islamic and coptic arts, and has not yet recognized its more recent heritage, which explains why the village of New Gourni has not been considered a priority. Nevertheless, it remains an exceptional cultural production more than worthy of conservation efforts.

New Gourni, Hassan Fathy's pilot-project, is at present abandoned and in danger. Although the theater and the mosque have been restored, many buildings are uncared for, others have been brutally altered and others yet, such as the boys' school and the village handcrafts' hall, have purely and simply been torn down.

Therefore, the professors of the Department of Art History and of the Master in Environmental Sciences of Geneva University, are requesting an international heritage listing of New Gourni.

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NADIA RADWAN, art historian, is assistant professor at the *Environmental Sciences Department, Université de Genève*, where she graduated with a MA dissertation entitled "*Hassan Fathy, towards Appropriate Architecture*." She worked as a consultant to *Unesco World Heritage Centre, Arab States Unit* and is presently writing a thesis on *Contemporary Art in Egypt*.

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Fig. 5. *New Gourni Market vaults*, January 2007

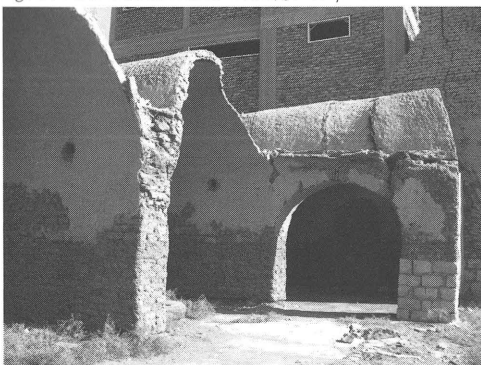


Fig. 6. **Hassan Fathy**, *House in New Gourni*, January 2007

Georgette Cottin-Euziol

BETWEEN THE BEAUX-ARTS SPIRIT
AND THE PHILOSOPHY OF MODERNITY

ASSIA SAMAI BOUADJADJA

As in other North-African or Mediterranean countries, the modern influence was present in Algeria in town planning and architecture. Georgette Cottin-Euziol (1926–2004) counts among the modern architects who deeply impacted the Algerian landscape, and in that respect, her work is representative, enlightening even.

From the 1930s, the Algerian landscape was the theater of experiments influenced by Le Corbusier and the Perret brothers, in the works of well-known architects such as P.-A. Emry, Jean de Maisonseul, Louis Miquel, Pierre Bourlier, Roland Simounet, as well as lesser known architects such as Georgette Cottin-Euziol.

Georgette Cottin-Euziol, architect-DPLG, a talented and very well-read individual, was born in 1926 in El-Afroun (Blida) in Algeria. Her father was an engineer and her mother a primary school teacher. This was an environment favorable to culture and freedom of spirit, and fundamentally humanist. In 1956, upon graduation at the École Nationale des Beaux-Arts in Paris, she was introduced to modern philosophy and the plastic arts. During her schooling she was introduced to the world of creation by joining, at the age of fourteen, the Algiers Fine Arts Society, for courses in drawing as well modeling: "a tactile art allowing one to gain a better sense of volume." She was daily immersed in culture through poetry, theater, drawing, painting, modeling and literature, and her traveling. In her own words: "Culture feeds the spirit and art hones sensibility."

Among her friends were painter M' hamed Issiakhem, and writer-poets

Kateb Yacine, Mohamed Dib, Mouloud Ferraoun. As for her architect friends, she evoked Claro, who in 1963 appealed to her for the training of the first generation of architects in independent Algeria, coined "the class of independence," for which he was responsible, as well as Anatole Kopp, Emry, Maisonseul, and Girard, who had settled in Constantine and was the secretary of the regional order of architects.

A BEAUX-ARTS STUDENT

A student of Grommort and Arrech during the preparation year for the ENSBA's entrance examination, she in turn joined Lurçat, Lagneau then Vivien, mentors who had an enormous influence on her. Her success in the field of architecture began in school, where she was awarded the first prize for her entry in the Lebahar competition (the youth clubs competition in 1955), was allowed access to the Redon and Bigot competitions (1956), and finished her training years with her graduation project for a phthisiology clinic, which earned her the Institut de France prize and that of the International Union of Architects (1954–1956). Cottin-Euziol remembered the Fine Arts School with pride and nostalgia and disapproved of the school's new curriculum doing away with competitions, including the entrance exam, and disagreed



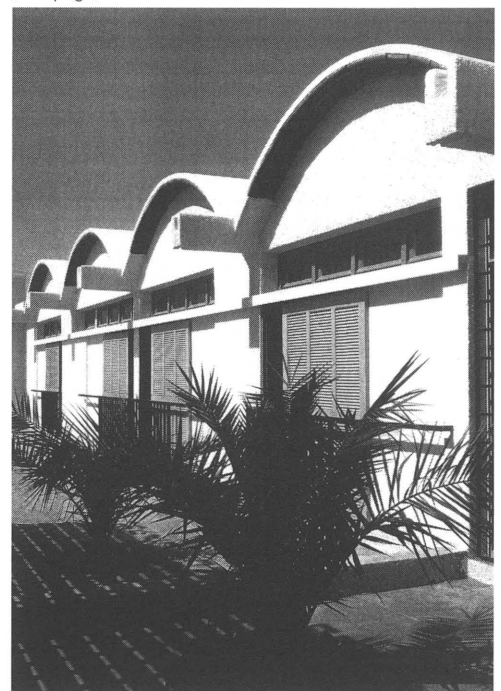
All pictures © G.C.E. archives

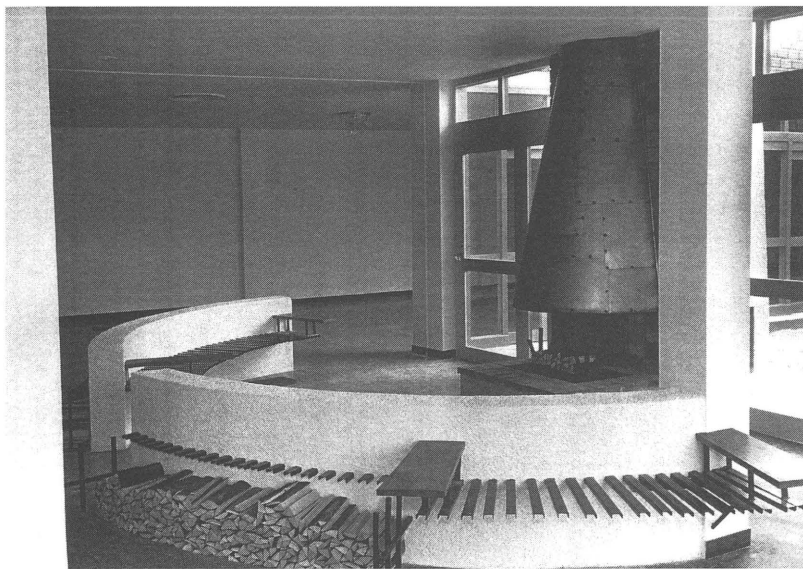
Fig. 1. Georgette Cottin-Euziol at the age of 45

with its paying less attention to graphic representations, and with its being disconnected from the other forms of art.

The career of this architect of encyclopedic knowledge spread out over five periods, producing a colossal work, a large mosaic which contributed to the constitution of the architectural heritage in four countries, especially in Algeria, but also in Switzerland, France and Russia.

Fig. 2. Georgette Cottin-Euziol, the Souf Grand Hotel, 1966: garden façade and detail of the fireplace (next page)





From 1956 to 1961, she settled in Algeria and designed three private hospitals along the same lines as her graduation project, the school complex Djenane Ben Omar, social housing projects and participated in the reconstruction of Orléansville, destroyed by the 1954 earthquake. From 1961 to 1963, she found refuge in Geneva where she realized a number of projects among which housing compounds and the first consulate of Algeria. From 1963 to 1978, she returned to Algeria just after independence, and was intensely involved in the vast building site of newly independent Algeria. She profoundly impacted the Algerian architectural landscape, signing important projects concerning various fields: service, housing, industry, health, culture, tourism, etc. In 1978, she sorrowfully left Algeria, a country to which, she would say, she had so enthusiastically, intensely and lovingly given herself. She returned to France and set up a private office in Juan-les-Pins then in Antibes and was entrusted with projects also in a variety of fields. Then in 1994, an exciting new opportunity arose: to take part in the reconstruction of the new republics born of the Eastern block's dislocation.¹

In February 2004, the commissioner of the Year of Algeria in France, in association with the Bretagne School of Architecture (France) supervised by Jean-Pierre Camps,

sponsored an exhibition devoted to her work entitled "Le Visage de l'Esprit." Georgette Cottin-Euziol, *Rétrospective de l'Œuvre Architecturale* ["The Embodiment of the Soul." Georgette Cottin-Euziol, *A Retrospective Exhibition*], focusing mainly on her production in Algeria. "This exhibition brought her out of anonymity and allowed her to clarify through the presentation of her work the architectural reflections stimulated by her respect for mankind and the love of architecture."² In May 2005, the Toulouse School of Architecture (France), supervised by Cesar Juve, welcomed the same exhibition under the title "Un Engagement envers l'Algérie" [A Commitment to Algeria].

HER WORK

Cottin-Euziol has left us with an architectural mosaic happily merging her beaux-arts training and the modern influence, the latter sometimes colored with regionalism, sometimes with traditionalism and sometimes with purism. "Her work will be modernity in motion..."³ a modernity to which the Grand Hotel of Souf (1966, in an oasis of the Algerian South) and the office building of the STWS (1971, Society of the Construction Works of the Setif wilaya—ie. department) bear witness.

The Souf Hotel, located in the city center of El-Oued, in a zone of educational, administrative and cultural facilities, was designed

within the framework of the vast tourism policy program adopted by Algeria after its independence and aiming at revealing the country's national identity. This project, as every other, worked out everything to the slightest detail, gargoyles, interior design, furniture, chimneys, etc. The building, crowned by vaults and domes, pierced through with terraces, both introverted and totally open on the vegetation in its central garden, refers to the architectural landscape of the city of El-Oued, also known as the city of the thousand domes (fig. 2).

The second building, the STWS office building, very powerfully expressed modernity in an essentially suburban fabric scattered with residential buildings, another kind of urbanism based on adjacency, building alignment, extraversion and compactness. The STWS

Fig. 3. **Georgette Cottin-Euziol**, STWS Office Building, 1971



Fig. 4. **Georgette Cottin-Euziol**, Sonegaz Building, Algiers, 1970

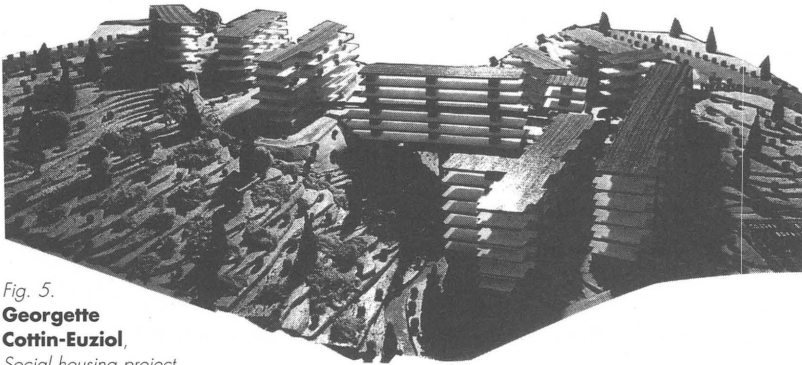


Fig. 5.
Georgette Cottin-Euziol,
Social housing project,
Bouzaréah (Algiers), 1973

building is a typically modern architecture of pure lines, curtain wall façades, free plans, screen walls and brise-soleils (fig. 3). Such is also the case of the Sonelgaz building (1970), located in the center of Algiers (fig. 4).

"Architecture's duty, she tells us, is to make the heart of human beings vibrate, to move them, . . . to vibrate by interweaving its volumes, their relationship with the site, their place in the urban context. One should not, in architecture, in art, make a clean sweep of the past, which is omnipresent. One should learn how to cajole and master it, make good use of it without plagiarizing it."⁴ She also worshipped the site, which she tamed and enhanced by experimenting modern techniques, for instance in a building running across the talweg in Bouzaréah (1973) (fig. 5), or in Hassi Messaoud's Alfort company building (1970), low and spread out like the Algerian desert (fig. 6).

Her doctrinal humanism pervaded her conception of architecture, and consequently her projects. She strived to eliminate the clichés reducing social housing to sheer subsistence and schools to their strictly educational function (fig. 7). "Architecture ought to produce comfortable spaces, allowing man to live his life fully and thrivingly" she would say. A blossoming, which she translated into a fragmented and free plan incorporating nature, into the furniture's drawing and into the perfection of architectural details.

Thus, by combining general knowledge, technology, social and

geographical context, supported by the osmosis of heart and reason, tradition and modernity, Georgette Cottin-Euziol increased the architectural heritage of four countries with buildings worthy of interest, which undeniably belong to the range of modern architecture and deserve to be known, shown and discussed.

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France-Grenoble 2, professor and researcher at the CNRS. A friend of Georgette Cottin-Euziol, with whom she carried out several recordings, she owns her personal archives.

NOTES

- 1 Cottin-Euziol Archives, 138 J, Bouches-du-Rhône Departmental Archives, Marseilles.
- 2 Assia Samai Bouadjadja, introductory text of the exhibition, in July 2003.
- 3 In "Un Engagement! Une Architecture! Georgette Cottin-Euziol," by Claude Garnier Euziol, her husband and partner.
- 4 "Georgette Cottin-Euziol, International meetings "Le Corbusier et Le M' Zab," Ghardaia (Algeria), on November 14, 1998.

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Fig. 6.
Georgette Cottin-Euziol,
Hassi Messaoud's Alfort
company building
and housing,
Algerian South, 1970

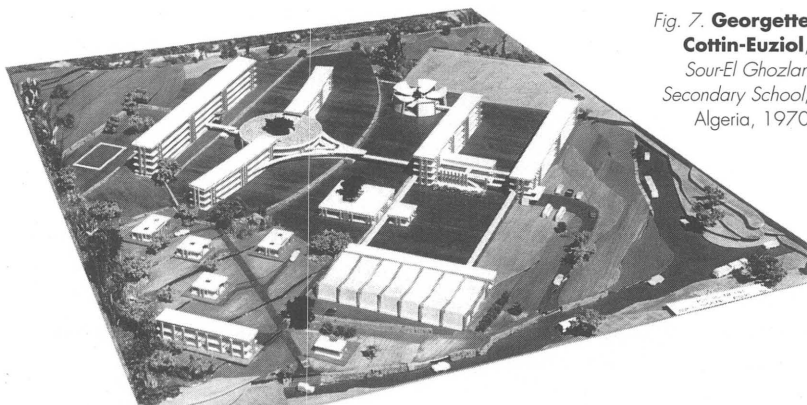


Fig. 7. **Georgette Cottin-Euziol,**
Sour-El Ghozlan
Secondary School,
Algeria, 1970

Conservation and Transformation of the **Automóvil Club Argentino** Network

BY STELLA MARIS CASAL ET AL.

The ACA network of buildings, gas stations and various facilities is an outstanding example of modern architecture, dating mostly from the late 1930s and early 1940s. Most buildings, ageing with dignity, are still in use and fully functional, and play a key role in the urban and rural Argentine landscape. Their author, engineer Antonio U. Vilar (1887–1966), is well known for coherently applying modern movement principles to all his work, which is also characterized by high levels of technology and comfort. During the last sixty years this remarkable heritage, originally conceived as a whole and complex unity, has undergone different levels of transformation, from faithful preservation to partial or total demolition. Facing with responsibility the challenge of its conservation represents a most interesting opportunity to develop a comprehensive and creative restoration program.

THE AUTOMÓVIL CLUB ARGENTINO

The ACA was created in 1904 and since then has played an important role in the development of social tourism in the country, becoming one of its most well-known non profit private institutions, much appreciated by the community. In 1936 an agreement was signed between the ACA and the national oil company, YPF (Yacimientos Petrolíferos Fiscales) with the aim of developing a network of gas stations across the country. As a result of the joint venture, Vilar was commissioned to design the ACA headquarters in Buenos Aires,¹ all the garage and gas station

buildings, as well as social facilities, hostels, furniture, nameplates or road signs, graphic design, stationary and last but not least, to implement the above-mentioned tourism policy, based on the idea of touring the country's cultural and natural heritage by car. The brief included creating 180 gas stations and outbuildings, at a distance of no more than 150 km from one another and covering the full extent of Argentina (fig. 1). The bulk of the program was built between 1938 and 1943, designed and supervised by Vilar together with a very small staff of assistants with a highly efficient and advanced working organization.



Fig. 1. ACA-YPF plan: black dots indicate stations already built by 1943, white dots stations under construction at the time

Pictures below show the main building typologies (from top to bottom): urban headquarters, suburban gas stations and social facilities, road stations and social facilities and gas stations and social facilities for tourist areas

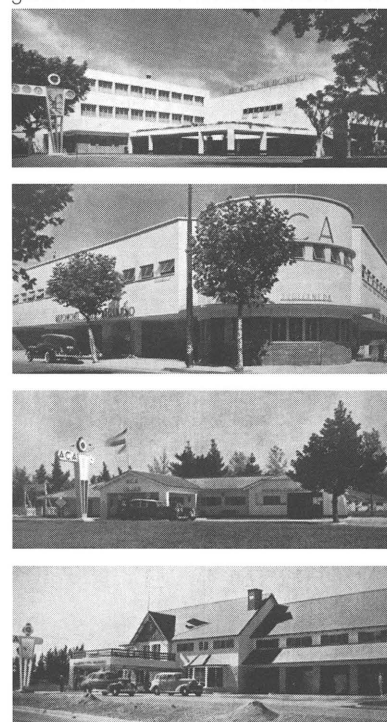




Fig. 2. Evolution of the characteristic road sign, from original to current design, all still in use

Today, the ACA network is still running, strongly present even in the most remote neighborhoods and roads, but the buildings are diversely dealt with: preserved, modified, neglected, sometimes even demolished. Graphic designers have generally shown more sensitivity than their architect counterparts to the original idea, so well-rooted in the Argentine community's imagination, and carried out rather subtle and innovative renovations (fig. 2). Admittedly, the new functional requirements, in particular those determined by the updated security levels, entail changes of a more radical nature than those required to revamp the ACA's image, but in any case the architectural ideas carried out did not prove adequate to maintain the unity of character and quality of the original design, and results differ from one another. Most contemporary transformations seem to have forgotten the project's original spirit based on integrity, efficiency and rationality. The ethics of authenticity, minimal sustainability and creativity are often missing. Still, a few exceptions deserve to be pointed out. The following entries review a few case studies, as an invitation and a challenge to devise a better future for this magnificent heritage.

THE BUENOS AIRES HEADQUARTERS

by Matías Gigli

The ACA headquarters in Buenos Aires represent the heart of the network spreading throughout

the country (fig. 3). Built in 1943, the building was one of the earliest examples of new technology and modern aesthetics on Libertador, one of the most important avenues in town.

It was destined to house mechanical services as well as important social facilities. This double function was expressed by two clearly differentiated volumes, articulated by a circulation volume. The result was a singular design that adequately addressed both symbolical and functional demands. The brief required a considerable surface for the vehicles and their service. A curved front at the rear of the plot displays a system of semicircular ramps linking the levels housing the garage and the service areas. The exterior treatment of the garage is a neat refractory brick coating with modular semitransparent glass windows. Facing this and opening onto Libertador Ave. the social

department's volume was rationally organized, although following a rather classic composition in compliance with the city's building code.

The building is decidedly purist, expressing highly modern concepts comparable to the European buildings of the time. It bears witness to a flourishing cultural moment in Argentina, when modern ideas merged with the art deco trends of the 1930s, as is evident in the symbols, murals and other graphic expressions that represent the realm of automobile in the building's social areas and main façade.

Thanks to a systematic periodical maintenance plan, the building is in excellent conservation shape. Current security requirements have added two new fire staircases, fitted into two glass boxes inserted at the junction of the composition's two main volumes. Subtle in concept, these are however crowned with an intrusive red cornice which has nothing to do with the original building, that unnecessarily focuses attention.

ACA URBAN GAS STATION AND SOCIAL FACILITIES IN BELGRANO

by Valeria Garelo

ACA gas station No 60, located in Belgrano district, in Buenos Aires, is a clear example of how new functional demands together with a misunderstanding of the ACA's architectural chart and its design criteria have led to the demolition of valuable patrimony (fig. 4).

Fig. 3. ACA Headquarters, Buenos Aires, designed by Vilar together with Héctor Morixe, Jacobs Gimenez y Falomir, Jorge Bunge, Sánchez, Lagos y de la Torre

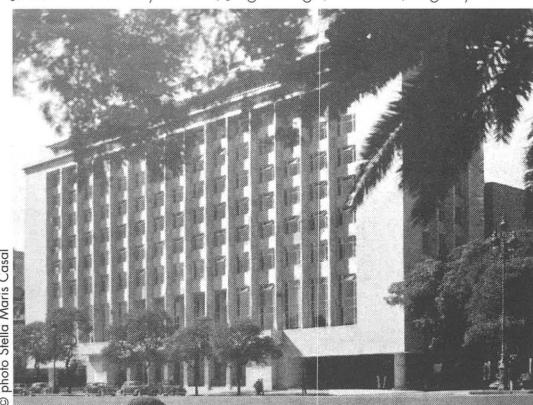




Fig. 4. ACA urban gas station and social facilities, Belgrano

In this particular case, the loss includes architectural heritage as well as a legacy of plants which had existed on the plot for many years. The Vilar's project preserved the important trees, which once belonged to a historical villa, in harmony with the new built environment. Thus, the construction dating from the early 1940s was well-adjusted to the natural site without however neglecting the functional and practical requirements of this type of station. Furthermore, the concept of 'urban infill' was present in Vilar's projects. Always concerned with the existing environment, he was eager to enhance it thanks to the interaction with his architecture.

Today, to the detriment of Buenos Aires's townscape, this idea seems to be outdated. The station's location is now arid and dispossessed of its heritage of trees, the building itself contributing no more to the city than its utilitarian function. The new construction lacks the design and constructive qualities of the original, which was a good example of the principles followed by modern designers in Argentina. To those who remember and regret the former gas station the original

and emblematic road sign has been preserved as the only remaining link with the ACA.

ACA URBAN GAS STATION AND SOCIAL FACILITIES IN BARRACAS by Guadalupe Calafell

These urban ACA gas station and administrative office were built in Barracas, one of the oldest and more traditional neighborhoods of Buenos Aires, as part of the urban plan developed by Vilar for the locations in town (fig. 5).² It was built in a determinedly modern character at the corner of two avenues, where, in order to improve both traffic and pedestrian circulation, the administration offices were pushed into the plot's sharp angle.

Over time Vilar's architectural language was totally transformed. Changes were mostly caused by an increasing amount of vehicles and the new demand for customer facilities. Only part of the original shed-roofed main wing was preserved. The building's height allowed adding a mezzanine for the staff's room and storage. Its structure was completely changed.

The administration office and the big frontal beam surrounding the facade were removed to make room for the new gas pumps. Social facilities were relocated in the former car park and repair shop, while the administration office and the typical ACA sign, formerly at the street corner, were moved to the side.

The neighborhood's morphology has also changed. The one and two-story houses have been replaced by higher buildings, although on both sides of the gas station the original low houses remain, thus emphasizing the contrast with the new environment.

LA PLATA URBAN GAS STATION AND SOCIAL FACILITIES by Alfredo Conti

The ACA headquarters in La Plata, capital city of the province of Buenos Aires, were built between 1938 and 1940 (fig. 6).

The brief included a gas station, administration offices, social facilities and a car park. The site is a corner plot (30 x 50 meters) on one of the avenues forming the city's monumental alignment.³

Fig. 5. ACA urban gas station and social facilities, Barracas



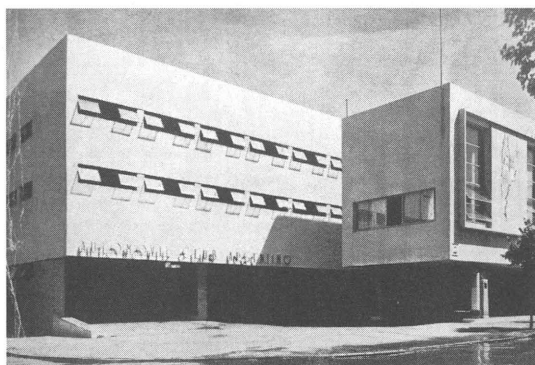


Fig. 6.
La Plata
urban
gas station
and social
facilities

© photo Alfredo Conit

As in most ACA buildings, its layout was based on the differentiation of functions through differing volumes and architectural expressions.

The gas station is located on the ground-floor, where the corner opens on to the public space, while the car park and administration occupy two different volumes whose fenestration indicate their different functions, with a general appearance clearly related to the modernist expression of plain white volumes. Facing one of the streets an exposed brick wall at ground-floor level expressed the difference between gas station and parking and a vertical brick surface indicated the place of the ramps linking the parking floors. The original two-story parking area was later extended by the addition of a new story, nevertheless preserving the aesthetics of the original building.

In the mid 1990s, an architectural project altered part of the original conception. A new disposition of the ramp leading to the car park involved demolishing the exposed brick wall. As a result, the contrast between a dark basement and the white volume of the car park disappeared. At the same time, the remaining exposed brick was painted white, thus abolishing the visual effect of a vertical ribbon of ramps linking the car park floors. Although the general features of the building remain, these changes have partly altered the initial composition and image, thus threatening the architectural and aesthetic values of the building. In 2005, the building was included on the heritage list of the city of La Plata, with the maximum level of protection.

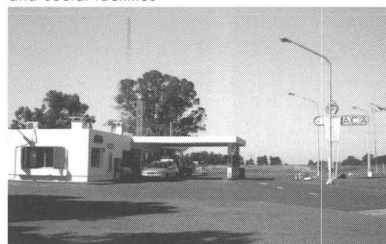
GORCHS ROAD GAS STATION AND SOCIAL FACILITIES

by María Clara Palacios

The nineteenth of the ACA-YPF plan to be built, the ACA station in Gorchs in General Belgrano, a vast and very productive rural district of the province of Buenos Aires, was inaugurated on May 14, 1941 (fig. 7). It is strategically located on National Road No 3 (km 143), at a junction of roads leading to important towns such as Benito Juárez, Rauch, Tandil, and Olavarría, and thus ideal to gas up, take a break and have a snack. Gorchs gas station has provided social and technical assistance for more than sixty years. It has not undergone significant alterations, except for the bathrooms, relocated outside the main building, and the addition of an outdoors leisure area for customers, with tables, chairs and a small barbecue.

It exemplifies how crucial the joint venture Vilar-ACA-YPF was to the development of the Argentinean road system, its road-side gas stations representing a landmark in the country's frequently isolated roads; for travelers today, although larger and improved stations have been implemented, the ACA stations remain a symbol of security and reliance.

Fig. 7. Gorchs highway gas station and social facilities



© photo María Clara Palacios

THE SOUTHERN ANDEAN REGION: BARILOCHE, VILLA TRAFUL

AND VILLA MASCARDI

by Marcelo Frischknecht

In the late 1930s, Vilar designed the ACA headquarters in the city of San Carlos de Bariloche as well as a gas station prototype to be replicated in some of the new villas (villages) created by the Administration of National Parks as part of its development strategy for the Nahuel Huapi Lake region (figs. 8, 9 & 10).

The Bariloche headquarters built in 1938–1939, in a constantly growing city,⁴ were demolished in 1992 despite their belonging to the municipal heritage list. On the other hand, the gas station built in El Bolsón, a bucolic village located 130 km south of Bariloche, was rather coherently restored, retaining its original function and shape. The two prototypes built in Villa Mascardi, a sleepy village of no more than twenty houses scattered around a small church and police station, and in Villa Traful, a lonely crossroads construction, preserve their original shape but are threatened with oblivion and lack of maintenance. The gas station prototype for the southern Andean region typifies Vilar's rational approach to the building program and his sensitivity in handling the architectural scale. The steeply pitched roof covered with plain red ceramic tiles stands out over the white plastered masonry walls that are covered with stone cladding up to the head of the wooden windows. Above the center of the building,



Fig. 8. Bariloche urban gas station and social facilities: one of the locations of tourist interest



© photo Marcelo Frischknecht

the architect designed an upper floor housing the staff's private quarters and sheltering the gasoline provision underneath. The result is a T-shaped building with the public service area in its center, the bathrooms and cafeteria on one side, and the garage on the other. Particular care was given to the composition of the wing facing the main road, which displays steel letters identifying the ACA branch and the names of the designer and main contractor, Christian y Nielsen, another demonstration of Vilar's preference for firms of foreign origin. In the composition of this façade emerges a modernism that the gas station prototype does not seem to develop entirely without restraint. The reason for this can be found in the rules enforced by the Administration of National Parks on all constructions in its jurisdiction: for instance, materials considered "not typical of the region" were specifically forbidden in an effort to impose a regional style.⁵

Beyond its functionality and somber form, the most significant aspect of the prototype built in Trafal and Mascardi is the same today as it was more than half a century ago: it successfully addresses

the challenge of inserting a building in a pristine natural environment. Vilar's architecture here, object-shape contrasted against a backdrop of landscape, endows the natural context with a human dimension, a 'placeness' that makes the whole area unique and memorable.

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ALFREDO CONTI is an architect in La Plata, member of the Commission for Scientific Research of the Province of Buenos Aires, current president of Icomos Argentina and a founding member of Docomomo Argentina.

MARIA CLARA PALACIOS is in her last term as an architecture student at Las Flores, province of Buenos Aires, and is currently training for the research concerning conservation and rehabilitation of modern architecture at the University of Buenos Aires.

MARCELO FRISCHKNECHT, Ph.D. Tokyo University, works as an architect and urban planner in San Carlos de Bariloche.

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All archives reproduced from *Nuestra Arquitectura* magazine, Buenos Aires, January 1943.

NOTES

1 Exceptionally, together with Héctor Morixe, Jacobs Gimenez y Falomir, Jorge Bunge, Sánchez, Lagos y de la Torre.

2 Which included Plaza de Mayo, 9 de Julio, Belgrano, Barracas and Flores.

3 La Plata is the main urban creation of the nineteenth century in Argentina, an entirely new city incorporating the most advanced town-planning concepts of the time.

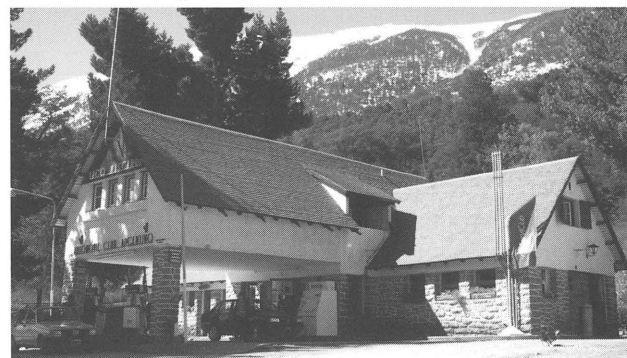
4 Between the 1940s and today, Bariloche's urban expanse has been multiplied by 3, its population by 30 and the number of visitors has increased one hundred fold.

5 Basically, it is a sort of picturesque style merging Tyrol and Canadian architectural influences.

Fig. 9. Villa Trafal road gas station and social facilities



Fig. 10. Villa Mascardi road gas station and social facilities



© photo Marcelo Frischknecht



KISHO KUROKAWA
(1934–2007)

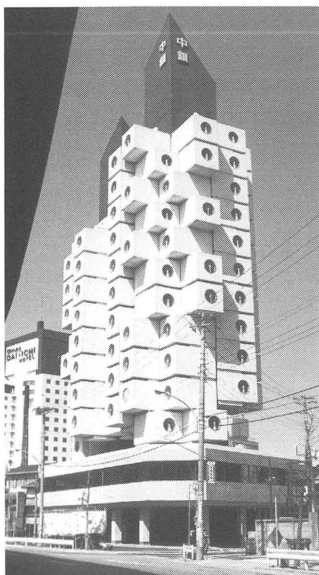
Noriaki (Kisho) Kurokawa, who died in Tokyo in October, was a major figure in post-war Japanese architecture. He enjoyed a universal reputation as architect, artist, master planner, eco-philosopher, lecturer and latterly as a politician *manqué*. But as every architectural student will know he is best remembered as a founding member of the Metabolist Group and the designer of the famous Nakagin Capsule Tower, Tokyo (1970), the Sony Tower, Osaka (1972) and recently the eco-friendly International Airport at Kuala Lumpur (2000). Last year saw Kurokawa moving into politics. He contested the position of Mayor of Tokyo (which he lost) and recently contended a seat in the Upper House, which he also lost! On hearing of his death, Prime Minister Yasuo Fukuda told reporters that Kurokawa had "demonstrated his genius to open a new way to architecture."

He was born in Nagoya in 1934, educated in Tokai by Buddhist monks and trained as an architect at Kyoto University (1954–1957) before moving on to the Graduate School of Architecture, Tokyo University, where he studied under his mentor Kenzo Tange. In 1962 he opened Kisho Kurokawa Architect and Associates in Tokyo. During the 1960s he was a founding member of the Metabolist Group, the name of which means 'change' but also signified an interest in Buddhism and cyclical biological processes. Other members of the group included Kiyonori Kikutaki, Masato Otaka and Fumihiko Maki, later joined by Kenzo Tange and Arata Isozaki. They believed biological processes could, in relation to architecture and urban growth, refer to the visible individuality of cell-like structures as part of a larger order such as system buildings or changing city patterns.

Helix City (1961), Kurokawa's first Metabolist project, was a series of linked helical structures set in an "artificial landscape creating three dimensional, organic vertical land." From 1964 he worked with Tange on designs for Tokyo Bay

which received worldwide publicity. Metabolist designs were inspired by Watson and Crick's discovery of DNA. For Kurokawa this led to an interest in extensible capsule structures which he claimed demonstrated his Metabolistic theories through individual buildings. The first of these was the Nakagin Capsule Tower (1970) a tall prefabricated concrete structure with renewable clip-on life and work pods and the appearance of a vertical machine. Sadly this iconic structure is today under threat of demolition due to asbestos content. Its nomination by Docomomo to the World Heritage Committee for consideration as one of the major innovative modern experiments in post-war Japan has been ignored. In 1972 in Osaka the spectacular Sony HQ capsule office tower followed with its exposed lifts and services. It is ironic that with his large office in Tokyo, Kurokawa built little in the city itself, at least until recently when his huge, spectacular wavy glass-walled National Art Centre in Roppongi was opened this year. His work in Japan and abroad became known through his built projects and in Japan and abroad through the publicity surrounding his evolving philosophy of symbiosis that advocated a paradigm shift from 'The Age of the Machine to the Age of Life,' ie, from old fashioned European modernism to the new found interest in the organic.

In Britain this shift served as the main title for the huge retrospective exhibition held at the RIBA in 1998 which I curated with Dr Kurokawa. With its see-through floors featuring hundreds of sketches by Kurokawa as well as the exquisitely made small scale models lit by fibre optic spots it was a knock-out show only marred by what Kisho called "the disgusting smell of breakfast" from the adjacent café. The multi-million dollar retrospective, also seen in Paris, Chicago, Berlin and Amsterdam and Japan, was visited by an estimated audience of nearly a million. Further British exhibitions of Kurokawa's projects followed in Manchester and at Kew Gardens,



The Nakagin Capsule Tower



Entrance with big eaves of the Art Museum, Museum of Modern Art, Wakayama



Looking up the dome over the Entrance Hall, Ehime Prefectural Museum of General Science

All photos: Kisho Kurokawa Architect and Associates

the latter as part of the 2001–2002 nationwide Japan Festival. Kisho Kurokawa was magnanimous in his generosity to others, and an ever gracious, serious entrepreneur who co-curated telling exhibitions on Emerging Young Architects held in Tokyo and in London. These AJ/RIBA exhibitions introduced the work of a new generation including Sejima, Kuma, Naito, Ban and others to London while the first show in Tokyo enabled British architects Allies and Morrison, Craig Downie, Patel Taylor *et al* to demonstrate the originality of their work.

Despite the success of these exhibitions Kurokawa had little success with new commissions in England. His Japanese Cultural Centre in Gunnersbury Park featured in the Kew exhibition was rejected. Recent discussions took place with him on the siting of a signature Japan Arena project in Kings Cross. What will come of that we don't know but the new Maggie's Centre he designed for Swansea will go ahead. Kurokawa's Retrospective heralded the English translation of his book *The Philosophy of Symbiosis*, a cult text in Japanese environmental, literary and political circles. The book espoused his "Age of Life" principle in direct opposition "to the methodologies of modernism" and its close association with the machine

aesthetics. In Kurokawa's interpretation, the Greek "symbiosis" means "living together" and creating "a relationship between two or more organisms that is not only advantageous, but necessary to both." His writings have had a continuing resonance and have a close connection with the development of his architecture.

Kurokawa's Tokyo office (with three branches in other countries) has produced dramatic new buildings in Sofia, Paris, Melbourne, Singapore, Beijing and Amsterdam. So many, in fact, that the major core works that espoused his holistic philosophy have sometimes been lost in the wider output of a practice which also followed the pattern of the big American 'commercial' firms. He was however most fortunate in his national commissions, many of which allowed him to develop an interest in local, regional and international cultures, demonstrated in projects from the 1970s for prefectural museums in Wakayama (Museum of Modern Art), Hiroshima (the City Museum of Contemporary Art with a hole at its heart symbolizing the place the atomic bomb hit on August 6, 1945 killing over 100,000 souls) and in the Ehime (The Museum of General Science) where, in a low bland industrial landscape, he brought together an assembly of geometric forms—cylinder, cone and cube—in

a scheme that sparkles in the sunlight, with its titanium slips randomly cast into the sheer concrete walls. Kuala Lumpur International Airport, situated at the edge of a rain forest, was commissioned through a competition won in 1990. Its design, based on 'Life' principles, showed a fusion of nature and technology with an ingenious support system combining structures and services like a spinney of structural trees. The airport was seen as part of a wider concept for an 'eco-city' media corridor linking the airport and the capital. In 2003 he completed a master plan for Astana, Kazakhstan, a concept plan for Zhengzhou and a central Axis project for Shenzhen in China. Kurokawa received many awards including the Gold Medal of the Paris Academy and the IAA. He was awarded Hon Fellowships from the RIBA and AIA and most recently the Chicago Athenaeum Museum International Architecture Award, 2006. He is survived by his second wife, the actress Ayako Wakao, and a son and daughter from a previous marriage.

This is an expanded version of an obituary published in The Independent newspaper and RIBA Journal.

DENNIS SHARP, Dennis Sharp Architects is currently vice-president of AA London, chair of CICA and co-chair of Docomomo UK and member of Docomomo ISC/Registers.

CANADA MODERN

A nation founded by Frenchmen, Englishmen, Aborigines and Métis and populated by immigrants, Canada seems perpetually in quest of an elusive identity: attempting simultaneously to negotiate and preserve the immigrant experience while forging a new perspective within a tolerant multicultural society, against an idealized backdrop of mountains, snow and maple syrup.

One way to handle this combination of isolation and diversity is to develop communication, which, whether to trade furs, produce the world's first radio and telephone signals, or launch the earliest telecommunication satellites, has turned out to be crucial to building the country. Moreover, ever since its creation in 1867, the nation has been concerned with communication between linguistic and cultural groups. Unsurprisingly, it is a Canadian, Marshall McLuhan, who invented the term 'Global Village.'

Historically, Canadian architecture, and in particular modern architecture, has relied on absorption, reconciliation and reinterpretation. International avant-garde movements were absorbed by the cultural and intellectual cognoscenti of the country and then 'situated' in a Canadian context. Initially, modernism in Canada assumed the romanticism of the wild landscape and the folklore of the founding nations and reflected the abundance of natural resources. In the twentieth century, architects were engaged in revivalism well into the 1950s, very few of them willing to commit to a purist modernism.

Today, the heroic modernists such as Moshe Safdie, Arthur Erickson or Douglas Cardinal—architects who truly understood Canadian predispositions—have passed away and their daring works have yet to be considered heritage.

In the following essays and reports on modern architecture in this country, the underlying theme of communication is obvious, whether in nation-building networks, regionalist negotiations, or in all-out cultural productions of Canadian nationalism (prevalent especially in the late 1960s at the height of nationalist pride and determination). Authors of this issue, from Quebec, Ontario, the Maritimes, the Prairies and the West Coast, each present their own regional idiosyncrasies, but their closely linked essays form the vast picture of what Canadian modernism was and how we are treating it today.



DOCUMENTATION
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CONSERVATION
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THE CONSERVATION OF MODERN IN CANADA

FRANCE **VANLAETHEM**,
IN COLLABORATION
WITH
JAMES **ASHBY**,
ROBERT **LEMON**,
STEVEN **MANNELL**

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THE PUBLICATION of this issue of the *Docomomo Journal*, ahead of the Icomos 16th General Assembly and International Scientific Symposium which will be taking place in Québec in late September 2008, presents an opportunity for taking stock of the modern movement's conservation in Canada. Let us first mention that within the Canadian confederation heritage protection is managed by three main levels of government: federal, provincial and municipal. While this power is generally under provincial jurisdiction as granted by the 1864 constitution, particularly with respect to private property, some provinces have transferred this authority to the municipalities or share it with them. Nevertheless, this has not prevented the federal government from intervening in the area.

The Historic Sites and Monuments Board of Canada was created in 1919 to recognize sites, individuals and events of national historic importance. Nearly 925 sites have been designated to date. However, the federal government's intervention is primarily commemorative: most often limited to installing a plaque or a simple marker, unless the government owns the site, in which case it can oversee its preservation and development.

Aside from the government, there are many other important parties involved, including citizens and heritage associations. Their participation is vital, because without their vigilance, heritage losses would be far more extensive than they already are. In Canada, as in many other countries, they were the first to demand protection for modern architectural heritage.

GROWING AWARENESS

The first motions to protect modern heritage date back to the late 1980s, when citizens in Quebec and Ontario reacted to threats facing modern architecture. In Ontario, in 1985, the demolition of the Shell Oil (Bulova) tower built 30 years earlier was the turning point in awareness that led to the organization of a series of conferences and an exhibition called *Toronto Modern: Architecture 1945–1965*.

In Quebec, the movement was kick-started in 1988 by the renovation of Westmount Square, a major urban complex designed by Mies van der Rohe in 1964. The esplanade was repaired, the travertine replaced with granite, and openings were made in the surface to bring light into the underground boutiques that had been decorated in a postmodern style. The owner and architects, pursuing primarily business objectives, showed no respect for the original project in their treatment of the complex.

In 1992, architects from Quebec and Ontario took part for the first time in Docomomo's second international conference in Dessau, and in 1994, these provinces gained representation within the organization and their chapters contributed to developing the register of modern movement architecture. British Columbia joined Docomomo in 1996, and the Maritime Provinces have applied for membership in September 2006, during the ninth international Docomomo conference held in Turkey.

Regarding documentation, in recent years there have been considerable activities outside the main centers of Montreal, Toronto and Vancouver. There have been exhibitions and/or publications on modern architecture in Victoria, Edmonton, Calgary, Lethbridge, Regina, Winnipeg, Peterborough, Chicoutimi, and Atlantic Canada. This large interest led, in 2005, to the organization of Canada's first national conference on modern heritage, *Conserving the Modern in Canada / La Sauvegarde du Moderne au Canada*, in Peterborough, Ontario. With contributions by all of Canada's Docomomo chapters, the Winnipeg Architecture Foundation, and others, the event was seminal in forming a national network of people working in the field of modern heritage. Sessions were held on the main activities that are critical to the conservation of buildings, ensembles and sites from the post-war era: documentation, evaluation, stewardship, building conservation, and education. One hundred people attended the event. Among them were the leading academics, historians, architects, engineers, landscape architects and planners within the field in Canada. The venue, Trent University (Ronald J. Thom, 1963–1969), provided an appropriate collegiate environment to foster discussions and offer reflection. Bilingual conference proceedings were published in 2007, providing a lasting legacy of the event. In Montreal, the experience was the motivation behind the creation of a graduate studies program in modern architecture and heritage at the Université du Québec à Montréal, École de Design, which this year was welcoming its seventh cohort of students.

FEDERAL MODERN HERITAGE PROTECTION

At the official level, the Federal government has been very progressive on the modern heritage front. In 1996, the Historic Sites and Monuments Board of Canada (HSMBC) commissioned a study on the documentation and evaluation of the built heritage of the modern era in Canada and elsewhere in the world. The results of this investigation can be found in a report entitled *Commemorating Canada's Built Heritage of the Modern Era*. In 2001, the content of the 1997 report was summarized in a pamphlet published to commemorate the built heritage of the modern era by Parks Canada, the agency in charge of managing Canada's natural and cultural heritage. This document was part of a new series of publications designed to educate the public about "aspects of Canadian history that have not received the national recognition they deserve."

Despite these initiatives, progress has been slow. Since 1997, only four modernist buildings have been designated as historic monuments by the Minister of the Environment, based on recommendation of the HSMBC.

1- The Binning Residence in West Vancouver, built in 1941 by and for B.C. Binning, a well-known artist, in collaboration with equally famous architects Pratt and Berwick. This building is one of the earliest examples of architectural modernity on Canada's West Coast and is a model for a new way of living and dwelling.

2- The Arts Centre of the Fathers of Confederation, in Charlottetown, designed by the ARCOP agency in 1961 for a national architecture competition. This is an unusual complex in that it is both a cultural center and an intentional monument, as it was built in 1964 to commemorate the 100th anniversary of the preparatory meeting for Confederation and was erected besides the provincial building that was the site of the historic meeting of the Fathers of Confederation.

3- Canada's Cold War Museum in Carp, outside Ottawa, Canada's capital city. Nicknamed the "Diefenbunker," after Prime Minister John Diefenbaker who, between 1959 and 1961 at the height of the Cold War, commissioned the construction of this bomb shelter to house the top levels of government in the event of a nuclear war.

4- The National Arts Centre in Ottawa, another project launched by the government to commemorate Canada's 1967 centenary and also designed by ARCOP. Located in the heart of the capital, a few steps away from the Parliament, this concrete building dedicated to theater has a remarkable and brutalist layout of hexagonal shapes.

Federal heritage protection action is not limited to the commemoration of historic sites and monuments. It is particularly effective when it concerns government properties, particularly the 47,000 buildings occupied by government departments. A Treasury Board policy in effect since 1982 requires that the management of government buildings take heritage

into consideration. Any department that decides to change, demolish or sell a building more than 40 years of age must ask Parks Canada, or more specifically the Federal Heritage Building Review Office (FHBRO), for an assessment to determine its heritage value. Under this policy, a wide variety of buildings was studied and protected. These include a large number of office buildings, single structures and major complexes erected in cities and suburbs, experimental farms, museums, military bases and other facilities. Up to now, close to 25,000 buildings of all ages have been evaluated, among which around one hundred modern buildings have been recognized or classified. Some of the buildings classified by the committee have been handled with careful attention. The former Ottawa City Hall, inaugurated in 1958 and acquired by the Federal government in 2001 after municipal mergers, has benefited from extremely detailed and meticulous conservation guidelines developed by a multidisciplinary team, as described by James Ashby in this issue.

Regrettably, however, some government facilities belonging to crown corporations, like the Post Office or Canadian Broadcasting Corporation, are not governed by this policy. Of course, they can, at their own initiative, ask for assessments as did the Montreal Port Corporation for Silo No 5. This infrastructure, not used since 1996 and not very popular with the public, was not demolished, thanks to concerted efforts by Héritage Montréal, AQPI (Association Québécoise pour le Patrimoine Industriel) and Docomomo Quebec. Today this huge infrastructure is still awaiting recycling.

REGIONAL PROTECTION OF MODERN HERITAGE

Now let us take a look at the situation at local level where heritage protection measures vary from province to province, depending on the foundation, or not, of a Docomomo regional chapter.

Quebec

In Quebec, the government has had legislation in place to protect its heritage since 1922, a responsibility it has shared with municipalities since 1985. Of the 25,000 buildings protected under Quebec's Cultural Property Act, either individually or as elements in historical areas, only 10% date from the twentieth century. This situation is in itself paradoxical given the quantity of buildings constructed between 1900 and 1975, as shown by the recent inventory of places of worship in Quebec by the Fondation du Patrimoine Religieux (religious heritage has received great attention since 2000). Among the nearly 3,000 churches, temples and synagogues surveyed, approximately, 2,000 were built after 1900, 1,000 of which after World War II. It is particularly surprising that none of the recent heritage properties are examples of post-war modernism. However, following action by citizens, several modern buildings and complexes are awaiting protection, such as the Domaine de L'Estérel developed in the Laurentians region in the late 1930s by Belgians Baron Empain and his architect Antoine Courtens, the church of Saint-Marc in La Baie designed by architect Paul-Marie Côté in 1955, and Habitat 67, without a doubt Canada's best known modernist realization. Others have been rejected, such as the campaign for Place Ville-Marie in October 2005, the large urban complex whose cruciform tower symbolically marks the modern city center of Montreal and which underwent refurbishment that profoundly altered its authenticity.

This event was a trigger at municipal level. In the process, under the Land Use Planning and Development Act, the district of Ville-Marie has recognized ten buildings as modern heritage, and commissioned a study to control the issue of building permits intended for modifying modern buildings which are particularly plentiful in a territory that adjoins Montreal's city center. Moreover, in 2007, the City of Montreal, which has recognized the importance of recent heritage in its 2005 Heritage Policy, has cited Habitat 67 as a historical monument and made one of the Expo 67 islands, Sainte-Hélène, a heritage site under the Cultural Property Act.

Ontario

In the province of Ontario, legislation to protect heritage properties was established in 1975. Designation of heritage properties and districts is the responsibility of individual

municipal governments, who set their own evaluation criteria, including age restrictions on buildings to be considered. In hindsight, the initial Ontario Heritage Act was limited in its effectiveness. The Historic Places Initiative estimated that Canada lost more than 20% of its pre-1920 heritage buildings between 1970 and 2000, and in response to these losses, the Act was substantially revised in 2006.

With regards to modern heritage, the cities of Toronto and Ottawa have each developed well-informed, if informal, advocacy communities that lobby for the protection of modern buildings and landscapes. While there have been a limited number of modern buildings officially designated, many have been placed on inventories that serve as "watch-lists." In these cities there has also been considerable advocacy activity in the form of exhibitions, open days, and books. The 2007 publication *Concrete Toronto* brought together over 30 collaborators to reflect on concrete architecture from the 1950s to the 1970s. Within the last few years, the interest in modern heritage has spread outside of the major centers, with events and advocacy activities in Hamilton, Peterborough, and Chatham.

As the new Ontario Heritage Act has only been in place for a short time, it has yet to be tested. In spite of the new legislation and considerable advocacy, there continues to be dramatic losses. In 2007 in Toronto, another building was demolished within Don Mills, the first fully integrated post-war community developed by private enterprise in North America. Amidst controversy, the Bata International Centre (John C. Parkin, 1964) was torn down to make way for a new Ismaili Centre and Museum.

British Columbia

In British Columbia one would think, by the popularity of everything mid-century modern, that all is well with the legacy of modernism. The annual tours of the post-war era buildings in Vancouver arranged by the Vancouver Heritage Foundation are always sold out. But all is not well on the West Coast, as the pressures of land values are putting many of these buildings in jeopardy. In recent months, a surprising amount of national attention was focused on the demolition of the landmark Graham House by Arthur Erickson in West Vancouver. The Binning House in West Vancouver is also in limbo, this despite a National Historic Sites status. Recognition as landmarks is not enough, as both buildings lack municipal heritage protection and are therefore vulnerable to market forces and demolition.

Also jeopardized is the distinguished Dal Grauer Substation in downtown Vancouver. A big question mark hangs over the future of the Post Office, an immense block of modernism in a prime downtown location with an uncertain future. Considerable public angst has focused on Erickson's landmark Robson Square complex, with a hinted at, but still underwraps, overhaul of the plaza area timed to coincide with the 2010 Winter Olympics. Perhaps if we could see what is planned, there might be a collective sigh of relief.

The University of British Columbia campus has a rich legacy of modernism and, on a case-by-case basis, some landmarks are being conserved, largely due to the diligence of a handful of sympathetic planners there. But in the absence of a heritage policy and formal recognition of its heritage resources (much of which is post-war) the discussion and threat of demolition will continue for each potential heritage building.

Docomomo International and Docomomo BC have played key roles in raising the awareness of Vancouver's and BC's modernist heritage. In the early 1990s, inspired by the work of Docomomo International (and spurred by the loss of the landmark Custom's House), a handful of Vancouverites embarked on a path to formally recognize buildings of the modern era as having heritage status. The council of the day agreed and brought the city's heritage program up to date. Some early successes followed with the preservation of the BC Electric Building (now Electra condominiums), former Vancouver Public Library and Gardiner House. By the early twenty-first century, Docomomo BC rallied to create an award-winning cd-rom of BC Modernism, which has been effective in raising public awareness of modern heritage.

However, without political support, financial incentives and creative thinking not just to preserve but also to reuse our landmarks of the modern era, the itinerary for the public tours will become much shorter. And we will always need to be on guard for the next threat.

Atlantic Provinces

Atlantic Canadian cities were often early adopters of heritage policies, led by such projects as the Historic Properties in Halifax (restored 1970s) and the city market in Saint John (1980s). Closely tied to the development of heritage-based tourism, these policies focus on pre-twentieth century sites and buildings. To date there has been little success in official identification and recognition of the built heritage of the recent past. Almost all the twentieth century Atlantic Canadian properties listed in Canada's Historic Places are vernacular buildings or industrial sites; almost none are listed as examples of "modern architecture." Awareness of the built heritage of the recent past has largely been the result of public and professional outcry over demolitions—a 1920s Irving Gas Station in Halifax in 1999 (a registered heritage property), the PEI Ark, Spry Point in 2000, and the Beth-el Synagogue, St. John's in 2001. "Modernism in Newfoundland" was published in *Canadian Architect* in 2000. The first comprehensive documentation and awareness effort was *Atlantic Modern: The Architecture of the Atlantic Provinces 1950–2000*, a four-province survey exhibited in Halifax in 2001 and St. John's in 2002–2003, with catalogue published in 2004 with a catalogue. The exhibition Building New Brunswick / Bâtir le Nouveau Brunswick will take place in Fredericton in 2008, with accompanying catalogue, emphasizing post-1945 projects. Docomomo Canada-Atlantic was recognized as a provisional chapter in 2006.

This is a quick and partial overview of the state of modern building conservation in Canada. Among other places, we have omitted Saskatchewan, whose modern agricultural heritage is documented elsewhere in this issue. An important development there has come in the form of the May 2007 designation of the John Nugent Studio in Lumsden as a Provincial Heritage Property. Designed by Clifford Wiens in 1961 and winner of the Massey Silver Medal for Architecture in 1967, this modernist building is the first to be designated as such, and coincided with a major touring exhibition on the career and work of Clifford Wiens. This protection by the authorities, like some of the others mentioned above, testifies to the slow rise of innovative twentieth century architecture to heritage status in Canada. It is clearly linked to policies of documentation and development which, with the dawn of the new century, are on the increase across the country, and demonstrates the need for Docomomo's active involvement on the ground, close to the people responsible for the future of modern heritage and to owners, users and politicians.

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DOCUMENTATION

Grain Elevators on the Canadian Prairies

NOMADISM TO SETTLEMENT

■ BERNARD FLAMAN

IN COLLABORATION WITH MAUREEN PEDERSEN, GARTH PUGH, DAVID FIRMAN AND TOM WARD

As they crested the ridge, the cupolas of the wheat elevators at Plainville came into view . . . Gander grew up in the straggling street that skirted the railway track . . . on his left the huge bulk of the grain elevators, each with its squat little engine room from which came the intermittent spit... spit... of the gasoline motor . . . from the railway track came the sound, like rushing water, of wheat being piped into cars for shipment, first to Fort William or Port Arthur and later to those hiving lands of Europe now so assiduously engaged in a business of their own, but a business which could not be carried on for long without the help of that little red kernel, mightier than siege guns and battleships . . .'

*. . . many hopeful signs of a growing architectural sense in Canada have been brought to our attention. There are the possibilities of the new "engineering architecture" symbolized in Canada chiefly by grain elevators whether in wood as is typical on the prairies or in concrete about the Great Lakes. On the architectural merits of these, opinion differs; one of our informants finds them honest and no more, another admits a beauty in "simplicity of form, unbroken surface texture and the play of shadow."*²

THE ABOVE QUOTATIONS present two perspectives on Canadian grain elevator structures. The first quote, from the 1926 novel *Grain*, paints a picture of pioneer farm life in Manitoba between 1896 and the 1920s. The main character, Gander Stake, represents the first generation of settlers' children to be born and raised on the prairies. While his parents may have experienced urban life in large cities, if only through the immigration or settlement

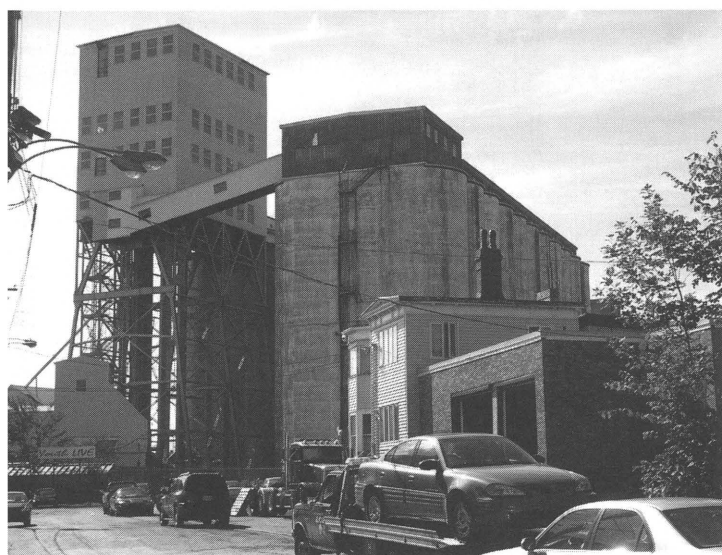
process, Gander's own life and experience does not yet extend very far past the boundaries of his family's farm. From Gander's viewpoint, the line of grain elevators in the fictional small town of Plainville are the largest buildings he has ever encountered and they connect his farming activities with the global market for wheat, an early example of what we now know as globalization. They also validate the settlement pattern of the Canadian prairies, which saw land surveyed into a grid composed of 1/2 mile by 1/4 mile plots of 160 acres called quarter sections, with towns placed at approximately 8 to 10 mile (13 to 16 km) intervals, a distance that a farmer could reasonably travel in one day with a horse-drawn wagon load of grain. Each town had several grain elevators representing different companies arranged in a row or 'line' along the railway tracks. The second quote, from the Massey Report of 1951, casts the grain elevators in a pivotal role in Canada's

architectural history, be it the wood crib construction type found in small towns or the concrete terminal-style at the major shipping points of Montreal, Thunderbay (Port Arthur / Fort William) and Vancouver. In general, Canadian architecture is largely the product of outside influence, often regionalized by local materials and responding to local landscape and climate. The grain elevator, however, is one of the few building types that was developed in North America and proliferated in both Canada and the United States.

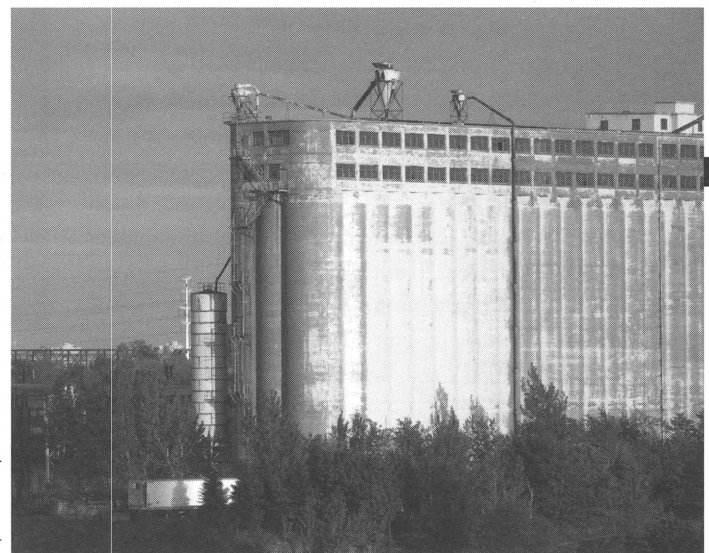
THE PLAN FOR THE SETTLEMENT of the Canadian West had its roots in the "National Policy" of 1879, a policy of tariff protection that also envisioned a populated, agrarian west providing a market for eastern manufactured goods.³ Beginning in the 1870s, the First Nations (or Native Canadians) were systematically resettled on reservations after the prairie bison (a creature perfectly adapted to the extreme climate) that sustained them was essentially eradicated. Beginning in 1876, before the completion of the railway from Winnipeg to Port Arthur on Lake Superior in 1883, wheat

onto railway cars.⁵ Such structures benefited from new technologies of 'cribbed' wood construction and elevating devices. The settlement of the Canadian prairies can be viewed as a modernist project, rooted in the Enlightenment philosophy and based on the ideas of mechanized agriculture, railway transportation and the control and modification of the natural environment that included the rejection of both indigenous peoples and fauna such as the bison.

One conclusion that can be drawn from this analysis is that the most extraordinary point in the evolution of this region and one most worthy of recognition and commemoration is the point of transition from the nomadic culture of the First Nations to the settlement culture of mainly European and American pioneers.⁶ The transition from nomadism to settlement occurred quickly, through mechanized means, in the late nineteenth century, during the formative years of modernist architecture. The railway itself, along with train stations, trestles and the surveyor's grid that redrew the landscape and illustrate a large scale environmental transformation, are very tangible elements of this transition. However,



Halifax grain terminal, Halifax (Nova Scotia), constructed circa 1920



Elevator No. 5, Montreal (Quebec), concrete silos begun in 1906

was exported from Manitoba to Britain via shipments to the south, on the Red River connecting with American railways. The building of the Canadian Pacific Railway across the area now known as Manitoba, Saskatchewan and Alberta after 1881 provided the transportation infrastructure for settlers and manufactured goods to reach the remote area. It also provided the means for agricultural products produced in the region to reach outside markets. In 1883, the Canadian Pacific Railway began the construction of a terminal elevator at Port Arthur and by 1884, a shipment of wheat was sent to Glasgow, Scotland, by means of an all-Canadian route to seaboard.⁴ Country grain elevators first appeared on the Canadian prairies in the 1880s as a solution for weighing, grading, storing and quickly loading grain

from an architectural viewpoint, it is the grain elevator that best symbolizes this important point in the social, economic and cultural development of the region, and possesses wider significance through its influence and iconic form. These simple and functional buildings not only symbolized the values of the pioneer settlers, but also attracted European modernist architects and artists, who viewed them as an example of "honest form" and an early representation of the beauty of the modern world. It is the only building type common to the Canadian prairies that has had a significant influence on the development of modernist architecture.⁷

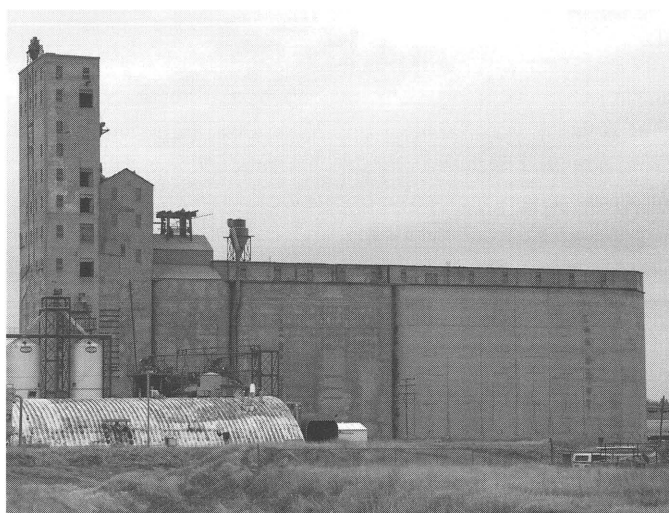
THE FIRST GRAIN ELEVATOR appeared in Buffalo, New York, in 1841 and is attributed to American entrepreneur

Thomas Dart and engineer Robert Dunbar, a Scot educated in Canada.⁸ These structures displayed characteristics which became common in later elevators, including wood crib construction and continuous elevating belts with attached cups. This basic formula was adopted in the Canadian prairies, with the Canadian Pacific Railway implementing a standard for elevator constructions. A plentiful supply of dimensioned lumber was available, with 70% of the lumber output of British Columbia transported to the Canadian prairies in the years before 1914.⁹ The terminal elevator incorporated concrete technology around 1900, but the construction of wood crib grain elevators in small towns continued into the 1980s.

AT THEIR HIGHPOINT in the early 1930s, there were over 5,000 wood crib grain elevators in Manitoba, Saskatchewan and Alberta.¹⁰ Their gradual forsaking began in the 1980s, as the traditional wood crib construction was superseded by concrete terminal elevators spaced over larger intervals and usually located in larger communities, a recognition that grain delivery had for some time been accomplished by large trucks rather than by horse drawn wagons. As the building of the railway across the prairie provinces in the late nineteenth century promoted the development and construction of the wood crib elevator, so too the systematic abandonment of the railway lines serving rural communities led to the death of the prairie icon; "the 1990s saw the full impact of this demise with the ending of the Crow Rate in 1996 and further rail abandonment."¹¹

The new reality proved shocking for many who believed that the giant icons would always mark their small rural community on the vast landscape. In some cases, the structures were sold to farmer-owned cooperatives or dismantled in order to salvage the wood. But often the destruction was brutal and wasteful, the redundant elevator toppled over, crushed and burned.

THE ACCELERATING LOSS of the country grain elevator sparked an interest in the identification and protection of some of the remaining key examples, an interest that came not just from rural communities, but also from heritage departments and agencies at provincial and national level. In 1995, a row of five elevators at Inglis Manitoba was designated as a National Historic Site. The agenda paper which supported the nomination, entitled "Framework and Criteria for the Evaluation of Country Grain Elevators," recognized the significance of the 'line' or row of elevators, a pattern that resulted from competition between various grain handling companies.¹² It also presented a chronological framework that helps to



Robin Hood flour mill, now Parrish & Heimbecker terminal, Moose Jaw (Saskatchewan), constructed 1912



Quaker Oats flour mill, now Parrish & Heimbecker terminal, Saskatoon (Saskatchewan), constructed 1909

understand the prairie grain elevator development and decline. The paper identified four time periods in the development of the grain industry: Genesis (1876–1900), Expansion (1900–1930), Maturity (1930–1970) and Attrition (1970–present). The chronology documented the evolution through each time period of the grain elevator's form, most apparent in the shape of the roof and size of the elevator and its various annexes. Hip-roofed elevators with cupolas were common in the Genesis stage; the 'sloped-shoulder' design became prevalent in the Expansion stage; and the Maturity and Attrition stages include simple flat roofs and more complex roofs that combine 'sloped shoulders' with gables.

THE SHAPE of the grain elevator, especially when grouped in a line, gives a skyline to the otherwise minimalist prairie landscape, and is comparable to such European icons as the historic windmills of the Netherlands. The fate of the wood grain elevator mirrors that of other modernist structures, such as industrial sites and airports, which are rendered obsolete when the



Robin Hood flour mill, Saskatoon (Saskatchewan), constructed 1927

© photo courtesy of the Government of Saskatchewan, Flaman

FLEMING GRAIN ELEVATOR FLEMING, SASKATCHEWAN

TIME PERIOD: Genesis Stage

CONSTRUCTED: 1895

DESIGNATION STATUS: Provincial Heritage Property

CONSERVATION TREATMENT: Rehabilitation

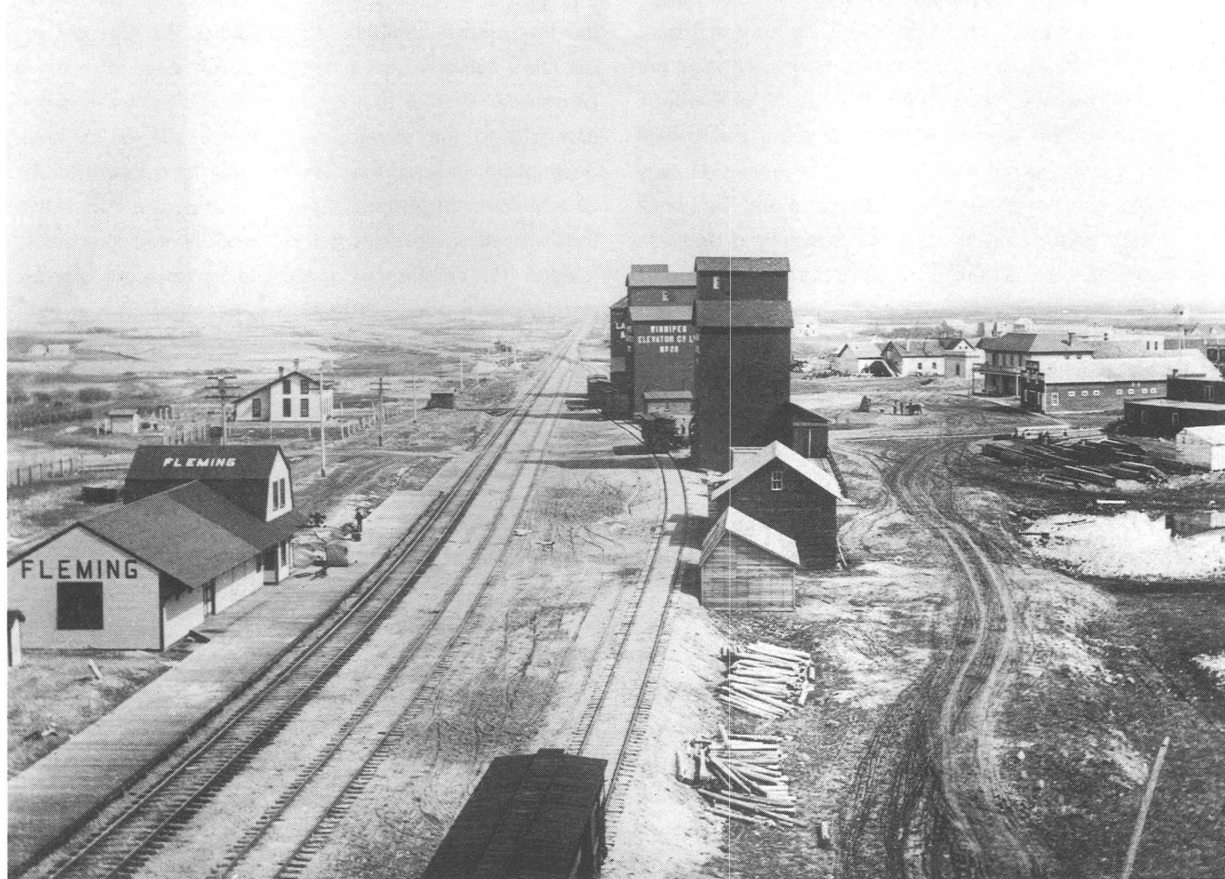
The Fleming Grain Elevator was constructed in 1895 and is the oldest standing grain elevator on its original site in Canada and possibly the only extant example of the Genesis stage (1876–1900). The hipped roof with cupola is the formal element that places the design in the first stage of grain elevator development. It was originally built for the Lake of the Woods Milling Company of Winnipeg and is located next to the Canadian Pacific Railway main line. Archival photos indicate that the unloading shed was rebuilt in an expanded version to accommodate the transition from horse-drawn wagons to trucks. Also, the office was moved from the west to the south side of the elevator and a lean-to structure on the west side was demolished, most likely in response to the change of the system powering the elevating leg that incorporated a drive shaft to one that utilized a rubber belt.

ANALYSIS OF THE BUILDING and research of historic documents, mainly photographs, led to pursuing the *rehabilitation* conservation treatment as represented

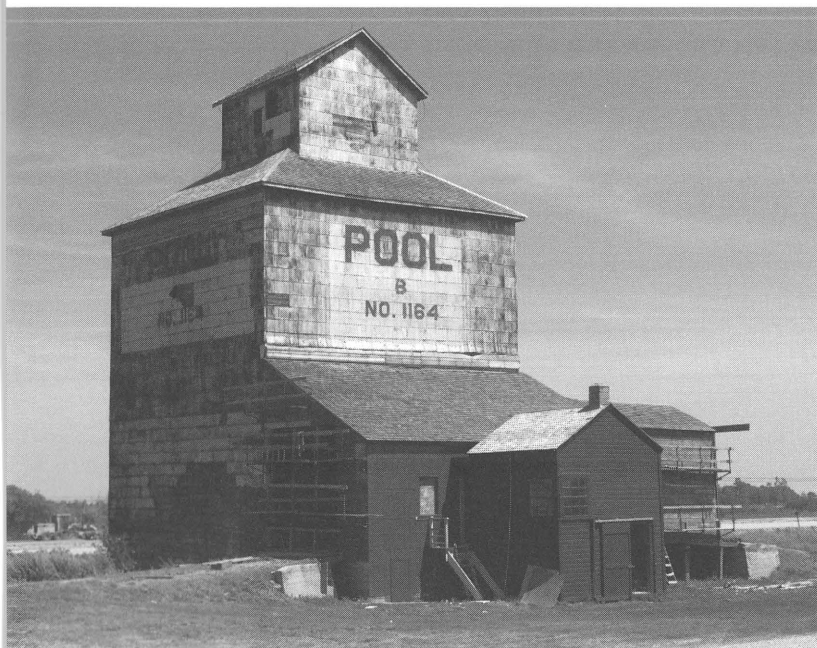
technology that created them becomes outdated. Despite greatly reduced numbers, it is through heritage sites, postcard images and tourist material that the grain elevator survives as a symbolic representation of the prairie region.

The following are three examples of recognized grain elevators listed on the *Canadian Register of Historic Places*. Each represents a particular time period and conservation treatment.

Historic photo of the row of grain elevators at Fleming (Saskatchewan), circa 1905. The existing elevator appears at the end of the row



© photo courtesy of the Saskatchewan Archives Board



© photo courtesy of the Government of Saskatchewan, Flaman

Oldest standing country grain elevator in Canada, Fleming (Saskatchewan), constructed 1895

in the *Standards and Guidelines for the Conservation of Historic Places in Canada*. The roofing material required immediate replacement and was carried out using cedar wood shingles, not the initial material, but a compatible one. The foundation and heavy timber frame supporting the grain bins were found to be in good condition. Apparently the current concrete foundation is an alteration of the original. The initial metal panels used as siding are at the end of their life and require replacement. A manufacturer was found to replicate the steel panels and screws, rather than nails, to fasten the panels. Traces of the original 'Lake of the Woods' company signage are still evident below subsequent layers of paint and will be reproduced on the west side of the elevator, along with recovering the original overall color. The east side may be used for revenue-generating advertising and the use of the elevator is currently undecided, awaiting a decision on the location and nature of a future tourism office.

INGLIS NATIONAL HISTORIC SITE INGLIS, MANITOBA

TIME PERIOD: Expansion Stage and Maturity Stage
CONSTRUCTED: between 1920 and 1925 with one elevator constructed in 1941

DESIGNATION STATUS: Provincial and National Historic Site
CONSERVATION TREATMENT: Preservation

THE FIVE ELEVATORS in Inglis, Manitoba, are the last remaining example of an elevator row in Canada. They were built over forty years, during the Expansion (1900–1930) and Maturity (1930–1970) stages, which could be viewed as the 'Golden Age' of grain elevator construction. They also represent the full range of ownership types, from the large Canadian and

American-backed companies, the smaller family-owned businesses, to farmer co-operatives.

The uniqueness of the Inglis elevators was identified in 1992 when Manitoba Culture, Heritage and Tourism undertook an inventory of the remaining elevators in Manitoba.

THE OVERALL CONSERVATION approach was primarily preservation. Each of the five elevators was thoroughly cleaned, an issue in elevator conservation where grain accumulation is a distinct fire hazard and attraction for rodents. Several foundations had proved to be failing, necessitating the raising of the elevators and the replacement or repair of the existing concrete foundations. All five elevators are constructed with wood cribbing, dimensional lumber laid flat, stacked and nailed to create a thick solid wood structure. Where the cribbing had rotted, sections were replaced in-kind. The elevators were re-roofed with cedar shingles, as they had been initially.

RESTORATION of three out of five elevators included rehabilitation for new uses. One elevator is now an interpretive center, incorporating modern washrooms, displays built into the cribbed bins of the elevator and interpretive displays installed in the driveway. The interior layout of the attached balloon annex (similar in construction to a balloon-framed house) has been adapted to accommodate group events and large displays on the main floor with curatorial offices on a newly constructed mezzanine. The elevator office has also been rehabilitated as the office for the site and the interpretive complex. As a whole, the elevator and attached balloon annex and office building form a well preserved complex that subtly incorporates new functions essential to the development of the site as a tourist destination. Indeed, the elevators attract a large number of international visitors annually. Eventually, it is hoped that two other elevators will be rehabilitated in a similar fashion for commercial uses related to grain storage, agricultural products or tourism.

ALBERTA WHEAT POOL GRAIN ELEVATOR SITE COMPLEX, LEDUC, ALBERTA

TIME PERIOD: Attrition Stage

CONSTRUCTED: 1978

DESIGNATION STATUS: Provincial Historic Resource

CONSERVATION TREATMENT: Preservation

Constructed in 1978 on the CPR line between Calgary and Edmonton, the heritage value of the single composite Alberta Wheat Pool Grain Elevator in Leduc lies in its status as one of the last wood crib grain elevators built in Alberta. The site was designated and protected in 2003 by the province of Alberta, under the Historical



Row of country grain elevators, Inglis National Historic Site (Inglis Manitoba), constructed between 1920 and 1941

Resources Act, for its strong landmark and symbolic values associated with the marketing and distribution of grain in rural Alberta throughout the twentieth century, and as a representative of the Attrition (1970–present) or final phase of grain handling through the rural elevator system. The 3,050-tonne capacity AWP grain elevator in Leduc, complete with its modern power train and dust collection machinery, foreshadowed the trend towards large centralized concrete and steel inland grain terminals that were to come.

The chosen primary conservation treatment type for this relatively unchanged modern historic resource has been *preservation*, which ensures the retention of all character-defining elements as well as its evolved mechanical systems. The main conservation challenge turned out to be a building code issue related to 'limiting distance' requirements which these sites, given their close proximity to railway lines and property boundaries, invariably contravene. A sprinkler system was installed to address this issue and to protect the building from destructive fire hazards. Limiting distance is best described as the required distance, for life and building safety, between a building's exterior wall and the property line.

IN ADDITION TO WORK REQUIRED under the code, the Alberta Legacy Development Society has also

proactively taken on other more visible conservation projects such as the repair of wood window sashes, where as much original material as possible was saved in the process. This year, all buildings on site were painted in Alberta Wheat Pool colors and original wall signs were uncovered and refreshed. By systematically addressing the material conservation issues and need for code compliance, the AWP elevator in Leduc will be preserved as a treasured landscape feature while enabling the public to view and use the property for a variety of functions, thereby ensuring the economic viability of the site.

BERNARD FLAMAN holds the position of Heritage Architect with the Government of Saskatchewan. He has presented papers on the development of Canadian Airports at the 2000 Docomomo conference and the Saskatchewan Power Corporation Headquarters in Regina at the 2004 conference.

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4 V.C. Fowke, *The National Policy & the Wheat Economy* (Toronto: University of Toronto Press, 1957, 1978), 105. The following offers a concise description of the beginnings of the grain export market in

the Canadian West and the dramatic change that the arrival of the railway and the technology of grain elevators brought to the region: "The first shipment of wheat from the Canadian West took place in 1876, before the coming of the railway, when R.C. Steele of Toronto, a founder of the Steele, Briggs Seed Company, came to Winnipeg to purchase seed wheat. He wished to secure 5,000 bushels but was able to purchase only 857. The wheat was sacked and shipped south from Winnipeg by steamer on the Red River to Fisher's Landing in Minnesota. Steele secured another 4,000 bushels of wheat in northern Minnesota and the total shipment was taken by rail from Fisher's Landing to Duluth, by boat to Sarnia, and by rail to Toronto. The growers in the Red River settlement were paid 85 cents per bushel and the freight to Toronto was 35 cents per bushel."

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8 Pedersen, *Saskatchewan Grain Elevators*, 4, and Buffalo Architecture and History: www4.bfn.org/bah/

9 Fowke, *The National Policy*, 72.

10 Inventories completed by Manitoba, Saskatchewan and Alberta suggest that a total of 5728 existed in the three provinces in 1933. John Everitt, *A Study of Grain Elevators in Manitoba*. Report

prepared for the Historic Resources Branch, Government of Manitoba, 1992: 95. This inventory for Manitoba suggests a peak number of 737 in the early 1930s and identifies 18 significant remaining elevators in 1992. The Inglis site is the only recognized heritage elevator site in the province.

Pedersen, *Saskatchewan Grain Elevators*. Report prepared for the Saskatchewan Heritage Foundation, September 2000.

This inventory for Saskatchewan lists a peak number in 1932 of 3,240, while subsequent updates identify approximately 700 in 2000 and 425 in 2005. The 2005 update identifies 12 significant elevators above and beyond those recognized as provincial heritage property and seven that are recognized as municipal heritage property.

Judy Larmour and Les Bergen. *Heritage Prairie Grain Elevator Project: Research Report*. Report prepared for the Provincial Museum of Alberta, April 1998. This inventory for Alberta lists a peak number in the 1930s of 1,781 and 979 in 1982 with subsequent updates identifying 156 in 2005. There are currently 12 that are designated and protected as historic resources.

11 Larmour and Bergen, *Heritage Prairie Grain Elevator Project*, 188. "The Crows Nest Pass Agreement of 1897 granted a subsidy to the CPR of \$3,500,000 cash and a land grant to build a line from Lethbridge to Nelson in British Columbia, in exchange for a reduction of freight rates to 14 cents per hundred weight on grain and flour moving east from Winnipeg to the Lakehead, and on machinery and settlers effects going west." The Crow Rate came into effect in 1899, taking various forms until it ended in 1996.

12 Gordon Fulton, "Framework and Criteria for the Evaluation of Country Grain Elevators," *Historic Sites and Monuments Board of Canada Agenda Paper*, 1995.

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See: www.cyr.gov.sk.ca/elevator-biblio

One of the last wood-crib country grain elevators to be built, Leduc (Alberta), constructed 1978



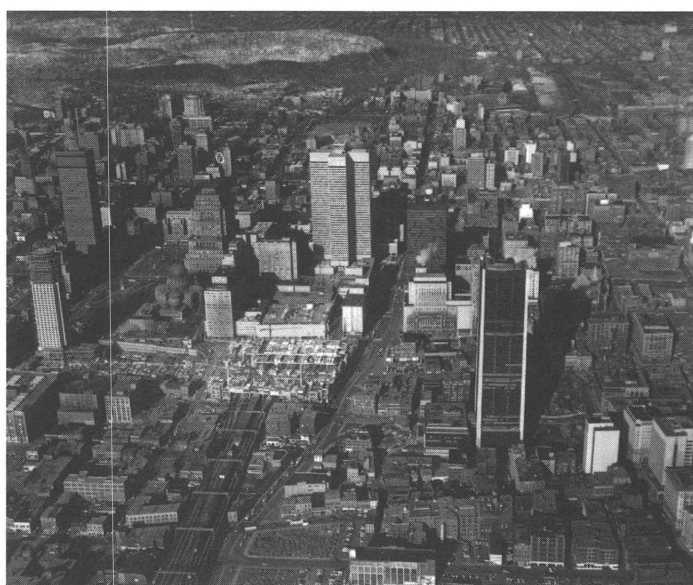
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The Continental Dimension of Modern Montreal

FRANCE VANLAETHEM

Aspiring to mobility is a component of modernity and of the ideology underpinning the modern movement in architecture. This value determines the unstable relationship modern man has with land, while belief in progress has guided his futuristic notion of time.¹ It accounts for the transportation revolution that occurred almost two hundred years ago with the advent of mechanized locomotion.

AT THE END of the nineteenth century, railways allowed Canada to establish a nation spreading across the continent, with Montreal emerging as its metropolis, that is to say the city where commercial activity, industrial and financial power were concentrated. In the nineteenth and twentieth centuries, the main features of Montreal's urban form were determined on a continental scale, first by the railway and then by automobiles. A new city center distant from the port was created, on the outskirts of the old city on the plateau stretching to the foot of Mont Royal, and replacing an elegant residential district built just a few decades earlier. This development began in 1888, when the station of the Canadian Pacific Railway Company—created to build the line between British Columbia and the eastern provinces—was built on Square Dominion. The pace of this new urban center's growth was given by the particularly favorable economic climate of the 1920s and later of the 1950–1960s. As Montreal was preparing for the World Fair in 1967, it was recognized as a concrete illustration of the 'city of the future.' Its reputation in the media was linked to an urban layout that superimposes rather than juxtaposes pedestrian and transportation networks in the confined area dominated by Place Ville-Marie. Intersecting at,



Montreal city center, view from the south, c. 1966

and beneath, Place Bonaventure—the international conference and commercial center built at the time of Expo 67—are the north-south railway line, 'underground Montreal,' whose shopping malls connect with town blocks, the metro line serving the lower part of the city, and lastly, the Trans-Canada Highway. Along with the construction of modern airports throughout the country and the opening of the St Lawrence Seaway, the Trans-Canada was the major mid-twentieth century federal transportation project.

THE TRANS-CANADA HIGHWAY PROJECT

The idea of a roadway crossing Canada from one ocean to the other dates back to 1870 and to British Columbia's negotiations to join the newly formed confederation. However, this type of connection—which at the time was slow and impracticable in winter—was rejected by the federal government in favor of the railway.² The idea was revived at the beginning of the twentieth century, when automobiles replaced animal-powered vehicles, and

the growing number of car enthusiasts organized themselves to defend their interests. But the project only became a reality just after World War II, following the Dominion-Provincial Conference on Reconstruction held in Ottawa in August 1945.³

IN CANADA, the challenges of reconstruction were less of a physical nature than of a financial one. They involved redirecting the country's production capacities that until then were primarily stimulated by the demand for arms and supplies, and encouraging public and private investment with in order to ensure full employment and the population's well-being. Against this backdrop, the development of transport networks was a priority.⁴ However, while Ottawa was able to act entirely independently concerning seaways and railways, the same was not true for highways as they fall within provincial jurisdiction.⁵ Nevertheless, since 1919 the federal state had financed the construction and improvement of major intercity roads without however being able to plan these works unilaterally.⁶ Passed in 1949, the Trans-Canada Highway Act was intended to assist the provinces by providing fifty percent of the budget for the trans-continental highway. Every province eventually signed the agreement specifying the required technical standards and administrative norms to realize it, with the exception of Quebec. Maurice Duplessis's conservative government opposed this project "born in the west," citing constitutional rights and the protection of villages.⁷ Quebec's position only changed with his death in 1959 and his party's defeat to Jean Lesage's Liberals in the June 1960 elections.

The course of the Trans-Canada Highway on the Island of Montreal was still very unclear in the agreement signed in May 1961 by the Minister of Public Works of Canada and Quebec's Highways Minister.⁸ It would be the subject of lengthy negotiations, made fiercer as local authorities, foreseeing important expropriation costs, requested increased funding from federal authorities.

THE ROUTE ACROSS MONTREAL

The modernization of Quebec's road network entered a new phase after 1957 with the decision taken by Duplessis's government to build its first limited-access road, the Laurentian Autoroute. This toll expressway, starting in Montreal, pushing north to Sainte-Adèle and serving a popular holiday region, was linked to roads planned in the preliminary master plan outlined in 1944

by the City of Montreal's urban planning department. This document never had regulatory weight, but it set long-term urban planning priorities, including plans for the construction of an underground metro, as well as freeways within the city limits, similar to those found in major American cities.⁹

THE MASTER PLAN proposed gridding the city with a "rational system" for car traffic, encircling Mont Royal at a distance, to alleviate congestion in the business district and to serve the port, while extending the penetration of the provincial road network.¹⁰ Among other things, it provided for the construction of an



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Décarie freeway, Montreal, 1967. Photograph Gabor Szilasi

east-west superhighway running along the port and serving industrial zones as it continues along the Lachine canal and the river. It included the Boulevard Métropolitain at the heart of the island, crossing it from west to east; the project was planned for by Quebec's government since 1923 and whose realization by the Commission Métropolitaine de Montreal was long delayed.¹¹ Ultimately, the City of Montreal took over its construction as an elevated expressway.¹² These major works began during the first term of Jean Drapeau (1954–1957), a mayor with great ambitions for his city, and were concluded by his opponent and successor, Sarto Fournier.

THE REALIZATION of the east-west freeway to the south of the city was just as laborious, even if it had been

planned in detail in 1948 following elaborate traffic studies. The first study produced by the urban planning department, just like the one commissioned from engineers Lalonde and Valois some ten years later, confirmed the freeway's course along the port, which would involve the demolition of the old city front.¹³ This route was however challenged in the early 1950s by, among others, architects Daniel and Blanche van Ginkel who were well acquainted with Team X ideas. Favoring a more dynamic approach to traffic in terms of destination rather than volume, they suggested differentiating between serving the port and serving the city center by moving the east-west freeway further north,¹⁴ a solution that also allowed Old Montreal—which people were starting to consider as heritage—to be saved from demolition. But when Jean Drapeau resumed power in October 1960, the east-west freeway project was shelved, his administration favoring both the construction of the metro to solve traffic issues in the east of the city, and the modernization of Boulevard Décarie, a major north-south artery in the west.¹⁵ However, money ran out, particularly as these infrastructures were financed exclusively by the City, and work on the metro alone started the following year. Nevertheless, the Highways Ministry's project for the Trans-Canada Highway presented a new opportunity, that of matching its route to those of the Décarie and east-west freeways. This came about firstly because in autumn 1962 the government abandoned its prime intention of using Boulevard Métropolitain for this purpose, as this elevated highway—built to lower standards than those required for the Trans-Canada—was deemed of insufficient capacity.¹⁶ The unexpected choice of Montreal as host to the next World Fair in November 1962, following Moscow's withdrawal, tipped the scale: after a few extra months of further studies, the model of the Trans-Canada Highway on the City of Montreal territory was introduced to the press in April 1964,¹⁷ following a layout based on the Van Ginkels' recommendation.

THE EAST-WEST SECTION of the Trans-Canada, however, was not completed in time for the opening of the World Fair in June 1967. The authorities had had to postpone its construction due to the pressure of expropriation and construction costs resulting from the building sector's intense activity to get ready for the international event, and from the beginning of the major works to the south of the new city center, among which Place de la Bourse, Place du Canada and Place Bonaventure.

MONTREAL, CITY OF THE FUTURE

In the mid-1960s, despite the east-west work being postponed, the Trans-Canada Highway contributed to Montreal's international reputation. Preparations for the World Fair and then its opening were certainly enough to attract the attention of major architectural magazines at the time.

But the interest of the specialized American and European press did not come to an end with the Fair. The city's new urban center, dominated by Place Ville-Marie with the trans-continental road passing beneath it in a tunnel, was considered an anticipation of the city of the future.



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Turcot interchange, Montreal, 1967. Photograph Gabor Szilasi

IN SEPTEMBER 1966, *Architectural Forum* magazine started the trend with a long article entitled "Downtown in 3D." Its author, Peter Blake, recognized in Montreal's new city center developing to the north-west of the old city the "most advanced urban center of the day," and a concrete example of the vision of the multi-level metropolis.¹⁸ His arguments, which emphasized both the deliberate and accidental nature of the development, were taken up by a number of his colleagues. The article was illustrated with expressive photographs and diagrams, among which some would be used by other magazines, such as the aerial view of the city and the river, taken from the Expo islands, on which the new urban center was outlined by a thick dashed line. Another frequently reproduced illustration is the street and

building plan representing existing underground networks and those due for completion by 1972: the layout of the shopping malls and metro stations is filled in solid black; the two underground lines that circle and extend beyond the city center are cross-hatched; the passage of the freeway and connecting roads is represented by large dashes.

MONTREAL'S REPUTATION endured beyond the excitement generated by Expo 67. In his book *Megastructure. Urban Futures of the Recent Past* published in 1976, Reyner Banham devoted an entire chapter to the "megacity" of Montréal, a city realizing the visionary concept of the megastructure envisioned in particular by Le Corbusier in his 1931 project for Algiers.²⁰ But the overall tone and judgment changed with Banham's book. While recognizing the "mega-Montreal of the mid-sixties as a compound historical phenomenon" with social and ideological ramifications,²¹ Banham no longer considered it a model. Quite the opposite, in fact. For him, megastructures are "dinosaurs of the modern movement" and "many megastructuralists did, indeed, make much of the 'urban crisis' of pollution, crime, congestion, dysfunctions of municipal services and the rest of the litany of Nekropolis, yet their projects paradoxically present a physiognomy of manic optimism."²²

THE HERITAGE OF MOBILITY, A HERITAGE TO BE FORGOTTEN?

The idea of the Trans-Canada crossing the entire Island of Montreal as a freeway was abandoned in 1976, in the weeks following the election of the Parti Québécois: the section crossing the city center from the Turcot interchange was built at the beginning of the decade by the Liberal government to boost employment thanks to public works, but the segment extending to the east, crossing the residential districts of Hochelaga and Maisonneuve towards the Louis-Hyppolite-Lafontaine tunnel, would never been completed. This type of infrastructure, entailing a complete upheaval of the urban fabric, had become too unpopular, while the heritage movement had acquired new momentum in a Quebec increasingly rallying around, and focused on, the national issue. "Mammoth," "concrete monster:" the poor reputation highways have of carving up urban morphology persists to this day and, in Montreal, they are more likely to be demolished than protected. Following the destruction of the Parc-des-Pins interchange, excavated at the foot of Mont Royal in the late 1950s, and its replacement by a 'friendlier' traditional junction in 2007, the City of Montreal is now considering the transformation of the Bonaventure freeway—built to provide access to the Expo 67 site—into an urban boulevard as part of a huge urban project, the first phase of which is due to start by the next municipal elections in 2009.²³ Quebec's Transport Minister is also planning for 2015 the reconstruction of the Turcot interchange, whose ramps soar above CP's old marshalling yard.²⁴

AMONG THE BUILT EXPRESSIONS of modernity, infrastructures built for automobiles are no doubt those whose heritage is least likely to be acknowledged, even if some contemporary artists appreciate their 'monumental' or residual spaces. In Montreal, the underside of the east-west freeway in the Saint-Henri district has become an open-air art gallery for graffiti artists, whose TA Wall focuses gatherings of the hip hop culture.²⁵ The electronic art organization Champ Libre suggests including among its exhibition venues a space of which very few people are aware. It is a gigantic underground service room—described as a 'cathedral'—where the Ville-Marie freeway safety exits converge.²⁶

The heritage relating to mobility is seldom acknowledged, although Canada does protect its railway heritage²⁷—at least its 'monumental' stations—and even though it is included in the joint Program on Modern Heritage launched by the World Heritage Centre and Docomomo in 2001 to bring some balance to the World Heritage List. Luuk Boelens's article, commissioned to fuel the debate, covers this subject and recognizes six archetypes of the culture of mobility, offering a framework for more extensive research. To a certain



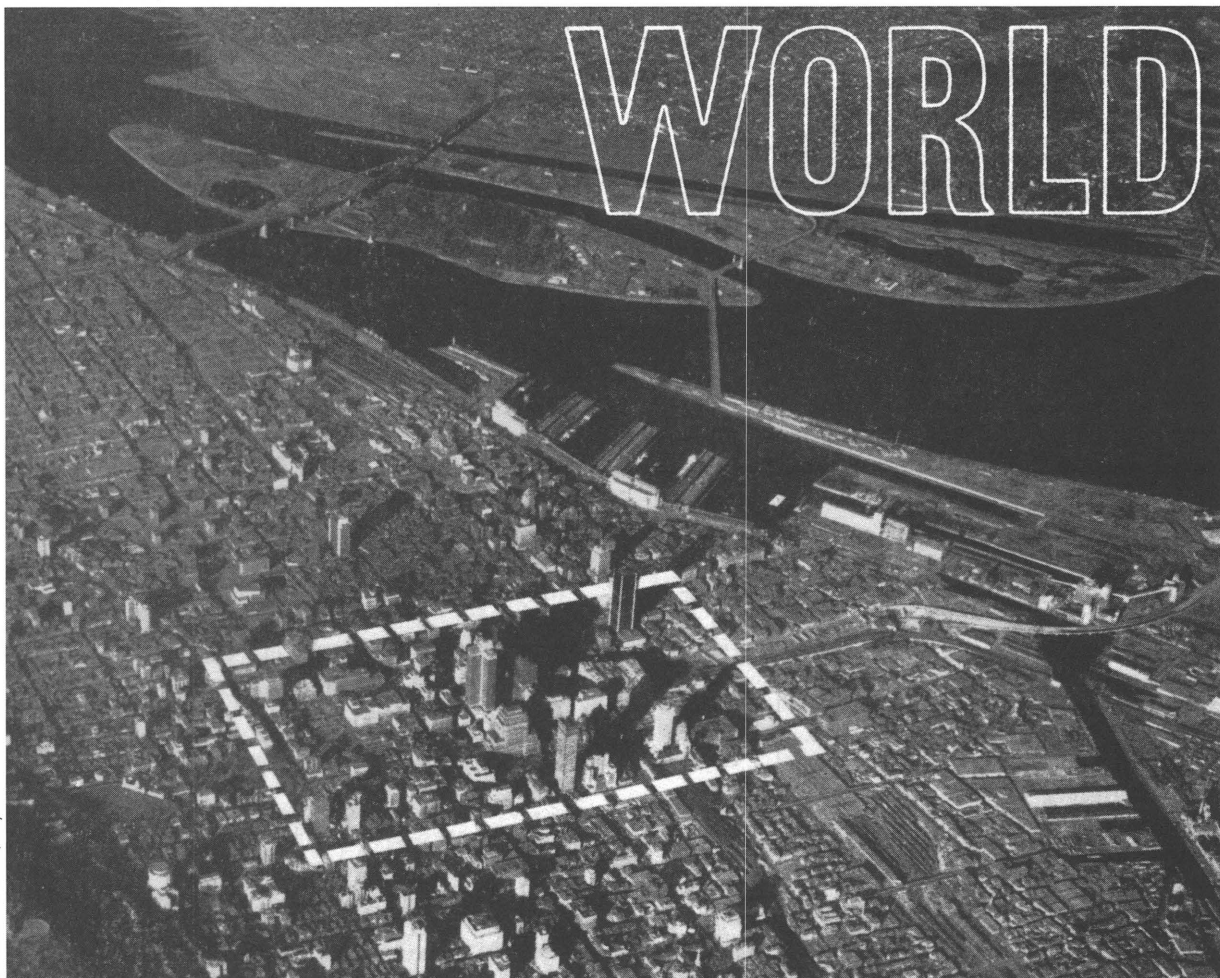
Turcot interchange, Montreal, 1967. Photograph Gabor Szilasi

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WORLD

Montreal downtown, "a most formidable network of multilevel living"

© Architectural Review, May 1967



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extent, this work began with Marc Desportes who, from a phenomenological perspective, studies "moving landscapes," that is to say landscapes transformed by major transportation infrastructures. Desportes shows how the roadway of the Age of Enlightenment, namely the industrial age's railway network and the twentieth century freeway, has gradually changed our relation to the world, disrupting man's customary relationship with his environment and the relationships that link people to each other.²⁸ Should the unrelenting rejection of urban superhighways since the 1970s be considered as a healthy reaction, or as an example of blind indifference to their patrimonial value?

FRANCE VANLAETHEM, architect ENSAAV-La Cambre, is a professor and director of the graduate program in Modern Architecture and Heritage at UQAM's École de Design, as well as founder president of Docomomo Canada-Quebec.

NOTES

¹ Jean Baudrillard defines modernity as the basic moral doctrine of change and progress, in *Encyclopaedia Universalis*, <http://www.universalis-edu.com/article2.php?napp=5856&nref=M120991> (consulted on December 24, 2007). He primarily considers this ideology in terms of its relationship with time, only mentioning its landscape dimension in passing. Historically, he goes back to Christopher Columbus's discovery of America in 1492. Let us assume that modernity also concerns our relationship with space.

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⁴ *Dominion-Provincial Conference (1945). Dominion and Provincial Submissions and Plenary Conference Discussions* (Ottawa: Edmond Cloutier, 1945): 2, 76, 78–79.

⁵ Gérald-A. Beaudouin, *La Constitution du Canada. Institutions, Partage des Pouvoirs, Droits et Libertés* (Montreal: Wilson & Lafleur, 1991): 411–419. This division of responsibilities, established in 1867 with the British North America Act that created the Confederation, can be put down to roads being initially of limited range in territories that have numerous natural obstacles.

⁶ In Canada, the relationship between the federal government and provincial governments is complex, particularly with the devolution of regional policies to the provinces. Furthermore, major road infrastructures are not the powerful land planning tool in the hands of the central state that André Lortie suggests they are, even less so in Quebec, where provincial autonomy was a key challenge, "Montréal 1960; les Singularités d'un Archétype Métropolitain," André Lortie (ed.), *Les Années 1960, Montréal Voit Grand* (Montreal: Canadian Centre for Architecture, Vancouver and Toronto, Douglas & McIntyre, 2004): 78.

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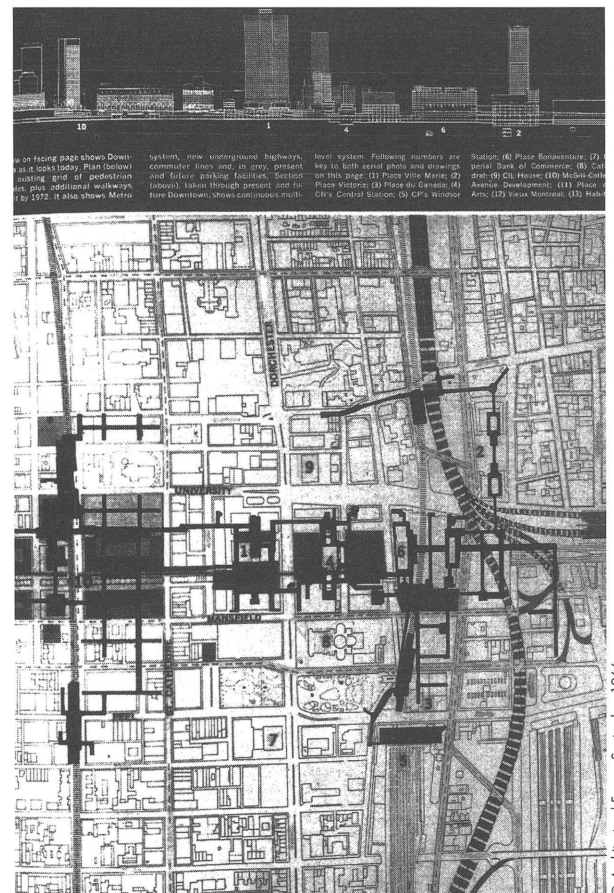
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"Plan includes existing grid of pedestrian promenades, plus additional walkways to be built by 1972"



The east-west freeway entering the city from the west, Montreal



Shopping Malls in Post-war Ontario

MARIE-JOSÉE THERRIEN

The development of North American cities and suburbs in the wake of World War II differs from that of European cities, especially if compared to those decimated by bombings where rebuilding dense urban areas, which heavily relied on state intervention, temporarily slowed down suburban growth. Common to both types of cities however, was an unprecedented demand for new housing.

WHILE EUROPEAN CITIES slowly recovered during the first decade after the war, North American urban development patterns benefited from a high degree of private affluence.¹ Many families who had experienced decades of deprivation were eager to improve their housing conditions as well as their material life style. As geographer Richard Harris explained: "the great majority of these houses were built in urban fringe . . . in controlled suburban municipalities,"² developed by corporate promoters, with the support, in Canada, of the Central Mortgage and Housing Corporation. Compared to early twentieth century suburbs, these post-war municipalities occupied much more space. The car, no longer a luxury good, transformed transportation patterns and led to low density and scattered suburban design.

FROM THE END OF THE 1940s, architects and urban planners conceived architecture and master plans around the automobile, but this is not the only decisive factor in the shape of the post-war built environment. The size of bungalows for instance, which offered more space and privacy, depended more on the private affluence resulting from the post-war economy than the ubiquitous accessibility of car. Nevertheless, the profusion of privately owned cars "required a much more extensive infrastructure of roads and parking lots."³ Travel patterns were no longer limited to the linear corridors of the streetcar lines. The abundance of farmland on the edge of large cities allowed for almost limitless sprawl. At the dawn of the booming post-war decades, enthusiastic promoters and optimistic governmental authorities did not anticipate the long-term impact that automobiles were to have on the environment. Post-war retail habits were radically transformed and a new building type that found precedents in the pre-war period began to invade the

suburban landscape: the shopping mall. An American invention that did not take long to cross the border, the shopping mall became the quintessential building type of our high consumerism era. It provided "the ideal [commercial] core for a settlement that grew by adding residential nodes off of major roadways rather than the concentric rings from downtown, as in cities and earlier suburban communities."⁴ But, victims of their own popularity owing to the competitive nature of the market economy, shopping malls are condemned to renovation, if not demolition, with a fifteen to twenty year cycle. In the following overview I have analyzed a few typical examples of Ontario shopping malls built in rural and suburban areas in the 1950s and 1960s. Their scale and relation to surroundings might differ but all were designed focusing on the automobile. However, as will be observed, pedestrians were also taken into consideration by the suburban planners, at a time when most families owned only one car that was usually driven to work by the father. The mother and her young children were left with the task of doing the groceries on bicycle or with a wooden wagon.

THE FORERUNNERS OF SHOPPING MALLS

In North America historical precedents of shopping malls appeared in the interwar years, along with multi-story garages.⁵ With the proliferation of Ford's mass-produced Model T large cities were overrun with automobiles. Scarce curbside parking space became an impediment to commercial activities. The face-to-face contact of traditional pedestrian circulation patterns was eroding in favor of a faster mode of transportation, which led merchants to build small clusters of commercial buildings with off-street parking space to alleviate the problems of congestion. This type of commercial cluster, the drive-

in market, contributed to changing consumer habits. As argued by architectural historian Richard Longstreth the drive-in market demonstrated "the merits of coordinating the sale of all basic food items in a sizable emporium located somewhat apart from business nodes—a place to which more customers would drive than walk and where off-street space existed for their cars."⁶ The post-war strip mall and the shopping centers are the direct heirs of the drive-in market.

THE PLANNING OF POST-WAR SUBURBS

The regional planning models that appeared in the nineteenth century considerably influenced twentieth century suburban landscapes. These new models, which included schools, churches, recreational areas and business centers, most often tended to segregate suburban land into single-use areas of residential, commercial and industrial zones. The shopping center was a significant promotional tool that helped attract new home owners. Once the critical mass of new residents justified the financing, developers would initiate its construction.

HUNGARIAN BORN ARCHITECT and engineer E. G. Faludi, who had studied in Italy before immigrating to Canada in the 1940s, was a pioneer in the planning of suburban shopping centers. In 1949 he published an article in the national professional architectural journal⁷ which was largely inspired by similar studies in the United States. For him the shopping center was an essential component of suburban planning. In a study for Metropolitan Toronto, Faludi drew a map of the "shopping nuclei" for new residential areas of the Canadian financial metropolis. His hopes were to replace the scattered clusters of stores by planned and controlled shopping areas. The map he drew indicated the location of future shopping centers which would accommodate, under the same roof, a group of stores, lined up along a sidewalk opening on to a parking lot. He established a hierarchy of shopping centers according to the size of the population of each planned settlement. He also identified the location of these buildings either at the intersection of principal roads for small community shopping centers or at the crossroads of major thoroughfares for regional malls.

THE THORNCREST VILLAGE shopping center (c. 1953) is one of the first neighborhood shopping centers (*fig. 1*). It was designed for Toronto's first post-war suburb where single-family houses stood on vast green yards arranged around cul-de-sacs and meandering streets. Its unusual fan shape, in harmony with the triangular block it stands on, is still recognizable despite subsequent additions. Surrounded by front and rear side parking lots, the single building accommodates a continuous series of shops, with the grocery store, the "main attractor" facing the

busiest road. Its entrance is signaled by a conspicuous field stone beacon. The rear façade is almost intact; the bank has kept its red granite entrance while the low running field stone wall of the string of stores has remained unaltered. Small columns punctuate the curved façade and separate the shops, identified by illuminated signs suspended from the fan shaped marquise. The low brick masonry wall of the grocery store creates an elegant contrast with the field stone lower wall. The treatment of this façade which combines noble and indigenous materials complements the residential architecture of the surrounding neighborhood.

THORNCREST Village is an excellent example of what Faludi identified as a "nucleation" or a "clustering of retail uses" that assumes structural unity at a street intersection.⁸



Fig. 1. Eugene G. Faludi, Thorncrest Village Shopping Center, Etobicoke (Toronto), built c. 1953

Well integrated in its "self-contained community" to which it is linked through a pedestrian walkway, Thorncrest Village's layout also hinged on the automobile and in fact, is a typical example of the kind of post-war commercial facilities that came into existence with the proliferation of automobiles. While accommodating pedestrians who live in the immediate neighborhood, Thorncrest Village, a shopping destination for vehicular traffic, is far removed from other business centers. It is, in Faludi's master plan, a commercial unit itself planned as part of a larger designated commercial area in a car-oriented suburb.

DESPITE THE CHANGES it underwent, the Applewood Village (c. 1955) commercial center in Mississauga, (a suburb West of Toronto) is also exemplary of the first generation of post-war shopping centers. Like Thorncrest Village, Applewood Village was planned to serve a local community. It is composed of three separate buildings linked by an arcade in an L-shape form. Located at the rear of a lot, it is connected to the surrounding residential areas on three sides. The south façade faces a major



Fig. 2. Architect unknown, *Dominion Grocery Store*, Applewood Village Shopping Center, Mississauga (Toronto), built c. 1955

Ontario thoroughfare, the Queen Elizabeth Way. The chain supermarket retains its original façade and stands strategically near the highway. Worthy of mention is its almost intact transparent shop window punctuated by a metallic V-shaped structure superimposed on a light orthogonal grid of mullions (fig. 2). Two pedestrian walkways connect the mall to the residential areas, while a vast parking lot occupies the front of the lot. The layout

is organized around two open-air courtyards, where customers can gather as they would in a town square. These privately owned commercial gathering places reflect the 1950s practices for shopping mall design, as put forward by experts such as Victor Gruen, the father of American suburban malls. Similar layouts were found in shopping centers all across Ontario, whether in rural or suburban areas.

Fig. 3. **Kenneth H. Candy**, *Morrisburg Village Plaza Shopping Center*, aerial view, Morrisburg (Ontario), built 1956–1958



SHOPPING MALLS IN RURAL AREAS

The construction of the St. Lawrence Seaway, between 1954 and 1959, is among the most colossal engineering achievements in Canada. Its completion "opened up a deep waterway reaching 3,790 km from the estuary of the Lawrence River to the head of Lake Superior."⁹ Thousands of acres of land were drowned, forcing the relocation of eight river-bank communities and more than 200 farms.¹⁰ Each new village was the subject of its own specific town planning. Residents could opt either for the moving of their home or the construction of a new bungalow, all to be located on standard lots of 70 by 150 feet (approx. 25m x 50m). These small displaced communities from rural villages had to learn how to live in these standardized suburbs, whose exclusive zoning regulations called for a life style similar to the metropolitan suburban settlements of the time.

THE SHOPPING MALLS of the villages of Iroquois and Morrisburg (*fig. 3*) (both built 1956–1958) face Highway 2, a public road that, with the creation of the St. Lawrence Ontario Park, became a tourist thoroughfare for motorized vacationers. The shopping centers of these relocated communities serve as meeting points between the highway and the residential zones. While in the past the stores and their owners shared the more or less contiguous streetscape of Main Street, here they are incorporated to a few new structures of standardized forms. As with any shopping mall, a large parking lot isolated shopkeepers and stores from the road but not from cars.

THESE COMMERCIAL CENTERS by architect Kenneth Candy were designed to offer maximum flexibility. Their modular construction and exposed steel frames allowed for varying layouts while projecting a strong overall visual unity (*fig. 4*). Although the geometric simplicity of the original façades is no longer visible, the malls have not however lost the integrity of their initial volumes. As with the inhabitants of Pessac, shopkeepers have made some changes but the structures continue to perform their original functions.

THE ADDITION of faux Victorian lanterns and ornate aluminum canopies, as seen in the Morrisburg Village Plaza, might go against modern aesthetics but the mall itself illustrates its designer's intention to provide a clear layout to establish a friendly relationship with the neighborhood. Candy distributed the components of his "program" in the same fashion as what was then current in suburban shopping malls, which included anchor stores, "strategically located for the benefit of all the merchants"¹¹ and a series of smaller shops connected by covered sidewalks. The central volumes, perpendicular to each other, were broken in two, leaving space for an open-air landscaped courtyard. Aligned

with a residential street and connected to the front parking lot, this courtyard, today adorned with a clock tower and mature trees, works like an old town square. Applied to the drugstore entrance, a trompe-l'oeil reproducing a fictional village apothecary complements this faux Victorian atmosphere. As with the courtyard, this personalized retro touch does not alter the original structure, but what it seems to point out, however, is the inadequacy of the uniform initial design to express the retailers' need for attractive and individualized front windows enticing shoppers to choose their store over others.

MOURNING THE DEATH OF AN ICONIC SHOPPING MALL

In 2006 the mall developer Cadillac Fairview Corporation began the demolition of the Don Mills Center (*fig. 5*), a mall, which like the boomers it used to serve, was ageing. Its owners deemed it obsolete and no longer competitive, and decided to begin anew. Ironically the current proposal, a so-called lifestyle center, recaptures some principles carried out by the defunct center's architects. Indeed, as in the first phase of the Don Mills Center, the new complex will be organized around an open-air courtyard. From the community's hub that it once was, to the theoretically innovative proposal championed by its current developer, the history of this commercial center is closely linked to the development of this corporative Toronto suburb that is now designated under the Ontario Heritage Act.

DON MILLS is a utopia of the car era, and a product of the post-war spirit of optimism. Inspired by the garden city concepts and the principle of neighborhood units developed by Clarence Perry (1929), this satellite city is divided into three zones: residential, commercial and industrial. To achieve his ambitious endeavor, the investment banker E. P. Taylor who had acquired more than 2,000 acres of farmland north of Toronto gathered a team of young professionals. The initial team included Macklin Hancock, a recent Harvard graduate in town planning, and former Gropius student, John C. Parkin—a significant pioneer of modern architecture in Canada. Together they exerted strict control on the planning and imposed tight building restrictions. Don Mills "became the hallmark of Canadian suburbia, a landscape dominated by the values of privacy, family, amenity, growth and progress."¹² The original master plan was organized in quadrants laid out according to two major arterial roads. A commercial and recreational 'town square' occupied the initial settlement's center where the Don Mills Center would stand.

As mentioned by the architecture historian Claude Bergeron, the 1953 preliminary drawings for Don Mills Center (built 1953–1955), by John B. Parkin Associates, embodied the most current ideas on the subject of such



Fig. 4. **Kenneth H. Candy**, *Morrisburg Village Plaza Shopping Center*, detail of façade, Morrisburg (Ontario), built 1956–1958

commercial amenities. The first phase of the project included a row of shops connected by arcades that surrounded two open-air perpendicular courtyards, in the manner of the Northland Shopping Center by Victor Gruen.¹³ This is the first Canadian shopping mall where the stores are not directly accessible from the parking lots since the buildings turn their back to the exterior. Here the car driver leaves behind his vehicle and becomes a pedestrian who can enjoy the “pleasant surroundings” of the shopping precinct designed to “recreate the happy informality of the old market square” as its original promoter stated.¹⁴ A national award-winning building, phase 1 of Don Mills Center was introduced to the media as a contemporary agora of a community in the making. During the following two decades, it expanded to cater to its increasing population. However it only attained in 1961 the status of a regional mall with the opening of Eaton’s—the first national department store chain to move to the suburbs (unlike their American counterparts, the Canadian department store chains were reluctant to move to suburban malls).¹⁵ The different phases of expansion were followed, in response to increasing competition from other recently constructed regional or downtown malls, by a major renovation in 1978, but despite this Don Mills Center declined. Today only memories and archival records testify to the presence of this elegant classical pioneer of modern Canadian architecture.

THE LEGACY OF THE POST-WAR MALL

Despite a growing interest in the study of shopping malls,¹⁶ the building type represents a real challenge for preservationists. Subjected to cyclical changes, these buildings usually retain very little of their initial design. The best preserved examples are the malls of smaller communities, such as the Morrisburg Village Plaza that proudly claimed, in a business improvement campaign, to be the first of its kind in Canada.¹⁷ Those that suffered the most are the larger malls, located in suburbs that once thrived on large families of customers but are now filled with empty nesters.

THE DON MILLS CENTER is a case in point. Although the local population attempted to come to its rescue, it found no noteworthy support among preservationists. As suggested by Jeffrey Hardwick in a previous issue of *Docomomo Journal*,¹⁸ the enduring legacy of shopping malls is its planning concept rather than the buildings themselves. Malls might be physically threatened but they continue to be an essential agent of our consumerist society. Don Mills Center has disappeared but the idea of a community hub as promoted by its initiators is still alive.

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NOTES

1 On the discrepancies between European and North American cities, see Robert Bruegmann, *Sprawl, A Compact History* (Chicago: Chicago University Press, 2006), 42–43.

2 Richard Harris, *Creeping Conformity, How Canada Became Suburban 1900–1960* (Toronto: University of Toronto Press, 2004), 129.

3 Harris, *Creeping Conformity*, 130.

4 Elizabeth Cohen, "From Town Center to Shopping Center: The Reconfiguration of Community Marketplaces in Postwar America," *The American Historical Review*, vol. 101, 4: 1053, <http://www.jstor.org>

5 Marie-Josée Therrien, "The Rise of Parking Garages," in Michael McClelland, Graeme Stewart ed., *Concrete Toronto, A Guidebook to Concrete Architecture from the Fifties to the Seventies* (Toronto: Coach House Books & E.R.A. Architects, 2007), 186–187.

6 Richard Longstreth, "Innovation without Paradigm, The Many Creators of the Drive-in-Market," in Thomas Carter (dir.), *Images of an American Land, Vernacular Architecture in the Western United States* (Albuquerque: University of New Mexico, 1997), 236.

7 "The Trend in Shopping Centers," *The Journal of the Royal Architectural Institute of Canada* (JRAIC), vol. 26, 9 (September 1949): 267–279.

8 "The Trend in Shopping Centers," *JRAIC*: 268.

9 "Construction of the St. Lawrence Seaway," *Historic Sites and Monuments Board of Canada*, Submission Report 2002–59, (2002), 2.

10 Despite efforts to smooth the process as much as possible, the population displacement from the affected areas was not willingly embraced by all members of these communities. The report of the HSMBC briefly mentions the awkwardness of the situation. "Construction of the St. Lawrence Seaway," *Historic Sites and Monuments Board of Canada*, 13. The Cornwall Library holds the archives of the project.

11 Kenneth H. Candy, "Power Development and Rehabilitation in the Valley," *JRAIC* (May 1959): 155.

12 Jill Grant, "Planning Canadian Cities: Context, Continuity, and Change," T. Bunting and P. Filion, *Canadian Cities in Transition*, 2nd edition. The Twenty-First Century, Don Mills: Oxford University Press, 449.

13 Bergeron, "Developments in Architecture in Canada," in Warren Sanderson (ed.) *International Handbook of Contemporary Developments in Architecture*, Westport, Connecticut, 1981, 186.

14 Angus McClaskey, "An Evaluation of Suburban Shopping Centers," *Evaluation*, vol. 1, 11 (September 1957).

15 Ken Jones, "Dynamics of the Canadian Retail Environment," in Bunting and Filion, *Canadian Cities in Transition*, 407.

16 American architectural historians began to research this field in the 1990s and many other disciplines have looked at related issues earlier in the second half of the twentieth century. A comprehensive list of sources is impossible here, but the following website is a good starting point: "Shopping Mall and Shopping Center Studies," <http://www.easterncrct.edu/depts/amerst/Malls.htm>

17 A sign at the entrance to the parking lot of the mall announces: "Celebrating 50 Years, Canada's First Shopping Center." See also: *Rediscover Shopping on Main Street Morrisburg*, published by the Morrisburg Business Improvement Area.

18 "Creative Destruction, Victor Gruen and The Shopping Mall's Past and Future," *Docomomo Journal* 31 (September 2004): 53.

Fig. 5. **John B. Parkin Associates**, *Don Mills Center*, Don Mills (Toronto), built 1953–1955



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The Vancouver Passenger Terminal Building

MODERNISM AND THE ARCHITECTONICS OF MOVEMENT

■ RHODRI WINDSOR-LISCOMBE

The progenitors of a modernist approach to architectural designs and urban planning were right to call their approach a movement. Modernism was all about movement: as fundamental social reconstruction, as a cultural renewal in the wake of the 'civilization' collapse during World War I, as a direct embodiment of new technologies, and as a creed for practice (their reasoning had theological echoes) in the transferability of their formal aesthetic across time, ethnicity and space.

45

NOT SURPRISINGLY they embraced the latest machines of movement and in particular the imagery of aviation. The movement's most active promoter, Le Corbusier, opined in his 1935 book *Aircraft*, "The airplane has given us the birds-eye view. When the eye sees clearly, the mind makes a clear decision."

In that earlier between-the-wars phase, when modernism was still a counter-culture design agenda—arguably less modern in the popular sense than art deco—the aviation schemes tended to be for the elitist or strategic purposes. By the end of the war, aviation had become as much a commercial as strategic objective due to the reification of aeronautical power and availability of surplus aeronautical material. Flying became an increasingly popular form of travel with the advent of such technologies as pressurized cabins, high-powered piston and jet engines, radio and radar.

THE PASSENGER TERMINAL built in Vancouver in 1958 to the designs of McCarter, Nairne and Partners coincides with a moment of even greater socio-cultural change owing to new mechanization techniques, economy and behavior. In Canada this included the purchase of the gas turbine (jet) propeller aircraft: Vickers

Viscount by Trans Canada Airlines (now Air Canada) to facilitate more comfortable and reliable cross-country air service, and the Bristol Britannia airliner to inaugurate trans-polar flights to Britain and Europe (a special hangar for servicing the Britannia was opened at Vancouver Airport in 1958). Soon thereafter jetliners, and, a decade later, wide-bodied 'jumbo' jets would revolutionize global geographies of people no less than economies and places. Air transportation helped re-position Vancouver from subsidiary western terminus of Dominion enterprise to a rapidly expanding, culturally and economically diverse port city flirting with world city status. In 1958, however, Vancouver Airport handled mainly local and regional air traffic. Its new terminal was designed for a ten-year life span and cost approximately \$380,000, only a fraction of the budget assigned to expanding the major Canadian transcontinental and international airports at Gander, Montreal and Toronto.

THAT PROFOUND SHIFT in place signification replicates aspects of modernist claims for universal relevance yet local adaptability of their design approach and aesthetics. It was part of the argument

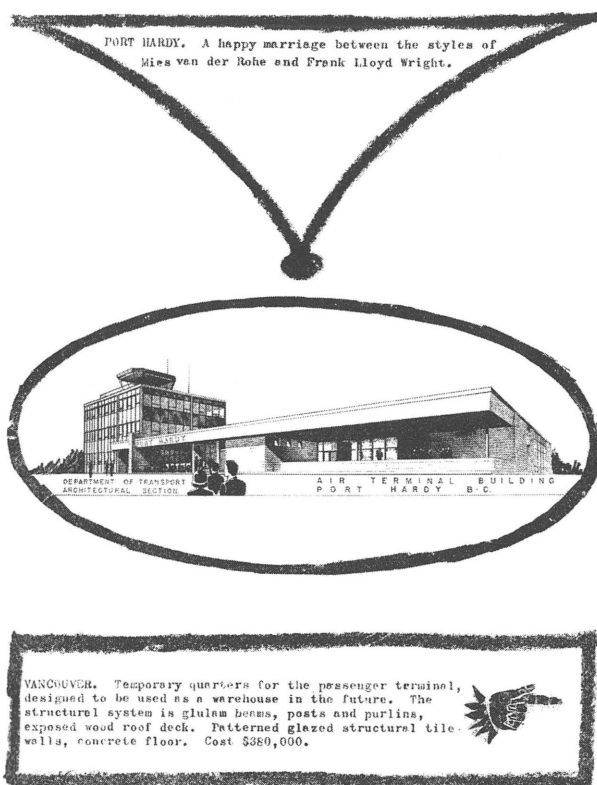


Fig. 1. Air Terminal Building, Port Hardy (B.C.) "A happy marriage between the styles of Mies van der Rohe and Frank Lloyd Wright"

In "Airport and Seaplane Harbour," Templeton related the events leading up to the opening of the Vancouver Airport in July 1931 on its present site on the south side of Sea Island (formerly Lulu Island), south of the city. His speech illuminates the mix of private and public, commercial and cultural, competitive and collective impetus responsible for the establishment of the airport—and for the eventual adoption of modernist iconography and, less consistently, ideology in the post-war building of North American urban society. Symptomatic of the economic and cultural politics of Reconstruction-era Canada (1945–1965), the first regular flight service from Vancouver was to Seattle. Together with Portland, Seattle was a node of architectural influence for the regionalist modernist idiom of much domestic and smaller scale commercial design at Vancouver, including the simple and glazed post-and-beam Passenger Terminal.

THE TERMINAL was built ten years after Templeton asserted the centering of the formerly peripheral Vancouver through air transportation: "In 1946, we emerged from the war with Vancouver recognized as one of the world's great aerial crossroads, with airlines operating to the north, east, south and west and spanning the Pacific to the sister Dominions [Australia and New Zealand] beyond the South Seas."

TEMPLETON's exaggerated rhetorics mirror much of the promotional discourse—seldom truly theoretical—published by the progenitors of the modern movement. But it also demonstrates the explanatory nature of remote statements from the metropolitan modernist design agenda. Similarly, the 1958 Vancouver Airport Terminal discloses several important features of post-war North American modernism. These are its plays upon—or between—the cosmopolitan (international) and the regional; the expression and the suppression of technology; and the individuated and the collectivized. In addition, the Terminal's blend of elitist-oriented and functionalist design serves to highlight the core achievement of modernism in post-war North America, namely its chameleon embodiment of the conservative components of modernity with the democratic visuals of the everyday social environment.

Wells Coates made about the greater centrality of Vancouver in the aeronautical age when he briefly resided there 1956–1958. His transfer to Vancouver coincidentally represented the relocation of modernism itself to North America over the previous decade, and the mythical significance of 'West Coast Modernism' in the Canadian iteration of the movement. The 1958 terminal used the same wood and concrete block construction as much of the domestic design that had established the modernist credentials of West coast architects. By contrast the airports at Dorval (Montreal) and Malton (Toronto) were built in more permanent materials, especially steel and reinforced concrete, that would be used for the first major terminal at Vancouver completed in 1968 at a cost of some \$32 million, but for some years operating at only about half of its originally intended capacity of 3.9 million passengers per year.

THE 1958 PASSENGER TERMINAL at Vancouver can be read in such spatial narratives of modernism. But it is important to indicate that both the Vancouver airport and modernist architectural projects appropriated or overlapping with other agendas in the broader force of modernity (and modernization). For example in 1947, some eleven months after the American Town Planners, Harland Bartholomew re-launched their original 1929–1930 scheme for Vancouver by publishing the *Metropolitan Airport Plan*; the front cover shows a Canadair passenger plane superimposed upon an aerial view of Vancouver in inadvertent reference to Le Corbusier's connecting of flight with reformed urbanism.

THE INTERPLAY between cosmopolitan and regional is evident in the publication of the "Air Terminal Building Vancouver" in the first issue of the fourth volume of *The Canadian Architect* (January, 1959). It was "the only air terminal building shown in detail" in that journal's extensive coverage of "Canadian Airports" despite being modest in scale and length of service. Those other airports were at Gander, Halifax, Quebec, Montreal,

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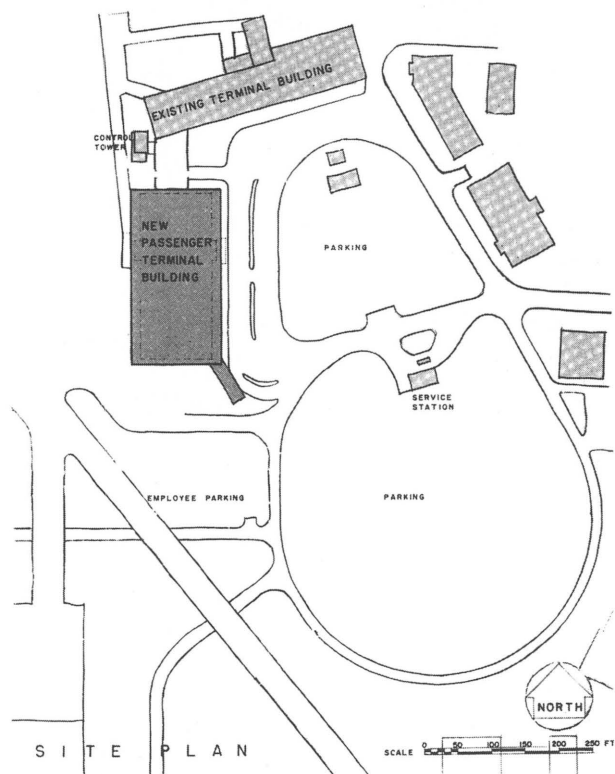


© Canadian Architect (1959.01): 40

Fig. 2. **McCarter, Nairne & Partners**, Air Terminal Building, Vancouver. Exterior view & plan

Ottawa, Toronto, Windsor, Regina, Saskatoon, and Port Hardy (British Columbia), listed geographically from east to west in the old imperial framing of the Canadas. The tremendous growth in economy and mobility attending their construction is immediately registered in the TCA article and with particular respect to the Vancouver Terminal. The blurb for the Canadian Airport article begins with this sentence, "The air terminal building, the terrestrial core of the business of air travel through or to which must come all the people and things using air transportation, is playing an increasingly large part in Canadian life." The increase in air traffic had caused the Federal Department of Transport to assign \$600 million to airport construction over the ensuing decade, over and above the \$38 million being spent on the seven largest airports reviewed in the TCA. Conversely, apparently, but actually a factor of the new mobility that modernism seemed most fit to accommodate, the terminals were designed to "be capable of easy and low-cost expansion in four directions without interruption of the 24 hours-a-day, 365 days-a-year service which characterizes their operation."

VANCOUVER'S TERMINAL was built as "a temporary structure [adjoining the existing utilitarian terminal] which will ultimately become a baggage warehouse." It was positioned in front of the more institutional existing

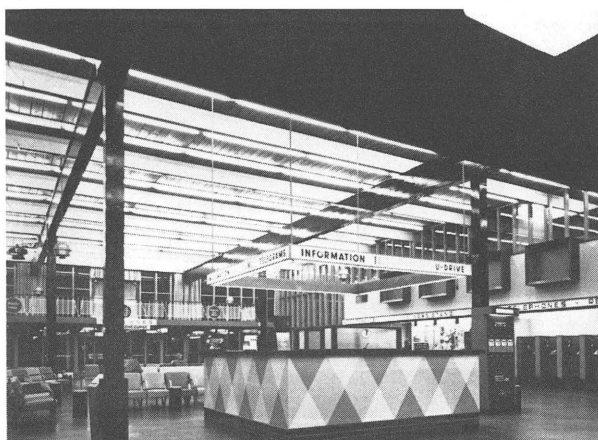


terminal that was also built of wood frame but stuccoed and including an octagonal control tower. Where the original terminal had the appearance of a school or hospital, the 1958 temporary terminal expressed the



Fig. 3. **McCarter, Nairne & Partners**, Air Terminal Building, Vancouver. Main floor interiors

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modernist normalization of new technology and that phase of the domestication of scale and aesthetics associated with later 1950s modern bank architecture.

THE McCARTER NAIRNE FIRM designed the Terminal as a hybrid of their residential and commercial architecture: large sheets of glass for the vertical envelope and exposed cedar and plywood structure with glazed tiles and pumice block for the roofing. The sense of between-ness, of 'placeful' and placeless architecture, was stated overtly with reference to the other British Columbia terminal at Port Hardy. Its more obvious international style building was described in *TCA* as "a happy marriage between the styles of Mies van der Rohe and Frank Lloyd Wright." The structural use

of local wood for the Vancouver terminal acknowledged the then dominant resource industry, but also its embrace of new technology. The main beams were Glulam—a lamination process developed at the B.C. Forest Products research center in North Vancouver. The glass walling similarly indicated the Pacific Coast modernist use of contemporary materials as a foil to the natural topography and organic qualities it celebrated architecturally. The October 1959 issue of *TCA* published several modernist buildings illustrating this counterpoint, from John B. Parkin Associates' elegantly formalist Ontario Association of Architects Headquarters, to the republication of the John Porter House in West Vancouver, organically embracing its wooded steep site, "as a house that almost disappears into the natural environment . . ." The use of patterned glazed structural tile in the Vancouver Terminal carried the interplay of aesthetic and utility further into the modernist space between the expression and suppression of technique. It economically echoed the tradition of decorative glazed mosaic started in Vancouver by artist B.C. Binning—and picked up in the current debate among modernist architects signified in that same January 1959 issue of *TCA* by Anthony Jackson's article, "Art and Society." Similarly the Terminal architects drew attention to the structural system and materials while exaggerating the local residential conventions of dissolving the formal distinction between interior and exterior space.

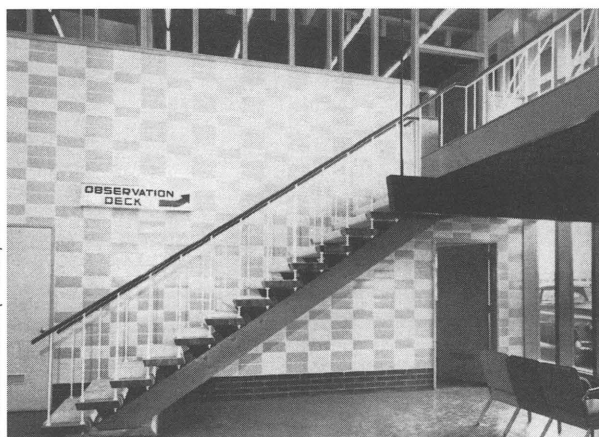
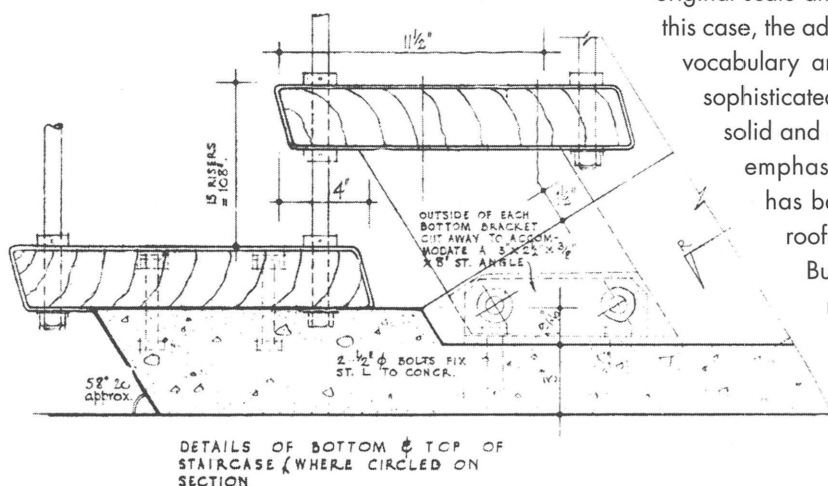


Fig. 4. **McCarter, Nairne & Partners**, Air Terminal Building, Vancouver. Staircase details



ALTHOUGH BUT A TEMPORARY STRUCTURE, the Terminal showed the modernist preoccupation with another oppositional dimension: the accommodation of individuated presence within collectivized space. The idea of democratic spatial disposition is evident in the placement of the two main airlines, Trans-Canada Airways and United Airlines, immediately adjoining the ticket booths along the inner wall behind administrative spaces, and the positioning of facilities for Aero Caterers across the broad public concourse. These public spaces had moveable stainless steel and artificial leather seats that recalled Bauhaus paradigms. The act of air travel thus related the institutional with the domestic environment in contrast to the often impressive if usually alien (in the cultural and technical senses) historical symbolism of railway and steamship terminals. Indeed, the functionalist aesthetics—by 1958 fully associated with modernist design—served to normalize air travel. The airy openness and use of lightweight suspended canopies and staircases in the Vancouver Terminal drew attention from the anxieties attending air travel while instilling a psychological affect of ordinary yet invigorating activity. Modernism was a process of modest buildings as much as of celebrity, public or corporate edifices.

THE VANCOUVER TERMINAL was in operation for less than a decade, signifying the ephemeral and local impact of its supposedly limitless capacity. Nevertheless its major structural components were incorporated in the present South Terminal (distant from the current, still expanding, International Terminal building first opened in 1996 at a cost of over \$250 million dollars). The original economical spaciousness of the 1958 building has been expanded to provide check-in, baggage claim, and commercial outlets for passengers flying to coastal and northern airports in the region. The direct spatial expression of function and circulation in many such buildings from the zenith of modern design offer opportunities for comparable reconfiguration where the original scale and capacity can serve current purpose. In this case, the adaptation of McCarter Nairne's modernist vocabulary and architectural effect is not sufficiently sophisticated. Consequently the original interplay of solid and open structure, of horizontal and vertical emphasis, as well as of planes and textures, has been transposed into cruder contrasts of roof overhang, masonry wall and glazing. But a greater flexibility in the adaptive re-use of modernist buildings and a broader embrace of contemporary interpretations of its aesthetics could increase the means to secure the heritage of the modern movement.

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The Former CBC Head Office

EDWARD DRAKE BUILDING

 MICHEL PELLETIER

The former Canadian Broadcasting Corporation Head Office (1964) is a six-story, flat-roofed reinforced concrete and steel structure with a flared Y-shaped footprint (*fig. 1*). Its three wings extend east, west and south in parabolic curves and its main elevation faces north.

The three main elevations are almost entirely glazed, an impression accentuated by the dark color of the mullions and the discrete granite banding between stories, while the tips of the wings are blind (*fig. 4*).

A ONE-STORY ENTRANCE PAVILION is located in the center of the front elevation and is accessed through a stand-alone flared canopy of white concrete sitting on concrete and stainless steel pilasters (*fig. 2*). A discrete loading dock is located in the middle of the west to south elevation. This composition makes for three sizable curtain-walled elevations, expressing horizontality, and three imposing 'wingtip' elevations covered in solid sandstone, expressing verticality (*fig. 3*). The overall impression is of a dynamic yet poised building, an impression emphasized by the large curved canopy of the roof and the subtle metal banding near the roofline. The entrance, finally, is emphasized by light fixtures forming a geometrical motif and is framed in elegant stone with fine stone inlays and carvings.

STYLISTICALLY, this building is an unusual, if not unique, federal example of the late 1950s trend to more poetic expressions in the modern movement, sometimes referred to as the expressionist or baroque phase of the international style. The much-reviewed Unesco building in Paris, by Marcel Breuer, was certainly one of the inspirations behind its design. Y-shaped buildings were popular during this period, especially for apartment blocks, but generally remained an assemblage of three rectangular blocks around a central core. Corporate and institutional expressions of this tendency remained rare

and were often weakly integrated into more conventional designs, as with the early design for the CBC Head Office (*fig. 5*). The former CBC Head Office certainly pushed the limits of these aesthetics by presenting curved elevations built around curved and flared floor plates. The aesthetics of the former CBC Head Office is also striking because more corporate, if not institutional expressions of the international style were generally favored for major governmental and civic buildings. The very best examples of the period did not stray far from the orthogonal aesthetics of the early modern movement. The former CBC Head Office, with its sophisticated form and surface treatment, thus stands as an accomplished and rare example of late international style expressionist architecture, not only in the federal inventory but also in Canada.

THE FORMER CBC Head Office and its site were designed as major components of the Confederation Heights area of Ottawa. The area had been annexed by Ottawa and integrated into the Plan for the National Capital (1950, also known as the Gréber Plan). Decentralization, parklands and extensive landscaping played major roles in the Gréber Plan and were intended to transform the urban nature of Ottawa. Governmental enclaves in the suburbs were proposed to relieve congestion in the central core and to accommodate a



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Fig. 1. **David Gordon McKinstry**, *CBC Head Office*, press release photograph, Ottawa (Ontario), 1964

vast federal construction program. Confederation Heights was planned as an extensive campus-like landscape, with a cohesive network of wide avenues and boulevards and low-rise buildings of similar cladding. The area still is dominated by government and crown corporation buildings. It also includes institutional and parkland/open space uses and a mix of commercial and residential developments. Designed originally in 1956, the former CBC Head Office was one the first buildings planned for Confederation Heights. Construction was however delayed repeatedly until 1961 and the building was only inaugurated in 1964. It was thus preceded by most of the other buildings on campus. Today, the CBC Head Office, with its carefully designed 6-hectare site strategically located along a major north-south roadway, remains one of the best preserved of this urban node.

CONTEXT

The development of infrastructure, through the engineering branch of the CBC and the office of its chief architect, accounted for up to one-third of the total budget of the CBC between 1936 and the late 1950s. David Gordon McKinstry (1905–1979) was the chief architect for the CBC Engineering Branch from 1939 until his retirement in 1970. Little is known of his architectural practice before 1939 but he is known to have designed, or overseen the design of over 160 buildings for the CBC over the next 31 years. A renowned acoustician, McKinstry demonstrated a keen interest in modern

architecture, designing modern and international style buildings as early as the 1930s. His best known project is certainly the International Broadcasting Centre for Expo 67 in Montreal, demolished (*fig. 6*). One of the few permanent buildings at the site, the 88,000 sq ft, four-story reinforced-concrete International Broadcasting Centre was “built to house complete up-to-date radio and TV services which were available to all participants at Expo for special programming needs in Canada and throughout the world. In addition, the pavilion served as an exhibit for visitors, with special galleries for guided

Fig. 2. **David Gordon McKinstry**, *Former CBC Head Office*, main entrance, Ottawa (Ontario), 1964



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Fig. 3. **David Gordon McKinstry**, *Former CBC Head Office*, detail, Ottawa (Ontario), 1964

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tours of the studios." The Expo Monorail ran through the western elevation of the building without interfering with broadcasts. The CBC used this facility for several years after. McKinstry's last project was the international competition for the design of the Maison Radio-Canada, in Montréal, which he organized. The former CBC Head Office building, which he personally designed, is certainly the best extant example of his design work.

THE CONSTRUCTION of the former CBC Head Office was first proposed in 1956, at the end of an era of phenomenal growth for the CBC, as a statement of its importance as an institution and as a rationalization measure that would see the ever-expanding national offices of the corporation moved from seven buildings scattered around Ottawa's downtown core to one larger building. Plans were even prepared for a rapid doubling of the new building. The development and administration of a national broadcasting network has been a permanent concern of Canadians and their leaders since

the 1920s. In 1929, the Aird Commission determined that broadcasting should be regarded as a national public service. Consequently, the Canadian Radio Broadcasting Commission (CRBC) was created in 1932. It exercised power over the regulation, control and distribution of programming in Canada. The Canadian Broadcasting Corporation (CBC) as such was established in November 1936 as a crown corporation, to replace the CRBC.

THE DEVELOPMENT and administration of the CBC remained nationally and internationally the object of praise well into the 1950s. The arrival of television in 1952 heralded the end of that era. The government of Louis Saint-Laurent determined that the public sector could not cope alone with the increased burden of television production and national distribution. The CBC lost some financial autonomy but remained the driving force behind the development of Canadian programming and broadcasting infrastructures after the Broadcasting Act of 1958. However, ambiguities in the Act frequently placed it in conflict with the newly formed Board of Broadcasting Governors. Both regulatory bodies attempted to assert their authority over Canadian broadcasting over the next ten years and the bolder designs produced for the CBC Head Office after 1957 (fig. 7) can be seen as expressions of that ongoing conflict.

INAUGURATED IN 1964, the new CBC Head Office in Ottawa would, for the next thirty years, oversee the administration of what had by then become one of the largest and most respected public or private programming and broadcasting systems in the world. However, the CBC as a whole, and the CBC Head Office in Ottawa in particular, because of its location, size and luxurious appearance, were always the object of attacks from proponents of private ownership in Canadian broadcasting and more liberal policies for Canadian programming. Political decisions, the fragmentation of the broadcasting and media markets, as well as a growing dichotomy between the French and the English language networks of the CBC, requirements to produce more and more Canadian content, and successive cuts in appropriations considerably undermined the market dominance of the CBC and eventually sealed the fate of the Ottawa Head Office. The CBC closed its Ottawa Head Office and vacated the premises in 1995. In 1997, the building was taken over by a component of the Department of National Defence, and renamed in honor of Edward Drake, the first head of the Communications Branch of the National Research Council.



Fig. 4. **David Gordon McKinstry**, *Former CBC Head Office*, south elevation, Ottawa (Ontario), 1964

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PRESERVATION

The former CBC Head Office is located on a 6-hectare site on Confederation Heights. The building faces north, toward Bronson Road, but can be considered to present three identical faces. It is accessed through its own drive. No buildings have been constructed near the site since it was first established during the 1950s. Landscaping accounts for 75% of the area. The original landscape was designed by CBC staff architects under the direction of D. G. McKinstry, approved by the National Capital Commission and carried out by the Department of Public Works.

to the needs of its new tenant but remains generally configured as originally designed. The 10,450 sq. meter interior consists primarily of office space. The curved and flared reinforced concrete floor plates of the building rest on only three curved rows of steel supports, one for each elevation, that disappear into the corridor walls, thus making for very efficient office spaces (fig. 8). The building was set on a raft foundation after problems were discovered with the site. This implied a delicate construction process, as the weight of the structure had to be evenly distributed across whole floor plates at every stage to ensure stability. Despite these

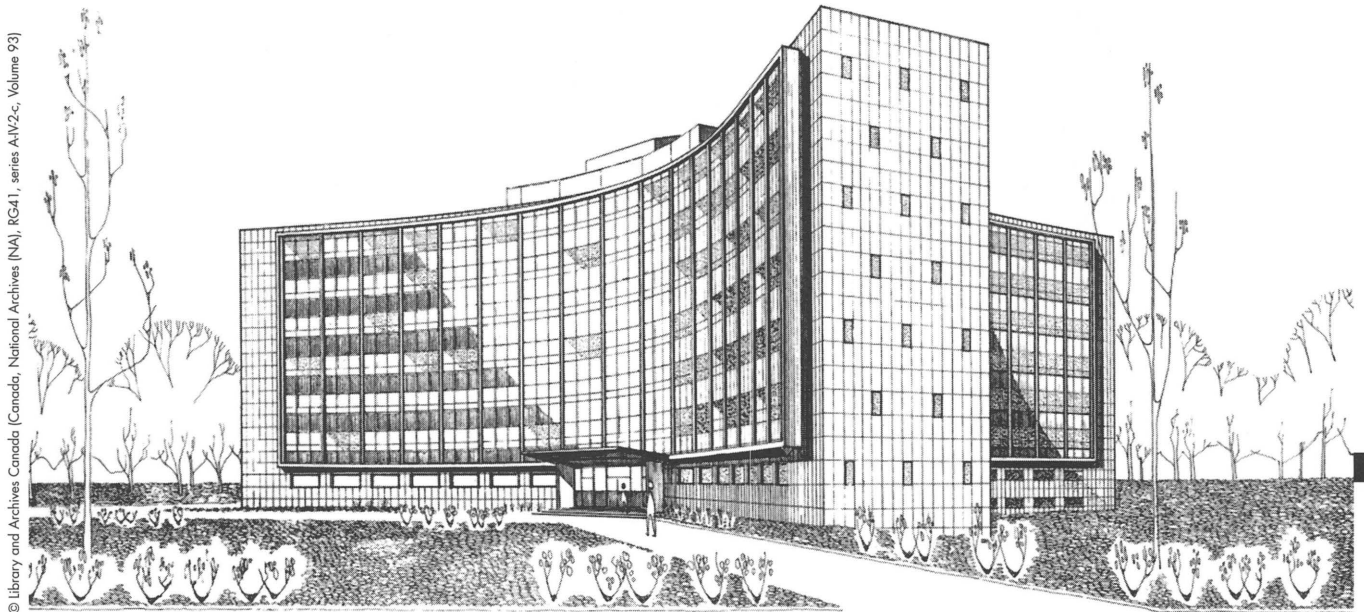


Fig. 5. **David Gordon McKinstry**, *Former CBC Head Office*, original design, 1958, Ottawa (Ontario), 1964

AN IMPOSING BUILDING clearly visible along the route from Parliament Hill to the Ottawa Airport, the former CBC Head Office is well known to residents of the area. A simple description of the Y-shaped building on the road to the airport immediately elicits the association with the CBC in numerous residents. In fact, the building was so well-known by the 1990s that it was no longer deemed necessary to add the corporate logo to the building (fig. 9). As one of the few major buildings of the area that has retained not only its original appearance, and as one of the most noticeable buildings of this area, the former CBC Head Office and its extensive site help maintain and communicate the original planning vision of the Gréber Plan, which has now been weakened by unfortunate interventions nearby. The former CBC Head Office thus participated in defining the sophisticated urban character of Confederation Heights and now contributes to its preservation.

THIS BUILDING was used as the Head Office of the CBC from 1964 to 1997. It was then refurbished and adjusted

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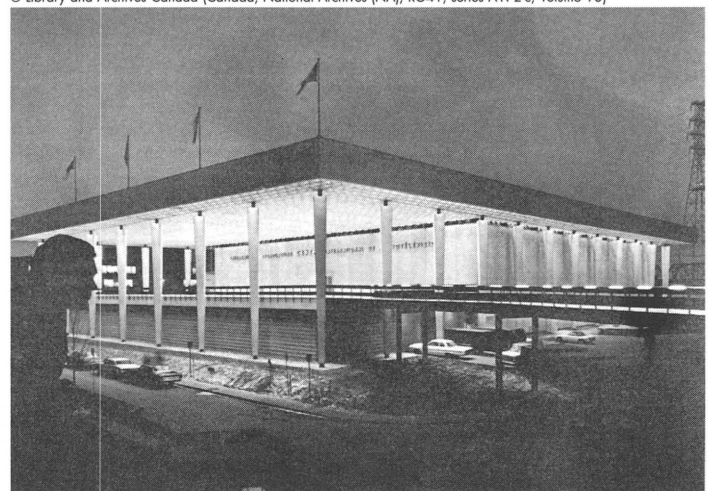


Fig. 6. **David Gordon McKinstry**, *International Broadcasting Center*, Expo 67, Montreal (Quebec), 1967

complications, the building has experienced no structural problems over the past forty years. Cladding materials have also weathered well and essentially required only maintenance or restoration over the years. All of the original hopper sash and frame wood and aluminum windows were replaced with sealed smoked-glass

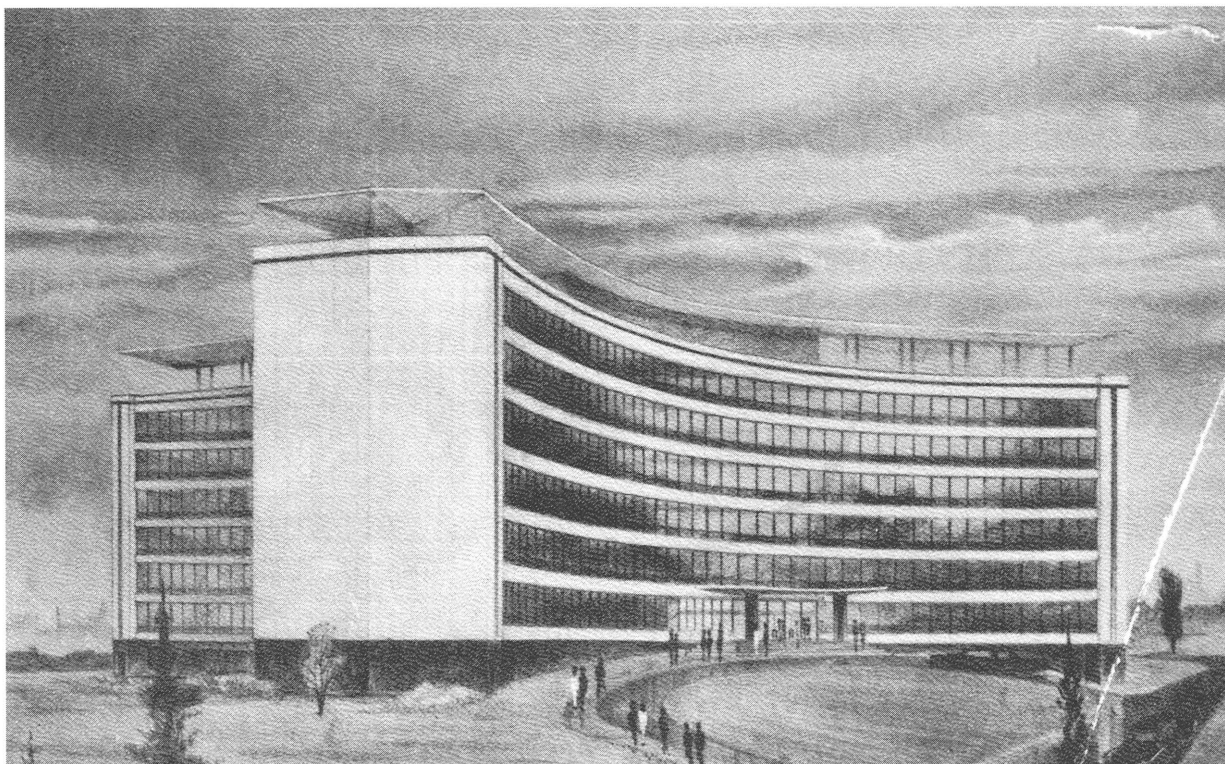
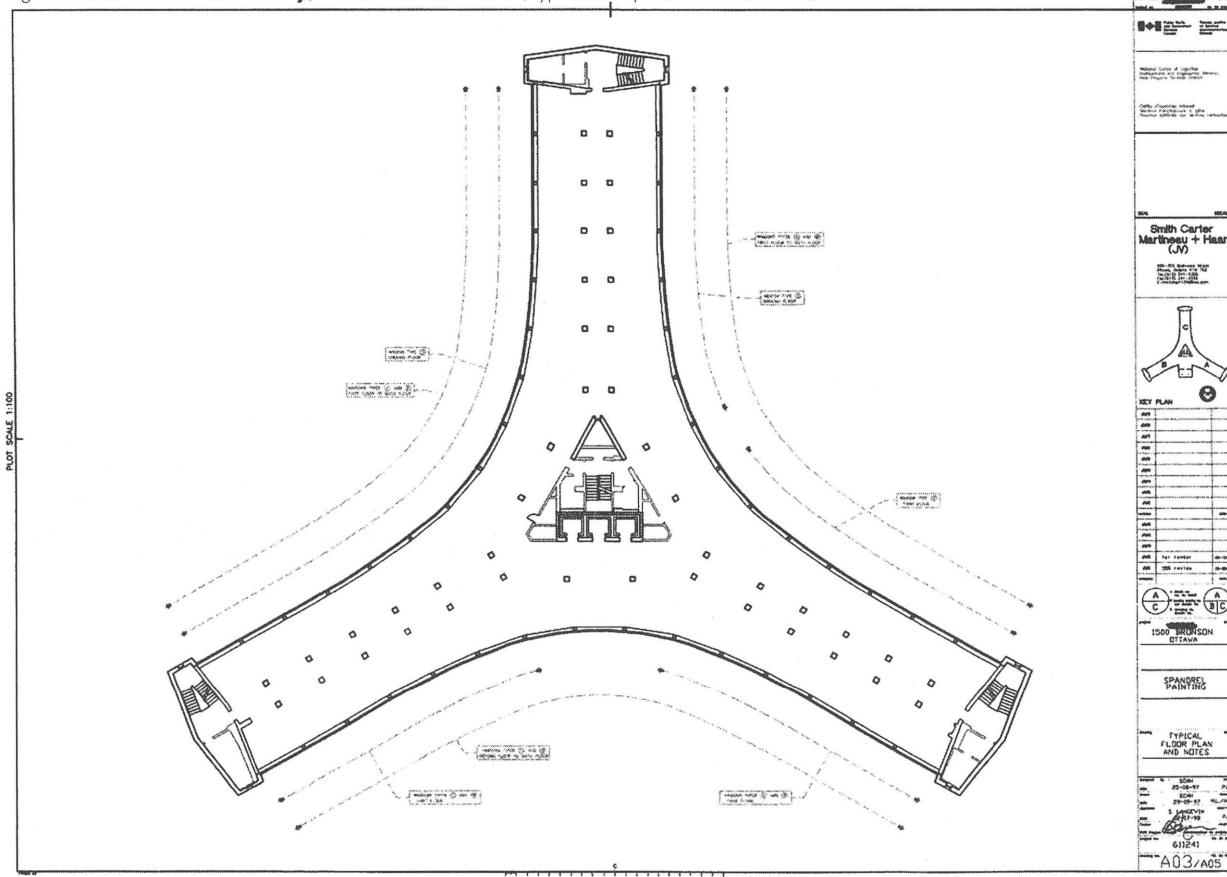


Fig. 7. **David Gordon McKinstry**, *Former CBC Head Office*, artist rendition, before 1961, Ottawa (Ontario), 1964

windows but the original appearance was generally retained. Rooms are organized on six floors along central corridors so that each room has window access. The above-grade basement is also used and holds a cafeteria (the original cafeteria was located on the sixth floor,

offering views over the whole region). The central core, in the shape of a truncated triangle, holds elevators, a stairwell, washrooms and services areas. The 'wingtip' pavilions, in the shape of truncated lozenges, hold unusually shaped staircases and washrooms. The

Fig. 8. **David Gordon McKinstry**, *Former CBC Head Office*, typical floor plan, Ottawa (Ontario), 1964



relatively minor adjustments imposed on the interior configuration of the building after forty years indicate that this building's original design, while unusual, was functionally efficient. A theater on the fifth floor and the boardroom on the sixth floor did not survive the remodeling. An unusual feature of the building was the design of a 'quiet' ventilation system and of 'quiet' rooms by the Engineering Branch of the CBC. While the 'quiet' rooms have not survived the recent renovations, the building is still noticeably quieter than most buildings.

THIS BUILDING was designed and built at the unheard cost of 3 million dollars between 1956 and 1964. Quality materials were used throughout. All of the materials have aged very well despite years of minimal maintenance and most were simply refurbished in 1998. Exterior materials include 'Kingston Hue' Canadian sandstone in 'sand-honed' finish on the 'wingtips' and for inlays on the entrance pavilion, green granite for the basement and exterior door sills, 'Stanstead Grey' granite between the stories and for some detailing, as well as Carrera marble and 'Stanstead Grey' granite for the entrance pavilion. Teak and stainless steel are also used for detailing, particularly on the entrance pavilion. Interior materials include 'Roman' travertine marble and marble terrazzo for the floors, as well as 'Radio Black' marble detailing. The entrance pavilion and lobby were lightly detailed in Carrera marble, teak and stainless steel. The 'Stanstead Grey' granite stepped base of the entrance pavilion was engraved with a geometric pattern and inlaid in places with sandstone. Overall the workmanship is unusually fine for a federal building of that era.

THE FEDERAL HERITAGE BUILDINGS Review Office (FHBRO) assessed the former CBC Head Office building for its heritage character in 2001. The primary objective of the FHBRO is to assist federal government departments in the protection of their heritage buildings, in accordance with the Treasury Board Heritage Buildings Policy. The policy applies to all federal government departments that administer real property but not to Crown Corporations. This means, for example, that many post offices and all railway stations are not covered by the policy. FHBRO evaluates all federal buildings forty years of age or older in order to determine heritage character. It makes recommendations to the Minister of the Environment, who is responsible for approving the heritage designations of all Government of Canada



Fig. 9. David Gordon McKinstry, Former CBC Head Office, Ottawa (Ontario), 1964

buildings. Through this process, buildings are designated as either Classified, the higher level of designation, or Recognized, the second level. The Government of Canada owns more than 40,000 buildings, of which more than 20,000 have been evaluated and over 1,300, or 3%, have been designated. FHBRO also provides advice to federal government departments that wish to make changes, or interventions, to a designated building, to ensure heritage character is protected.

THE FORMER CBC Head Office was declared a Classified Federal Heritage Building in 2002, after some of the changes mentioned above had occurred. As a Classified Federal Heritage Building, it is now somewhat protected from inappropriate changes to its heritage character. This protection did not however extend to its fine 1950s landscaping, which was not recognized as federal heritage per se, and has since been heavily altered, particularly through the addition of substantial crash barriers and modifications to the drive layout.

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Canada's Distant Early Warning Line

■ ANDREW WALDRON

Distant and isolated, remote heritage sites are inherently difficult to protect (*fig. 1*). In this paper, examination of the Cold War-era Distant Early Warning (DEW) Line of radar installations in the Canadian arctic, built as a defense system for North America, employing modular and mobile structures, is an instructive case that will hopefully broaden the scope of modern heritage and explain the approaches governments have taken on to enact heritage legislation and policies for these types of sites.

CHOOSING TO EXAMINE a specific case in Arctic Canada may also be of interest to other circumpolar Docomomo chapters, especially regarding large networks such as the DEW Line. The paper also raises questions on how we treat networks and systems as modern heritage. Unlike canonic works, these one-off systems are unique and difficult to analyze. Moreover, these systems quickly become obsolete: they gradually become a new type of industrial archaeology if abandoned, and are rarely good candidates for adaptive reuse. In the case of the radar stations, the strategy for protecting the system was to designate one site to represent the whole. A similar approach was taken in the United States in regards to the Minuteman missile launch sites (and later Cold War missile sites). Representativity of the whole may be one approach, but are there approaches that can better reflect the whole, particularly in the face of rapid obsolescence of these sites?

HISTORY

The DEW Line was built to monitor the actions of the Soviet Union and serve as a front-line guard against

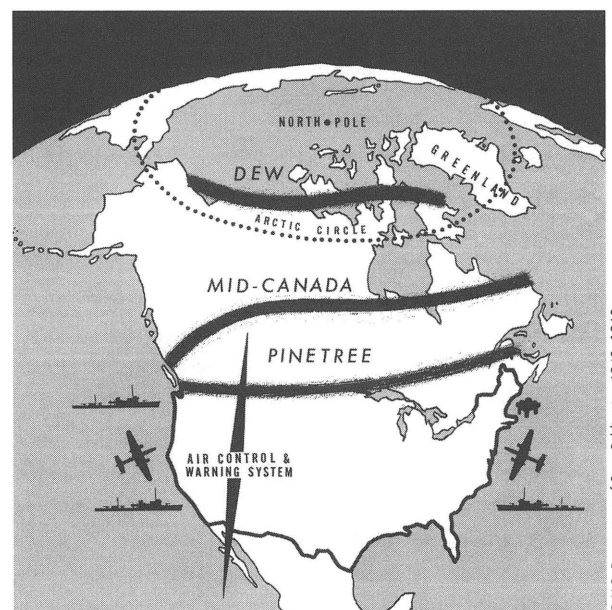


Fig. 1. Air Control Warning Lines, Distant-Warning and Pinetree Lines, 1960

circumpolar attack (*fig. 2*). A second, and less overt reason for building the DEW Line, was to ensure a semblance of Canadian sovereignty in the Arctic, even though the DEW Line was largely built with American defense funding.¹ At the end of World War II Canada's armed forces was one of the world's largest standing forces. In peacetime the Canadian military diminished in size, but in the early 1950s Canada returned to the fold of international conflict as the Cold War developed. One of the most compelling symbols of Canada's participation in the Cold War and of the complexity of its relationship with the United States is the DEW Line. Constructed between 1954 and 1957 with American funding, 66 DEW Line stations served North America as a protective warning system against those perceived threats (*fig. 3*). Forty-two of the stations were located at the 69th latitude in the Canadian Arctic and fed into a larger network of defense lines that was eventually enfolded into the North American Air Defense Command

(NORAD) in 1958. From Cape Lisburne, Alaska to Greenland, the stations were constructed in isolated locations, often inaccessible by boat or plane for much of the year, and few were built near permanently settled communities. The scale of the project, which cost about \$500 million (US) in the 1950s, defied imagination (*fig. 4*). Located in one of the remotest regions of the world, facing severe weather conditions, the stations were self-contained units capable of functioning for long periods without new supplies (*fig. 5*). Nearly 25,000 people worked on building and supplying the DEW Line during its construction.

THE DEW LINE consisted of a series of main stations, intermediate stations and auxiliary stations, linked by transmitters and receivers across the Line at approximately 50-mile (80.5 km) intervals. Each station gathered, analyzed and filtered air surveillance data and transmitted that data to terminal stations at existing Canadian and American bases further south. This type of early detection radar system had already been developed for the 1951 Pine Tree Line, a series of thirty-three radar stations linked from Vancouver Island to Labrador and jointly funded under a US-Canada agreement. However, the Pine Tree Line became redundant as the Soviet Union upgraded its military and bombing capabilities. The federal government of Louis St. Laurent was embarrassed by the inadequacy of the nation's defenses and approved the construction of the "McGill Fence" at the 55th parallel. Soon this line too was ineffective. The DEW line was the last and largest of these radar-warning systems and the most ambitious. Construction began in late spring 1955, with a three-year building period during the brief summer months. In the first year, gravel was laid over the permafrost and airstrips were built; in the second year, housing modules were assembled; and in the third year the communication structures were completed. On July 31, 1957 the DEW Line was fully operational and under US Command. Canadians took over command of the bases two years later. By the mid-1960s the DEW Line's purpose and technology had changed in response to new weapons and detection systems. The intermediate stations were decommissioned and the larger auxiliary and main stations were upgraded. In the following decades they would continue operating and were folded into new tracking systems in the Canadian Arctic, ultimately replaced with the current North Warning System in 1989.

PRIMARILY THE DEW LINE reflected Canada's participation in continental air-defense strategy during the Cold War, but it also represented Canada's efforts to assert sovereignty in the Arctic. Since exploration for the Northwest Passage in the nineteenth century, Canada's sovereignty over the Arctic has been tentatively respected internationally. In the 1950s and 1960s, the federal



Fig. 2. Baffin Island glaciers, aerial photo

government was intent on making a stronger national presence in the Arctic by establishing permanent communities and improving the transportation network.² Military presence in the post-war period strengthened government policies in local aboriginal communities, with some Inuit and Inuvialuit being employed at the stations, while the transportation network of World War II was maintained and improved.

EVALUATION OF REMOTE HERITAGE

By the mid-1980s, with the advent of new satellite communication systems and the imminent collapse of the Soviet Union, the DEW Line was rendered obsolete. The North Warning System replaced the DEW Line, and gradually sites along the Line were abandoned. Archaic stations were to be dismantled, cleaned up and removed of toxic wastes under a general government directive called the DEW Line Clean Up Protocol. This protocol addressed the toxic and volatile waste, landfill leaching and other debris, yet did not pose the question as to whether the sites were heritage.

The first sign of interest in the heritage value of these sites emerged in 1992 when the BAR-1 Distant Early Warning Line Auxiliary Station, located within the boundaries of



Fig. 3. Fox M, Hall Beach, Nunavut in October, aerial view, 1961

Ivvavik National Park in the Yukon, was submitted to the Historic Sites and Monuments Board of Canada. It was not deemed of national significance at the time, due to the controversy of examining what was considered a toxic waste site and structures that were perceived as opposing the natural heritage of the new national park. As part of a land transfer between Parks Canada and the Department of National Defence (DND), the BAR-1 complex was evaluated seven years later by the Federal Heritage Buildings Committee (FHBC), an interdepartmental and interdisciplinary body advising the Federal Heritage Buildings Review Office (FHBRO). It recommended designation of the complex, but due to environmental contaminants, the buildings were subsequently demolished. Simultaneously, DND and the Indian and Northern Affairs Canada (INAC) agreed to submit all the buildings at the forty-two DEW Line stations for heritage review, with the understanding that the buildings recommended for designation would

buildings and 21 structures at three stations would have been recommended for designation as "Classified" federal heritage buildings.

As a result, by using a representative sample approach, the Government of Canada avoided a considerable real estate property management problem. Simultaneously, significant heritage buildings were identified and protected for the benefit of present and future generations of Canadians.

VALUES

The DEW Line Stations were designed to be temporary buildings with a lifespan of ten years, using a standardized set of building plans. Indeed, planned obsolescence was the destiny for these buildings. Prepared to withstand the Arctic environment, each of the main stations was equipped with two module trains, a "Radome," a garage and a hangar (*fig. 7*).⁴ The buildings required flexibility and comfort, yet also to be economical and simple to build and transport if necessary. These complexes, built in a sublime landscape, were uncanny examples of real plug-in megastructures.

The prototype configurations were laid out using raised modules attached by enclosed walkways. These proved too difficult to heat, and simplified train modules serving multiple functions were built instead. The buildings could be reconfigured if necessary. Armco and Atwell knockdown buildings were also erected at the sites. Once completed, the complexes appeared to be extra-terrestrial settlements. Two arresting features of the sites are the "Radome" and the communication billboards. Landmarks unto themselves, these structures were critical to the station's purpose. Geodesics Inc. equipped the stations with Radomes, after the construction company tested other types of experimental materials and forms. Buckminster Fuller, who owned Geodesics Inc., applied a unique design using translucent polyester fiberglass panels containing no metal parts. His design could withstand Arctic conditions and would not interfere with the operation of the radar equipment. These stations were experimental in attempting to create self-sufficient living spaces in such a harsh climate.⁵

Highly technical and innovative in design, the DEW Line stations formed an impressive network of buildings, with a unique purpose, across the Canadian Arctic. In the barren desert land of the Arctic, these complexes were intended to be temporary. And in hindsight, they are monumental buildings in their scale and ability to convey an overwhelmingly modernist response to a sublime and isolated landscape.

OBSOLESCENCE AND REPRESENTATION OF MODERN NETWORKS

Considering the outcome of the submission and evaluation process, why did the heritage evaluation committee come to consensus on choosing the Hall

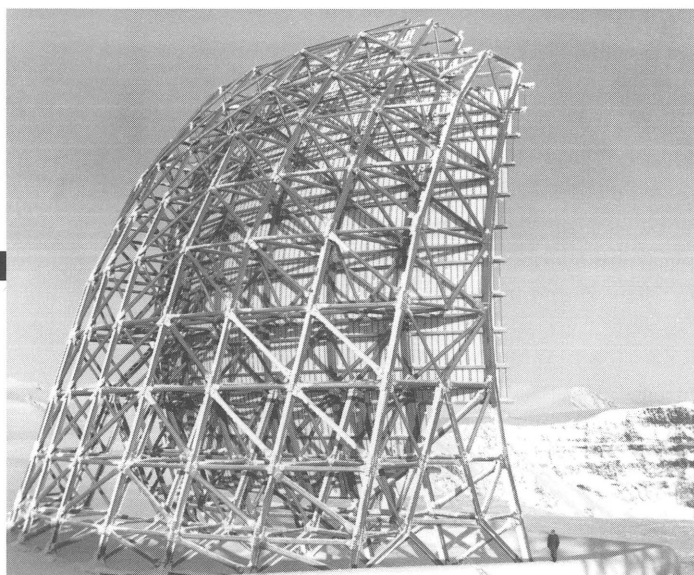


Fig. 4. A Communication billboard, DYE-M, Nunavut

be the most representative of the significance of the DEW Line structures, both historically and architecturally. In less than a year, 120 buildings were evaluated at forty sites. The FHBC came to a consensus and advised the FHBRO that the building complexes at the main and auxiliary stations were worth designating as federal heritage buildings. Since DND agreed to save only one or two sites, the Committee eventually agreed that a complex of seven buildings located at FOX-M, Hall Beach, Nunavut, should be designated as "Classified" buildings—the highest federal protection (*fig. 6*). According to the Committee, the Hall Beach site was representative of the whole DEW Line network.³ If the stations had been evaluated on an individual basis, based on the scores received during the evaluation, 45 buildings at 13 different stations would have been recommended for designation as "Recognized" heritage

Beach site as representative of the whole network? Various political decisions and inter-departmental pressures, as is experienced by any governmental body, were at play. However, this situation was a rare opportunity to examine an inventory of standardized buildings. With identified parameters, the heritage evaluation process became less a matter of relying on a comparative basis of evaluation and more a matter of integrity and representative sampling of the whole. Thus, the basis for designation was representation and integrity, rather than feasibility or future interpretation of the site.

WAS THIS APPROACH to protection of a significant Canadian military installation the best and most appropriate method? Does representative sampling work in the context of Canada's remote locales? Rigorous and comprehensive comparative analysis is one strategy to understanding and conveying values. Yet, how does one approach infrastructure as heritage? Buildings, ensembles and cultural landscapes possess the theoretical underpinnings necessary for applied methodology, but modern era systems and networks have only begun to be considered as heritage. A transportation corridor, such as a canal or railway or a network of roads, is an obvious example of a large system. Designation of corridors has proven to be effective, whether a route or a larger designated heritage area. But what of the sites that are not physically interconnected? The DEW Line, and many other modern era networks, is a manifestation of a type that is perhaps best understood in an intangible way, rather than physical. Networks, such as the DEW Line or its civilian counterpart, Canada's national

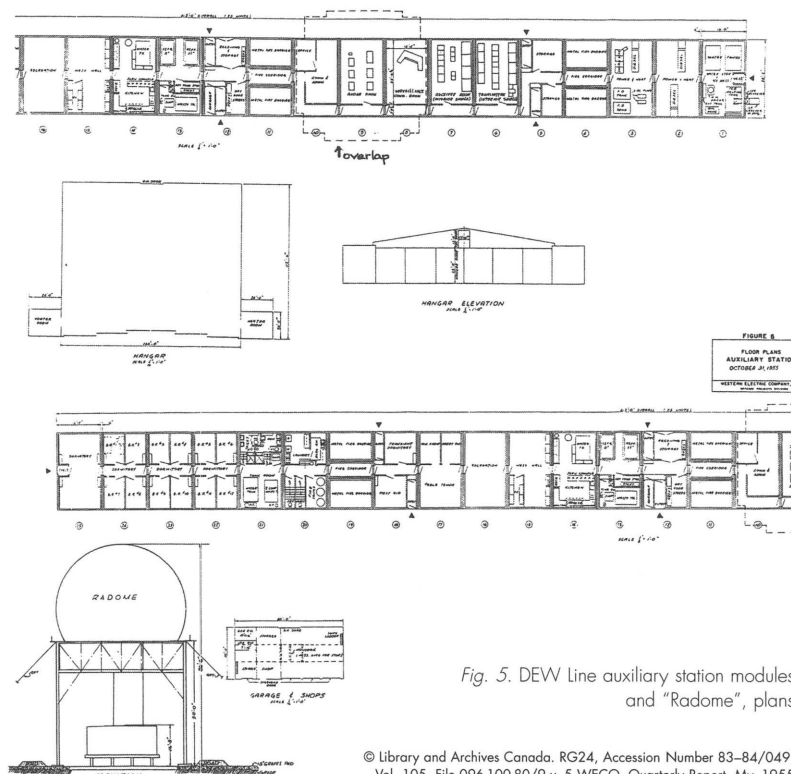


Fig. 5. DEW Line auxiliary station modules and "Radome", plans

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microwave broadcasting network,⁶ were projects resulting in physical structures that became obsolete but are significant beyond being representative, and are enmeshed in a larger network.

THE MOST EFFECTIVE STRATEGY to protecting these modern era networks is a combination of approaches. Representative sampling does not protect the whole network, but within clear parameters of type and function, it can protect values of the whole network. In the case of the DEW Line evaluation process, the result was the protection of one site. While the physical and associative values of the site were recognized in a



Fig. 6. Fox-M, Hall Beach, Nunavut, July 1960

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statement on the heritage character of the site, one relevant aspect of the site's value that was not captured in the statement was its feasibility as a functioning communication facility. Fortunately, the designated site remains part of the North Warning System of radar stations across the Canadian arctic, which has eleven long-range radar stations in operation today. Yet, the review process ought to have recognized the value of the communication network beyond the physical values. Consequently, at least a sufficient amount of other sites ought to have been also preserved to effectively protect the communication aspect. This protection would be in accordance with the new reality of protecting modern era networks and systems. The physical values of networks are an aspect of larger webs of systems, yet currently these networks are being distilled down to the mere physical sites. In remote locales, the challenge of designating the whole rather than the parts is even greater. In future, modern era systems and networks will need to be examined with greater depth, applying the concept of authenticity in tandem with integrity of the system. Thus, a network must possess a degree of wholeness or completeness to convey its cultural value. In Canada, communication systems were a vital aspect to nation-building in the post-war period. For protection of distant and remote heritage, such as the DEW Line, the designation process must step beyond physical elements and pay attention to sites co-relating within a network, connected as a larger system.

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NOTES

- 1** Escalation of the Cold War began after the Berlin blockade in 1948 and the formation of NATO. Following the signing of the Soviet-Chinese Friendship Treaty in 1950, most of the decolonized world was divided between communist and non-communist countries. US fears of an impending attack were confirmed after the National Security Council reported to the President in April 1950 that the Soviet Union had "the military capability of a surprise attack." Tensions further rose during the Korean War and after the invention of the intercontinental ballistic missile in the late 1950s.
- 2** Canadian Arctic sovereignty, specifically the waters of the Arctic archipelago of the Northwest Passage, is an ongoing issue for maritime nations. Most recently, the Canadian government has proposed a deep-water port for the City of Iqaluit.
- 3** The 13 buildings at FOX-M Hall Beach main station were evaluated. The seven buildings designated were two warehouses, a dormitory, the air terminal building, a hangar two types of the module trains and a garage. Each of the buildings reflected the values identified by possessing a high degree of integrity and was in use.
- 4** Some of the prefabricated buildings were assembled in Illinois, Canada. Parks Canada, Federal Heritage Buildings Review Office, "BAR-1 Distant Early Warning (DEW) Line Auxiliary Station, Komakuk Beach, Yukon Territory," Report 98-72.
- 5** Other experimental aspects of the design were systems to recapture heat generated by equipment and the use of PCB-based paint with better spreading quality in low temperatures.
- 6** Begun in 1958, 139 towers were erected in previous years to create a relay system for television broadcasting across the country. This network became obsolete with the construction of cable and fiber-optics lines and the launch of telecommunication satellites, yet the striking structures still stand across the country.

Fig. 7. Illuminated Geodesics Inc. "Radome," Fox-M, Hall Beach, 1959



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CONSERVATION

Conservation Guidelines

AN OWNER'S MANUAL FOR THE FORMER CITY HALL, OTTAWA

■ JAMES ASHBY

City Halls are supposed to weather and age well; and Ottawa's city hall is a thoughtful attempt at achieving a quality which modern architects often find so elusive: permanence.'

DRAMATICALLY SITED on its own verdant island, Ottawa's city hall was a refined expression of civic monumentality. It was completed in 1959 during an intense period of urban expansion and economic growth in Canada. Almost half a century later, the building had become part of a much larger urban ensemble and was subject to a change of use into a government conference facility. This paper describes the challenges of stewardship for this building and its site, and the role of conservation guidelines in protecting the modern heritage values of the former City Hall in Ottawa.

A MODERN CITY HALL FOR OTTAWA

As the location of Canada's parliament buildings and the seat of the national government, the city has long been the subject of negotiations between the federal authorities and the local civic government, often characterized as "crown versus town." Following the destruction of Ottawa's town hall by fire in 1931, it took twenty-six years for the launching of a national architectural competition for a new city hall. A Montreal firm of architects, Rother Bland Trudeau, won the competition with a restrained and refined design. The functional expression and crisp rectilinear geometry communicated the principles and design aesthetics of the international style (fig. 1). Its use of noble materials such as limestone, slate, and bronze imparted a sense of civic monumentality. Commissioned art in the form of fountains on the podium, a coat-of-arms on the façade, and mosaics within the interior complemented the restrained monochromatic palette. The completed building, sited dramatically on its own island within the



Fig. 1. Rother, Bland, Trudeau Architects, City Hall on Green Island, aerial view, Ottawa, built 1957–1959

Rideau River, achieved international recognition and garnered a prestigious Massey Medal for architecture.² Ottawa's city hall was to have considerable influence on the designs of city halls built elsewhere in Canada in the following decade.

BY THE LATE 1980s, the rapidly expanding city of Ottawa required additional space from which to administer its programs: approximately a five-fold increase of area. Moshe Safdie Associates in partnership with the local firm of Murray & Murray won the international design competition. Certain components of the proposed design were eventually eliminated for economic reasons. The resulting urban ensemble reduced the original city hall to one of a series of elements connected by a grand glass gallery (fig. 2). The completed project did not garner awards and the reviews in the architectural press were reserved in their praise. Less than ten years later, the amalgamation of local

municipal governments into a larger metropolitan organization made a number of city hall facilities in the region redundant. The new regional government sold the former Ottawa city hall to the federal government for use as a conference facility.

As a government building, the former city hall was subject to a policy that applies to buildings of over forty years.³ This policy requires evaluation to determine heritage character, and this evaluation is based on recognized criteria to assess historical associations, architecture, and contextual significance. For those buildings that receive designation (either "Classified" or "Recognized" status) the policy requires protection of heritage character. The former city hall achieved status as a Classified Federal Heritage Building due to its historic associations, architectural significance, and its environmental values.

THE CHALLENGE OF STEWARDSHIP

The compliance to the policy protecting the heritage character of designated buildings has been incorporated into a variety of stewardship practices. These have been most challenging to apply to places of the mid-twentieth century. There is a lack of experience with respect to the technical and philosophical challenges of conserving these places. In the context of limited resources, the traditional monuments from the nineteenth century are invariably the focus of attention.

The goal of stewardship activities is to make decisions that are values-based, that is, that protect heritage values. In Canada, heritage values are defined as "aesthetic, historic, scientific, educational, cultural, social, or spiritual importance or significance for past, present or future generations."⁴ The statement of significance for Ottawa's former city hall, developed during the designation process, identified three key values for this historic place. Regarding historical associations, the former city hall "is associated with the assertion of municipal governance in the post-war era of urban expansion in Ottawa and was influenced by post-war concerns with creating a modern form of civic monumentality."⁵ Regarding architecture, the former city hall is "an excellent example of the adaptation of the international style of architecture to a civic facility in Canada, marking the departure from the traditional town hall building type."⁶ Regarding the contextual values, the former city hall reinforces the National Capital's Confederation Boulevard. It is the protection of these values that is one of the key responsibilities of the former city hall's stewards.

APPROACHES TO GUIDANCE

At the Heritage Conservation Directorate within Public Works and Government Services Canada, the response to proposed changes to these modern buildings and their sites has been to develop tools to help guide



Fig. 2. **Moshe Safdie Associates** with Murray and Murray Architects, *Ottawa City Hall addition, south elevation, built 1993*

decisions that protect heritage values. The approach is not a regulatory one that attempts to police the management of heritage buildings. Rather, the approach is based on the premise that if decision-makers understand the heritage character of the buildings in their care, they are better able to manage change responsibly. Three types of property management tools have been developed: conservation guidelines, specific to a particular property; conservation advice, specific to a particular project; and training, specific to a particular audience.

GUIDELINES have been prepared at a variety of levels, for example, introductory and comprehensive. Comprehensive conservation guidelines typically address the site, the building exterior and the building interiors. Because of the considerable investment associated with comprehensive guidelines, they are appropriate only if the place is of sufficient cultural value and if it is of sufficient size, scale or complexity. If these criteria are met, guidelines may be an effective investment over the long term.

The objectives of the conservation guidelines report are ease of use and frequency of consultation by a broad number of people, people who will be making decisions that may have an impact on the heritage character of the building and its landscape. These include architects and engineers hired to accommodate new requirements, such as meeting building codes or tenant needs. Project managers might consult the guidelines regarding how to accommodate new security requirements. Facility managers might consult the guidelines with regards to housekeeping practices or recommended cleaning products. The guidelines are meant to support values-based decision-making at a variety of scales. At the micro scale for example, routine cleaning of terrazzo floors must not contribute to further deterioration. At the macro scale, additions to the building must be compatible. The conservation guidelines attempt to address a wide variety of possible activities including unanticipated needs.

PREPARING CONSERVATION GUIDELINES

The methodology for developing and presenting the former Ottawa city hall guidelines was consistent with the heritage conservation principles of understanding, planning, using and intervening, as defined in the Standards and Guidelines for the Conservation of Historic Places in Canada.

The first step in preparing the guidelines was to form a multi-disciplinary team comprised of an architectural historian, conservation architects, conservation landscape architects, and materials conservators. It was recognized that the field has sufficient specificity to require specialized expertise. The contributors were carefully selected to ensure that they had experience with mid-century modern cultural heritage in Canada. Research was executed in various archives to develop a more comprehensive understanding of the design development, construction, and subsequent evolution of the building and its site over time. The archival research was complemented by detailed on-site research focusing on the physical and conceptual integrity of the former city hall.

THE GUIDELINES REPORT began with an illustrated chapter on the history of the building and site, focusing on enhancing the understanding of the historical, architectural, and environmental values. It presented, in

a narrative form, the story of Green Island from its first settlement to the present day, and in parallel the story of Ottawa's city government. Rother Bland Trudeau's award-winning design was repositioned within the emergence of the modern movement in architecture in Canada.

The archival research also determined the contribution of the various members of the design team and the various visual artists. This additional research revealed the contribution of interior designer Sigrun Bulow-Hube, a Swedish émigré, responsible for the interiors and furnishings (*fig. 3*). In addition to the architectural history was the political history, which documented the association with former mayor, Charlotte Whitton, who is commemorated with an historic plaque on the riverbank. The focused research enabled an enhanced understanding of the former city hall, beyond the earlier historical report prepared to support the building's heritage designation by the Federal Government.

FOLLOWING the illustrated history of the building and its site, is a description of the heritage character. For the authors of the guidelines, this was the key to the entire document. If the users of the guidelines do not understand the heritage character it is unlikely that the subsequent recommendations will be followed. The description of heritage character for the former city hall was based on

Fig. 3.
Council
Chamber,
interior,
circa
1959



all of the prior research, and in consultation with the multi-disciplinary team. There were nine key points identified, summarized as follows: 1- the commemorative theme of Ottawa's civic identity; 2- the open relationship between the former city hall building, the podium, the street, and the rivers; 3- the public accessibility around the island site; 4- the distinguishable architectural quality of former city hall within the present urban ensemble; 5- the combined expression of functional and symbolic meaning; 6- the interplay between the axial symmetry of the exterior and the asymmetry of the interior public spaces; 7- the crisp rectilinear geometry; 8- the curvilinear elements complementing the predominant rectilinear geometry; and 9- the monochromatic palette of traditional and modern materials.

As various users of the guidelines do not necessarily have an academic background in history, architecture, or conservation, there was concern that the written descriptions of the heritage character might be somewhat difficult to understand. The convention in these types of reports has been to select appropriate photographs, often archival ones, to complement the text. However, there was a fear photographs themselves would not effectively communicate the messages to all of the users. So visual images were designed with the goal of communicating the values as effectively as the text (*fig. 4*).

For example, the "combined expression of functional and symbolic meaning" is described with both a custom-designed image as well as an explanatory text that states: "Each of the major forms of the building massing expresses both its former functional and symbolic roles. The podium is an open and accessible plane expressing democratic public gathering. The ground floor is a transparent continuation of the plaza expressing the accessibility of civic government to its citizens. The chamber extends over the plaza and is finished in the highest quality materials expressing the stature and responsibility of city council. The slab block is an office tower expressing the administrative functions. The top floor balcony re-asserts the openness and accessibility of civic government to its citizens."⁷

AFTER THE DESCRIPTION of heritage character is a more detailed examination of the integrity of the building and its site. First, was the documentation of the changes that the building and its site have undergone since its completion in 1959. These changes were subsequently analyzed with respect to their impact on the heritage character of the place, as either positive or negative. All of the analysis led to the establishment of a hierarchy of spaces. Plans include zones that indicate areas of high, moderate, or low heritage value (*fig. 5*). These help to direct property managers when planning projects. New requirements should, whenever possible, be accommodated within areas of low value. When changes are planned within areas of moderate or

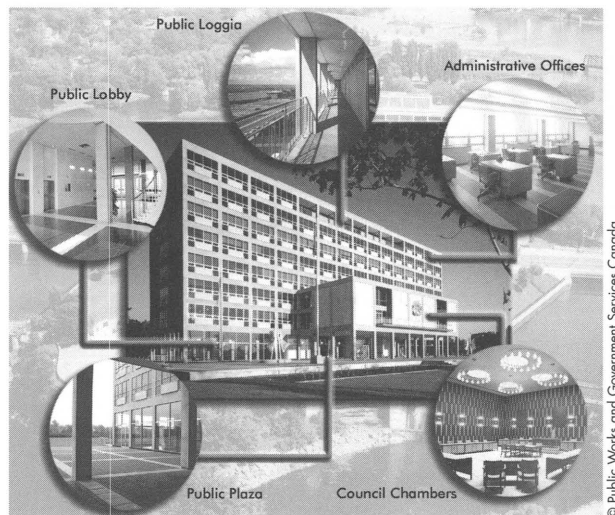


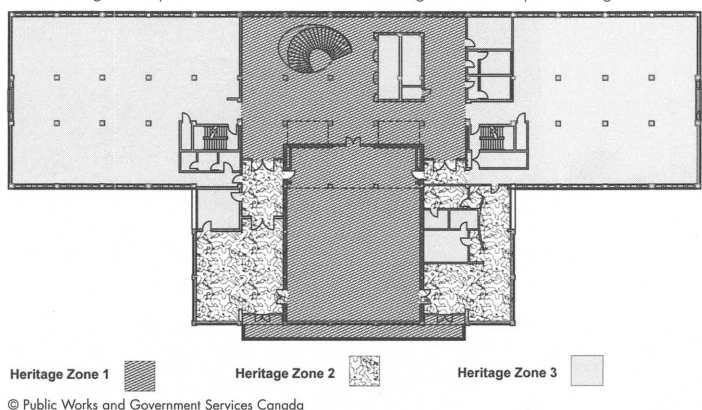
Fig. 4. A vignette depicting the combined expression of functional and symbolic meaning

high value, appropriate specialist conservation expertise should be sought and the specific guidelines for those areas should be followed.

Character-defining elements are also identified and described. Character-defining elements are defined as "the materials, forms, location, spatial configurations, uses and cultural associations or meanings that contribute to the heritage value of a historic place."⁸ For the architectural elements, a team of materials conservators from the Canadian Conservation Institute analyzed the architectural finishes (*fig. 6*). Facilities staff members were interviewed to determine the routine maintenance practices. Activities such as snow removal, window cleaning, and terrazzo cleaning were noted and subsequently assessed as to their impact, if any, on the long-term performance of the heritage materials. Specific guidelines were developed with respect to care and maintenance of these surfaces. Specific recommendations for improved maintenance practices were included.

In the closing chapter, recommendations are offered with respect to restoration, preservation, or rehabilitation of the exterior, interiors, and the surrounding site. Addressed aspects included plan and layout, spatial hierarchy, circulation, materials and craftsmanship, artwork and commemorative features.

Fig. 5. A plan of the second floor indicating the hierarchy of heritage character



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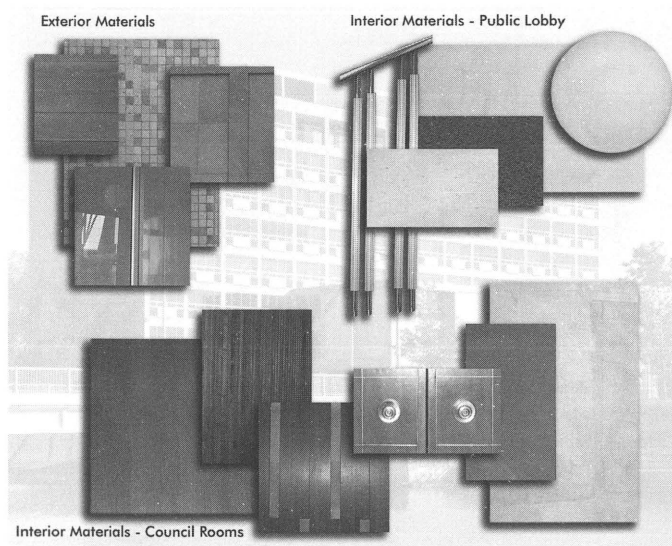


Fig. 6. A vignette depicting the materials palette

GUIDELINES IN PRACTICE

The conservation guidelines for the former city hall have been in place for approximately three years, and it is possible to reflect on their initial effectiveness. The guidelines have been successfully used to implement the design of a new driveway at the front of the site for taxis and buses (fig. 7). In that case, the lost integrity of the podium and central steps has been recovered. At this early stage in the life of the guidelines, the documentation and recommendations appear to remain valid and relevant. Although it is recognized that this may change over time, as new research emerges, particularly with respect to the major additions of 1993.

Since the success of the guidelines for the Former Ottawa City Hall, similar guidelines have been developed for other modern heritage places: the Public Archives

and National Library and Place du Portage 1 & 2. The Guidelines continue to influence the preservation and rehabilitation of all three buildings. Hindsight has also allowed for observations that could enhance the usefulness of the guidelines. It has been suggested that a web-based document would be more easily navigated than a hard copy report, and possibly easier to update. It has been suggested that investing considerable resources on a small number of high profile modern heritage buildings leaves the more modest buildings vulnerable. In the future, Heritage Conservation Directorate may prepare conservation guidelines that could be used for a number of office buildings. General guidelines on modern plazas and lobbies would be useful for a great number of office buildings that face similar pressures such as increased security requirements.

It is to be expected that the conservation guidelines report for the former city hall will become a historic document in its own right. The document will reflect the heritage values attributed to the site in the early twenty-first century and the approach to protecting those values at that time. While it is recognized that the guidelines may eventually become dated, it is hoped that the research, documentation, and the analysis of the conservation issues will remain valuable resources. The former city hall may gain additional heritage values with respect to its role as a government conference center. In the future, the existing guidelines document may support stewards in making decisions that protect the heritage values of Ottawa's former city hall as the values are perceived at that time.

JAMES ASHBY, a conservation architect, was the co-chair of Canada's first national conference on modern heritage: *Conserving the Modern in Canada*. For the Heritage Conservation Directorate, Public Works and Government Services Canada, he delivers technical workshops including one on a values-based approach to conserving modern construction assemblies.

NOTES

1 Peter Blake, "Ottawa's Modern City Hall," *The Architectural Forum* (March 1959).

2 The Massey Medals, Canada's most prestigious national architectural honor, were awarded by the Royal Architectural Institute of Canada between 1950 and 1970. In 1982, the tradition was re-established as the Governor General's Medals for Architecture.

3 The Treasury Board Policy for the Management of Real Property is a Government of Canada policy that applies to all buildings owned by the federal government.

4 Parks Canada, *Standards and Guidelines for the Conservation of Historic Places in Canada* (Ottawa: Her Majesty in the Right of Canada, 2003), 2.

5 Federal Heritage Buildings Review Office, Parks Canada, *Heritage Character Statement 01-042* (Gatineau: Her Majesty in the Right of Canada, 2002), D-3.

6 Ibid.

7 Heritage Conservation Directorate, *Conservation Guidelines: Former Ottawa City Hall (Sussex Pavilion)* (Gatineau: Her Majesty in the Right of Canada, 2003): 55.

8 Parks Canada, *Standards and Guidelines for the Conservation of Historic Places in Canada* (Ottawa: Her Majesty in the Right of Canada, 2003), 2.

Fig. 7. The recently added driveway re-instates the original design of the podium and central stair, 2006



© J. Ashby

How Green was Canadian Modernism?

HOW SUSTAINABLE WILL IT BE?

■ SUSAN ROSS

The need to address the goals of environmental, economic and social sustainability is increasingly recognized in almost every field of human endeavor, not the least in our stewardship of the built environment. In Canada, as in many urbanized countries, designing and building according to sustainable principles and practices is rapidly evolving from an innovative approach to an industry-upheld standard.

THE REUSE or redevelopment of existing buildings and sites is increasingly recognized as a potential key strategy to reduce waste and landfill; save energy and other resources; reduce sprawl and related transportation use; and, preserve communities and identity. In North America, governments, professional associations and heritage organizations have begun working at reconciling conflicts between heritage conservation and sustainability, while identifying potential synergies.¹ Sustainability, like heritage conservation, is an expression of evolving societal values. Beyond finding technical solutions to problems, an understanding of their related values should be developed.

CONSIDERATION of specific sustainability issues for the conservation of modern heritage has arisen as part of technical discussions within professional conferences and journals, in regard to the durability of concrete and the energy-efficiency of curtain walls.² At the first pan-Canadian conference on conserving modern heritage in 2005, sustainability was also evoked in broader terms in sessions on the stewardship of modern heritage, with respect to social issues raised by the conservation of modern housing and public spaces.³ While arguments for recycling the larger existing building stock of the twentieth century can be developed in terms of environmental sustainability, if the built legacy of the modern era is not just to become a salvage yard

for recycled steel and crushed cement or brick, there is also a need to understand how the qualitative values associated with specific places can be sustained.

ISSUES SPECIFIC TO MODERN MATERIALS, BUILDINGS AND SITES

The synergies identified to date between sustainability and heritage conservation are generally based on recognizing characteristics and qualities of *historic* buildings and places. This includes regionally responsive building design, construction and settlement traditions; the durability, service quality or lifecycle advantages of older structures and materials; and, other more intangible community values rooted in historic places. Many such benefits associated with older structures are challenged by the built legacy of the modern era, by less durable or experimental materials and assemblies that relate more to international models than to local resources; by planning and urban design theories based on separation of uses and automobile transportation; and by large-scaled planned landscapes that often replaced earlier more vernacular structures and places.⁴

A PRELIMINARY ANALYSIS of the common issues of modern buildings and sites with respect to environmental sustainability is presented below in table form according to the categories defined by currently used rating systems, including sustainable site design, energy, water and

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materials conservation, reduction of waste and exterior effluents, and provision of healthy indoor environments.⁵ The right hand column of the table (see page 72) suggests related strategies that have become common in sustainable design. A few of these issues are potentially simple to resolve, and the impact of proposed solutions would be easy enough to mitigate. These include green or reflective roof rehabilitation, adaptation of light fixtures, even use of renewable power. Many others are more challenging to address since they relate to the basic design of modern buildings, such as complex envelope assemblies dependent on caulking and sealants, or artificial interior environments dependent on mechanical systems and inefficient or polluting sources of energy and water. In the Canadian context, the extremes of climate and the correlated high dependence on mechanical systems, are compounded both by the sprawling land development of a nation that lacks the physical constraints of more densely developed countries, and the inherently long distances for transportation of people, utilities and manufactured goods.

RE-EVALUATION OF CANADIAN MODERNISM BY CURRENT SUSTAINABILITY VALUES

At first view, it is clearly a significant challenge to reconcile conserving modern heritage and meeting the goals of sustainability. But perhaps a more positive way of looking at this relationship would be to ask ourselves to reconsider the legacy of the modern era in terms of its own contributions to environmental, economic and social goals as they have evolved over the last century. Many ideas of current sustainable design have their roots in old ideas that were reinvented in the modern era.⁶ What are the lessons to be learned from the modernist versions of green roofs, solar control and atria, from buildings planned for flexible adaptation to growth and change, or from the built expressions of modern era social programs?

WHILE A COMPREHENSIVE HISTORY of Canadian green architecture has yet to be written, much information is already part of the histories of specific buildings, sites or designers, including those associated with regional modernism, organic architecture, or climate-responsive design.⁷ A survey might answer these basic questions. Regarding environmental sustainability: what were the landmark modern buildings or designers in terms of developing greater understanding of the range of Canadian climates, site conditions and regional materials? Regarding economic sustainability: what were the landmark modern buildings or sites in terms of



Fig. 1. Ernest Cormier, National Printing Bureau, early double skin wall technology, Gatineau (Quebec)

lifecycle-based designing, including planning for growth and change, and durable constructions with long service life? Regarding social sustainability: what are the landmark modern buildings, sites or programs in terms of responding to community needs, such as the provision of an important public space or affordable housing?

AFTER DECADES OF USE, experimental green technologies and early models for longer-term economic planning should now be reviewed.⁸ In addition, many of Canada's most significant works of the modern era are public buildings pertaining to an intense period of institution- and service-building, such as hospitals, airports, university campuses, schools, and churches. These public programs set many national and local standards for housing and other amenities. As the concept of social sustainability introduces new ideas of community interest, reviewing the lessons of earlier programs is critical.

A brief look at examples of the kinds of buildings, sites and designers that such a history would address helps to highlight some of the lessons to be learned. In some cases, green ideas may have been a major part of a designer's way of working, in other cases, elements of a single project may have something to teach us.

A discussion of Ernest Cormier's National Printing Bureau (1957), in Gatineau, Quebec, would reconsider its significance as an early double-skinned wall which housed the mechanical systems while providing a buffer zone to stabilize environmental conditions in the printing production areas.⁹ Its subsequent history of use can be related to issues that designers have struggled with throughout the development of glazed walls as these proved to be heavily dependent both on proper control of mechanical systems, and on shading mechanisms requiring regular maintenance.¹⁰ Some of the lessons for today include not only the advantage of using a natural ventilation system in a double skin wall, but also the



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Fig. 2. **Arthur Erickson and Cornelia Oberlander**, modernist green roof and transparent law courts, Robson Square, Vancouver (BC)

importance of planning for appropriate maintenance and commissioning. While this double-skin design might seem like an anomaly in Cormier's work, it suggests the interest of looking back at his other projects in view of ideas he might have explored about daylight, building envelope and systems design (fig. 1).

A discussion of Arthur Erickson's Provincial Law Courts and Erickson and Cornelia Oberlander's Robson Square (1973) might reconsider the significance of this modernist 'green roof' intended to bring green space into the urban environment. It could help explain the issues that designers have struggled with in developing green roofs in an urban setting, including the challenges of site-contained storm water management. In addition, from the point of view of social sustainability, the discussion might also reconsider the idea of democratic process expressed in the open character of the glass courthouse. How was this physical transparency translated into a functional reality? How has this goal managed to be sustained in an evolving set of pressures on public institutions with regards to access and security? The importance of such ideas in their work as a whole suggests that both Erickson and Oberlander might occupy a significant place in a history of modern green architecture in Canada (fig. 2).

A better understanding of how green ideas have developed will help inform strategies allowing us to preserve the expression of these ideas in their earlier forms, or modify them to adjust to improved understanding of these technologies and successful strategies.

ALSO OF IMPORTANCE in this history are the institutional and regulatory contexts. Concerning the initiating of

environmental goals in design, the introduction of energy codes in the 1970s had a radical impact on building envelope design in Canada; new standards for thermal resistance marked the end of at least one distinct phase of modernism.¹¹ In terms of setting social standards, one of the legacies of the modern era is a national housing institution, the Canada Mortgage and Housing Corporation (CMHC). In Canada, home ownership was generally favored as a socio-economic model, and the single-family house generally represented significant advances in terms of living space and basic services, making it one of the clearest expressions of 'modernity,' if not modernism. In more recent years, the CMHC has been one of the principal funding agencies for research and publications which help to advance our standards in energy efficiency, indoor air quality, materials durability, affordability, community-based design, urban intensification, and other measures of sustainability in Canadian housing and communities. Both the original housing and later research funded by the CMHC would play a part in telling the story of emerging ideas of sustainability in Canada.¹²

LESSONS FROM REHABILITATING THE EXISTING BUILDING STOCK

While establishing the historic and theoretical basis for sustainable conservation of modern heritage is important, reviewing projects involving modern buildings and sites that are now responding to evolving goals of sustainability will provide us with the testing ground for this discussion. The projects to be considered include those involving modern heritage conservation, but also the adaptive reuse of the more mundane office buildings,

apartment blocks and tract housing that make up such a large part of the modern Canadian landscape. The rich legacy of post-war architecture in Vancouver, British Columbia, includes many examples of regional modernism, so that it is not surprising that it has also been a critical breeding ground for more recent green design in North America,¹³ among which projects involving the sensitive rehabilitation of modernist green buildings.¹⁴ Concurrently there is a large stock of less significant modern buildings with a record of poor performance.

Fig. 3. **ERA Associates**, Towers near the Humber River, proposal for the sustainable rehabilitation of suburban apartment buildings, Toronto (Ontario)



© Jesse Jackson

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An early example of a green building rehabilitation of such existing building stock is the revitalization, beginning in 1998, of a utilities and office tower, the William Farrell Building (1948).¹⁵ The approach towards improving the building's energy performance would most likely be considered an extreme intervention on more significant modern buildings. The over-cladding of its original masonry exterior with a glass and metal screen, to provide a naturally ventilated triple skin wall, does however present a solution to building envelope performance issues, which by addition, as opposed to replacement, allows for some degree of preservation.

Another example from Vancouver in the 1990s involving a more significant architectural work provides a model for a social dimension of sustainability—the conversion of a former office building into residential units. The transformation of the BC Hydro building (Thompson Berwick Pratt, 1955–1957) was able to take advantage of the building's original narrow floor plate, which affords good daylight, while simultaneously introducing operable windows to the original curtain walls, to develop now highly valued apartments in a great location in the city.¹⁶ Achieving sustainability entails developing appropriate programs as part of an adaptive reuse. In most large Canadian cities, the conversion of industrial buildings has played an important role in creating

denser residential development. The conversion of modern office buildings on desirable urban sites into housing is a next stage of recognition of the basic value of the existing building stock.

Access to affordable quality housing is considered a measure of social and economic sustainability. Some of the most interesting current discussion in Canada concerning the sustainable conservation of modern heritage relates to the rehabilitation of the modern era housing stock in all its forms, that is, among others, single-family standard types,¹⁷ low-rise apartment parks¹⁸ and high-rise towers (fig. 3).¹⁹ While many of these projects tend to focus on green building type improvements, part of the interest of looking at housing projects is that they create a context that calls for the integration of the environmental, social and economic dimensions of sustainability (fig. 4).

GREENING THE CANADIAN SUBURBS: OUR BIGGEST CHALLENGE?

Another reason why our housing is so important to consider is that many of these projects are located in early suburban developments, where the broader physical landscape is challenged by current ideas of sustainable community planning. 'Smart growth' and other models for more environmental site and land use, are largely based on a return to the mixed use and higher density planning that the modern suburbs had replaced. One of the solutions in existing suburbs is to add density and new uses, in a process called "intensification."²⁰ This is already happening in many suburbs, although less through careful planning than demolition and rebuilding. Again, understanding the green character of the early suburbs, that included now mature vegetation, may be part of the solution to reconciling conservation and sustainability objectives. In order to meet the sustainability objectives of today, suitably giving value to the aspects of the suburbs that were successful is as important as allowing for change in other areas. Though perhaps the modern suburbs are unlikely to be formally designated as heritage, understanding both their values and issues will be critical to finding appropriate solutions to reinvest in this critical part of the existing built environment.

MODERN BUILDINGS AND SITES present new specific challenges for reconciling the goals of sustainability and heritage conservation. At the same time, we are just beginning to grasp the potential of the modern era's built legacy in Canada for current environmental, social and economic ideas of sustainability. A more comprehensive review of projects that are seeking to rehabilitate the modern building stock and landscape, would help identify successful strategies and thus expand the role of conserving our modern heritage as a contribution to society and the planet.

SUSAN ROSS is a senior conservation architect with Heritage Conservation Directorate, Government of Canada. She was co-chair of the Technical Committee on Sustainable Preservation of the Association for Preservation Technology from 2006 to 2007.

NOTES

1 The Association for Preservation Technology (APT) *APT Bulletin*, 36: 4, 2005, Special Issue on Sustainable Preservation, includes the proceedings of the first professional symposium on the subject held in Halifax, Nova Scotia in September 2005.

2 Susan Macdonald, "Authenticity is more than skin deep, Conserving Britain's postwar concrete architecture," *The Fair Face of Concrete: Conservation and Repair of Exposed Concrete. Docomomo Preservation Technology Dossier 2* (April 1997): 45-53; and Susan Bronson, "Authenticity Considerations for Curtain Wall Buildings: Seminar Summary," *APT Bulletin* 32: 1 (2001), 5-8.

3 Susan Bronson and Susan Ross, "Stewardship Session Papers," in Susan Algie and James Ashby, eds., *Conserving the Modern in Canada: buildings, ensembles, and sites, 1945-2005: conference proceedings, Trent University, Peterborough, May 6-8, 2005* (Winnipeg Architecture Foundation, 2005), 115-119.

4 The discrepancy between the inherent energy-saving characteristics of historic buildings and those of buildings from the 1940s to 1970s

performed, see Stewart Brand, *How Buildings Learn, What Happens After They're Built* (Toronto: Penguin, 1994).

9 Shannon Ricketts, "National Printing Bureau and Heating Plant," Federal Heritage Buildings Review Office Report 93-117 (unpublished government report), Gatineau, 1993, no pagination.

10 Reyner Banham, *The Architecture of the Well-tempered Environment* (Chicago: University of Chicago Press, 1969).

11 The US Department of Energy includes two Canadian buildings in "Milestone Buildings of the 20th Century," *Habitat 67*, for its integration of daylight and fresh air, and the insulation in pre-fabricated wall panels, see <http://www.artistsdomain.com/dev/eere/web/1967.html>, and the PEI Ark (demolished), as a model of a close-looped biological system, see <http://www.artistsdomain.com/dev/eere/web/1976a.html>

12 The role of the CMHC in developing awareness about sustainability in research on house renovation is highlighted in Cynthia Gunn, *Exploring the Connection Between Built and Natural Heritage*, Ottawa: Heritage Canada, 2001: 6, 8-10. URL: <http://heritagecanada.org/eng/GreenReport2Eng-Read.pdf>

13 The link between earlier West coast regionalism and the region's more recent environmental architecture is suggested in David E. Miller, *Towards a New Regionalism: Environmental Architecture in the Pacific Northwest* (Seattle: University of Washington Press, 2005).



Fig. 4. Housing, the challenge of the single-family home, Ottawa (Ontario)

was noted in Baird M. Smith, "Conserving Energy in Old Buildings," *Preservation Brief 3*, National Parks Service, 1978, URL: <http://www.nps.gov/history/hps/tps/briefs/brief03.htm>

5 Problems in applying environmental rating systems to heritage properties and projects are discussed in Andrew Powter and Susan Ross, "Integrating Environmental and Cultural Sustainability for Heritage Properties," *APT Bulletin* 36: 4 (2005): 5-11. One of the challenges is in obtaining related data on historic materials, for instance their embodied energy. The data for modern materials and assemblies can in principle be easier to obtain. See Mike Jackson, "Embodied Energy and Historic Preservation: A Needed Reassessment," *APT Bulletin* 36: 4 (2005): 47-52.

6 James Steele, *Ecological Architecture, A Critical History* (New York: Thames and Hudson, 2005).

7 Terry Meyer Boake, "Moving Towards Green" in Ferrera, Luigi and Emily Visser, editors, *Canada Innovates: Sustainable Building* (Toronto: George Brown College School of Design, 2006), 22-29; and Wadle, Kathy and Peter Busby, "Green Building in Canada: A Brief History" in Busby, Peter and Jim Taggart, editors, *Busby: Learning Sustainable Design* (Gatineau: Janam, 2007), 124-129.

8 On the importance of understanding how well buildings have

14 Marcus Leyland, "Restoration and Rehabilitation of the Evergreen Building," OMICRON, URL:

http://omicronaec.com/docs/Project%20Profile_Evergreen%20Building_Marcus%20Leyland%20arch%20perspective.pdf; OMICRON is also responsible for the rehabilitation of the Robson Square green roof.

15 Peter Busby and Jim Taggart (ed.), *Busby: Learning Sustainable Design* (Gatineau: Janam, 2007), 44-51. The Busby offices illustrate another example of adaptive reuse of ordinary modern building stock, see 88-93.

16 City of Vancouver, Community Services, Planning Department, Case Studies, URL: <http://vancouver.ca/commsvcs/planning/heritage/casestudies/970Burr.htm>

17 Work Worth Doing, The Now House, URL: <http://www.nowhouseproject.com>

18 L'œuf, Pearl Poddubiuk Architects, Benny Farm Green Energy, URL: <http://www.loeuf.com/en/bennyfarm/index.php>

19 Stewart Graeme, "Faulty Towers," *Toronto Star* (March 25, 2007), URL: <http://www.thestar.com/printArticle/195736>

20 Edmund P. Fowler, "Heritage in the 'Burbs, How to make the suburbs a lasting legacy," *Alternatives Journal (Canadian Environmental Ideas +Action)* 33:2/3 (2007): 22-25.

Common issues of modern buildings and sites with respect to environmental sustainability	Potential related solutions and strategies
SUSTAINABLE SITE DESIGN	
Dark colored flat roofs contribute to the urban heat island, with drainage / hard-surfaced site planning evacuating rainwater to storm sewers	Resurfacing with green or reflective roof materials, and landscaping to retain water
Low density mono-functional development with high proportions of roads and parking lots	Intensification through infill and additions, and incorporation of new services and amenities including pedestrian and bicycle circulation
Limited use of vegetation, building orientation and topography for natural cooling/ventilation	Addition of shade trees, additions to buildings to improve wind, sun, etc.
ENERGY CONSERVATION	
Poor building envelope performance due to single glazing, thermal bridging, inadequate insulation or vapor barriers, lack of shading	Over cladding, partial or complete envelope replacement, additional solar controls, etc.
Inefficient heating, cooling and ventilation, and interior and exterior light design and control systems	Mechanical system and light fixture and control adaptation or replacement; change in use patterns
Building design and systems that rely on the use of transported fossil fuels	Adaptation of systems to renewable energy and power sources such as geothermal, solar and wind sources (ground pumps, photovoltaic cells)
WATER CONSERVATION	
Inefficient plumbing fixtures using high levels of water flushing	Plumbing fixture adaptation or replacement to reduce consumption or waste
Building design and systems that rely on the use of treated water for all plumbing needs	Development of grey water storage and distribution capacity
Landscape water features or irrigation that use potable water	Use of grey water and re-circulating systems for vegetation (integration of cisterns)
MATERIALS AND RESOURCES	
Use of materials that were thought to be durable and are inherently difficult to repair / have poor service quality, e.g. reinforced concrete	Various solutions, including adequate monitoring and maintenance of problem conditions
Complex assembly details involving multiple materials, dependent on the durability of the weakest, e.g. sealants, coatings and other synthetic surface finishes intended to be low-maintenance but degraded by UV and other atmospheric conditions	Monitoring, maintenance and repair of the weakest to prolong lifecycle. Improvement of these materials when replacement is considered, e.g. by developing strategies for disassembly and repair. May also lead to over-cladding and other envelope changes
Use of experimental materials or materials in combinations that have poor service quality, e.g. plastics Use of materials that required massive amounts of transportation and manufacturing energy for their construction, e.g. aluminum	Repair and continued use of these materials to make best use of previous investments, but consideration of alternates where replacements are required, or use of salvaged materials where available
Use of exotic materials from endangered wood species or sites of exploitation that have devastated habitats and traditional uses of land, e.g. teak in Africa	Repair and continued use of these materials to make best use of previous investments, but also considering alternates where replacements are required, or ensuring new sources of same materials are sustainably managed
REDUCTION OF WASTE	
Poor durability, short lifecycle or poor reparability of building materials and elements	Reinforcement of existing or replacement of materials and elements with longer-life
Building service spaces based on garbage collection	Building service spaces adapted to recycling services
Obsolescence of large-scale structures intended to be adaptable, but actually suited to a single function	Zoning and planning adaptation to allow for alternate uses of spaces, including mixed uses
EXTERIOR EFFLUENTS AND POLLUTION	
Use of materials whose manufacturing or assembly process involve the use of adhesives, preservatives and other toxic chemicals, such as glues in wood-composites, creosote on exposed wood	Where materials used on the interior have previously off-gassed, carry out repair and continue to make best use of previous investments, but also considering alternates where replacements are required
Use of asbestos for finishes and insulation, or other problem building materials	Encapsulation or removal depending on use, and replacement with compatible substitutes
Use of materials that have poor durability in reaction to acid gases, sulphates, salts	Monitoring and maintenance, and investigation of potential protective measures, or strategies for replacement in part or completely. May also lead to over-cladding solutions
HEALTHY INDOOR ENVIRONMENTS	
Lack of operable windows, and related dependence on mechanical equipment for ventilation	Provision of alternate source of natural ventilation (atriums, overcladding with double-skin walls) or retrofit existing windows to make operable where feasible
Inadequate sources of daylight and dependence on artificial lighting	Provision of new sources for daylight (atriums, light wells, skylights)
Poor control of solar radiation	Addition of compatible solar controls, including architectural and plant solutions

A Case for Dal Grauer

THE REHABILITATION OF A BC ELECTRIC SUBSTATION

■ ROBERT G. LEMON

With its fully glazed façade, the Dal Grauer Substation is unusual for being a highly visible industrial building in a downtown urban setting. Significant at the time was the literal and symbolic transparency of the BC Electric Company's public mandate to provide power to downtown Vancouver. Its location at the midpoint of the Burrard Street corridor anchors a range of distinguished buildings of the early to late twentieth century. But changes over time have diminished the building's transparency and the robust beauty and clarity of its internal design.

BUILDING: Dal Grauer Substation
LOCATION: 950 Burrard Street, Vancouver, BC
DATE: 1953–1954
ARCHITECT: Sharp and Thompson Berwick and Pratt,
with B. C. Binning color consultant

THE DAL GRAUER SUBSTATION was included in the register of British Columbia sites by the Docomomo BC chapter for its architectural distinction, visibility, and symbolic connection to the province's resource and industrial development, and as an important work of a prominent architectural firm. It is listed on the City of Vancouver Heritage Register in the "A" category but is not protected by heritage designation. Because of the visibility of the steel plate staircases, colorful corridors and inner workings of mechanical equipment, insulators, copper bars and switching gear, it was also identified in the city's inventory of significant interiors. Sadly, the original clarity has been obscured by the installation of Plexiglas panels, and the internal



Fig. 1. Dal Grauer Substation, August 10, 1954

colors have changed over time. While a seismic upgrading of the building has been completed, restoration of the transparent façade has not been implemented.

BUILDING HISTORY

The Dal Grauer Substation is the oldest, most prominent and intact work of modern architecture on Burrard Street in Vancouver. Linked to the former BC Electric Building, it predates the tower, being built in 1953–1954. Both buildings were designed by Sharp and Thompson Berwick and Pratt, a leading architectural firm in Vancouver for the BC Electric Company. The dominant feature of the Dal Grauer Substation—essentially a large multistory black box industrial hydro substation—is its completely glazed Burrard Street façade. Behind the glazing is a nearly 3-meter wide circulation zone, three stories high, with staircases of folded plate steel and corridors visible from the street. The building's concrete floor structure is cantilevered and shaped to a slender knife-edge condition at the glass façade. As originally conceived by the architects



Fig. 2. Dal Grauer Substation, 2007, note obscured Plexiglas glazing in original frames

(and artist consultant B. C. Binning) it had a colorful palette of wall panels rendered in moss green, rust red and bright chrome yellow. Visible to the public were the neatly arranged inner workings of the substation, its equipment, copper "bus bars," ceramic insulators and switching gear.

THE GLAZING is broken into a Mondrian-like grid of six wide bays, three stories in height, with the upper central four bays projecting slightly from the plane of the main façade. These feature distinctive square ventilation openings in a vertical alignment. The solid ends of the façade have a shallow return to the side walls where the building narrows slightly. The words 'Dal Grauer Substation' are inscribed in the pair of solid concrete piers which extend up (and narrow) towards the top story. The channels in these piers reflect the power conduits contained within the concrete. Originally, metal letters 'BC Electric Company Ltd' were suspended from the underside of the central projection and lit at night from behind. A small internally illuminated dedication plaque is found in the window grid.

Mosaic glass tiles in shades of blue, grey, mauve, black and green clad the base element and the flanking sidewall. These were added to the building on construction of the adjacent BC Electric Co. office building, which is clad

in the same tiles. The original track for window washing equipment is still in place although not in service.

HERITAGE VALUES

In a country known for its vastness and the bounty of its natural resources, hydroelectric power generation holds an important place in Canada's history. The challenge for the BC Electric Company in the post-World War II building boom was to showcase the role of power in the province. For a prominent site on busy Burrard Street in growing downtown Vancouver, the response by Sharp and Thompson, Berwick and Pratt architects was to create a transparent box of a substation for the distribution of power to the entire downtown peninsula. The architects were one of the leading proponents of modernism in the province and responsible for numerous works of distinction which were celebrated nationally at the time. Their buildings remain noted to this day for the clarity and simplicity of design.

Staircases, corridors and power equipment, picked out in bright colors, were part of the fenestration composition and displayed its internal workings to the street. A rich palette of color was selected by noted local artist B. C. Binning. Binning went on to collaborate on the adjacent BC Electric Company tower, designing the mosaic tile patterns and colors.

Fig. 3. Dal Grauer Substation, interior view of south stairwell showing folded plate steel staircase

THE DAL GRAUER SUBSTATION is part of a cluster of heritage building fronting Burrard Street and also part of the larger context of the architectural legacy of the Burrard Street corridor in downtown Vancouver. This legacy includes the city's oldest church, two art deco landmarks and several works of modernism. The larger collection, stretching the length of Burrard Street as it spans the downtown Vancouver peninsula from Burrard Inlet to False Creek—the Burrard Street Corridor—is proposed as a heritage district (fig. 5).

IMMEDIATELY ADJACENT to the south is the former BC Electric Building (fig. 6), also designed by the same architectural firm Thompson Berwick and Pratt. Dating from 1957, it was rehabilitated in 1994 by Paul Merrick Architects to become a residential condominium tower called the Electra. It is "A" listed on the Vancouver Heritage Register and was the first modern landmark to become a municipally designated building in Vancouver. At the time of its rehabilitation, it was the largest office-to-residential conversion in Canada. Directly across the street from the substation, and predating it by thirteen years, is the Downtown YMCA designed by McCarter Nairne Architects in 1940 (plus numerous additions). The substation's scale closely matches that of the YMCA's four-story brick façade in height and width.

CONSERVATION DECISION-MAKING

The building has been maintained and upgraded seismically (2002) by the BC Hydro Corporation and it continues to function for its original use, that of a power distribution substation for the downtown Vancouver peninsula. Much of the original façade is intact, including the steel frames, concrete structure and tiles (added to the lower façade in 1957 when the adjacent BC Electric office tower was built). The original clear glass panels were replaced in 1972 after an explosion in the building shattered the glass; the replacement Plexiglas panels have aged and compromised the original clarity of the interior circulation space.

The steel frames are in reasonable condition but show evidence of rusting and deterioration in some places. The exterior mosaic tile surfaces are in need of consolidation and repair. The present color scheme—blue and green representing the BC Hydro corporate color scheme—is not original.

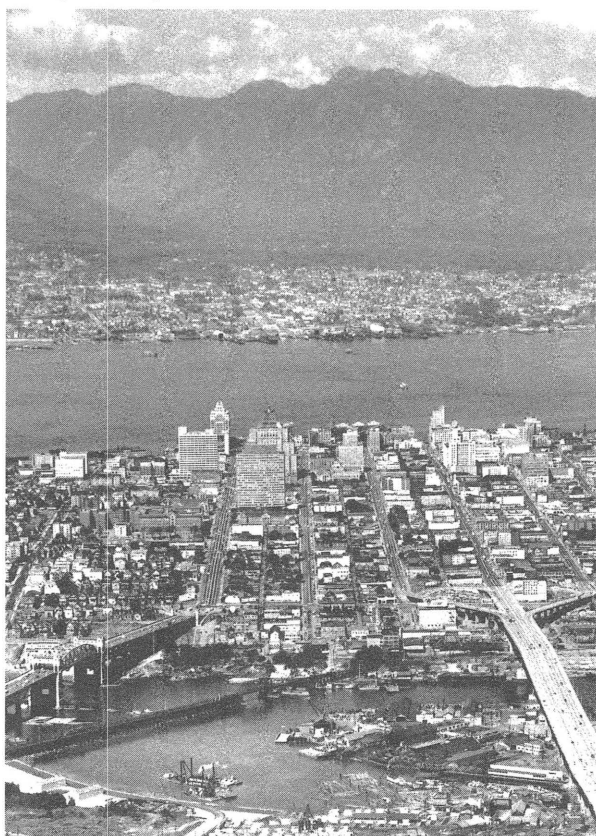
IN 2002, Busby + Associates (now Busby Perkins + Will) with Robert Lemon Architect Inc., were commissioned by BC Hydro to prepare an application to the City of Vancouver to restore and designate the façade as a municipally-protected heritage site, in exchange for a heritage density bonus. This proposal did not



Fig. 4. Dal Grauer Substation, view of central projecting section with ventilator openings (now filled in)

proceed, but a renewed application was made to the city of Vancouver in 2006, again as part of the Transfer of Density incentive program. In 2007 this was delayed again when the city recommended a review of the TD program.

Fig. 5. Aerial view of downtown Vancouver, showing Burrard Street running north in the center of this 1956 image. The art deco Burrard Bridge (1932) is in lower left and the art deco Marine Building (1929) at the top end of the street. Midway along on the right is the BC Electric Building (1957) with the Dal Grauer Sub Station hidden beside it; the modernist Burrard Building is further up on the left



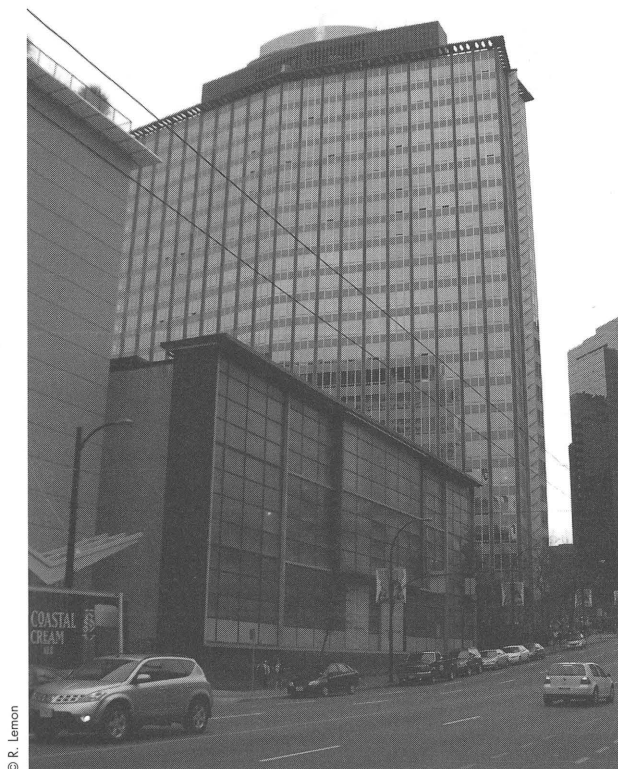


Fig. 6. Dal Grauer Substation, with BC Electric building behind

THE RESTORATION PLAN was to include replacing the Plexiglas panels with clear laminated glass in new slender aluminum sash, within the existing steel structural frame. The challenge in this task was to retain the slimness of the glazing profile while incorporating a way to allow the glazing panels release from the frame should an internal air pressure change force them outwards. To do this, the aluminum sash would be hinged to accommodate the release of the windowpanes, the details for which were worked up with the assistance of Advanced Glazing Systems Ltd. of Richmond BC.

THE ORIGINAL COLOR scheme will be restored based on archival images and on-site color matching. Recently, the original color palette board prepared by artist B. C. Binning for the interior colors has been found in the artist's estate. A 1954 color photograph confirms the original colors, which included moss green, mustard yellow and rust brown colors. In addition three shades of grey were found and a light pinky beige color. The mosaic tiles will be re-adhered in places and reset in others. Experience with the rehabilitation of the mosaic tiles of adjacent BC Electric building will be used for the substation. The restoration work will also include upgrading the internal lighting and exterior signage and lighting (fig. 7). A public art installation interpreting the history of power and electricity in the province has been proposed. This would be done in the ground surface between the façade and the sidewalk, incorporating LED light bands within a black terrazzo surface. The restoration work has yet to be authorized by the owner.

To partially finance the rehabilitation, a heritage density bonus was sought from the City of Vancouver. Recent changes to this incentive have slowed the progress of this project.

AS A WORK of industrial architecture in a prominent urban setting, the Dal Grauer Substation is an important work of Canadian modernism. The proposed conservation work would utilize technical innovation to balance the need for safety and transparency and return this highly visible structure to its original role, animating its Burrard Street presence. As the past half-century has seen the city grow around the building, and as an emerging residential population becomes aware of its value, the need for conservation has become more urgent. Its façade restoration would also return this prominent public landmark to its original clarity, with the authenticity afforded by the discovery of the original palette of colors.

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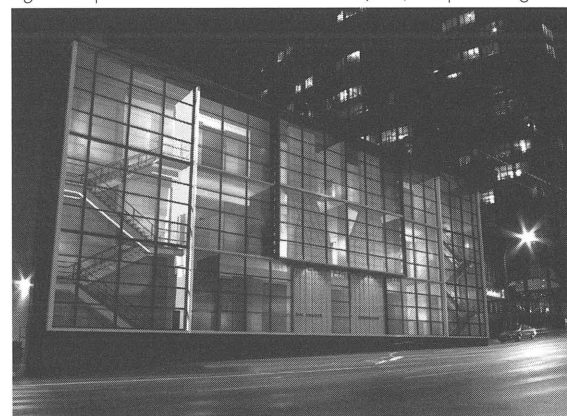
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Fig. 7. Proposed restoration of Dal Grauer façade, computer image



Beaver Lake Pavilion in Montreal Completely Restored

ONE OF DOCOMOMO QUEBEC'S
FIRST MODERN BUILDINGS TARGETED
IS SAVED, FOR NOW

 MARIE-FRANCE BISSON

On January 30, 2006 the restored Beaver Lake Pavilion was inaugurated in Montreal. The building located on Mont Royal, used daily by the park's many visitors, is a public success. Critics are just as unanimous, and the restoration's architects, owners and donators were awarded two prizes: Orange Prize, from Heritage Montreal, and an Excellence Prize, from the Ordre des Architectes du Québec.

BUILDING: Beaver Lake Pavilion
LOCATION: 2000 Remembrance, Mount Royal Park,
Montreal, Quebec
DATE: 1955–1957
ARCHITECT: Hazen Sise and Guy Desbarats

BUT THE FACT that the Pavilion was designed by two of Quebec's famous modern architects, its constant running since construction and its commendable material condition did not prevent the pavilion from being at threat. Even its location within a municipal Heritage Site perimeter, instituted in 1987, did not ensure a first-rate result to the restoration—a process which lasted seven years. For the Quebec chapter, this building is an example of how far off modern architecture's recognition still is. Most of all, it illustrates how knowledge and diffusion remain the best option to gain respect.

DOMINO EFFECT

In winter 1994 the cover of Docomomo Quebec's first bulletin featured a picture of the Beaver Lake Pavilion.

The province's chapter had existed for barely over a year. Its first action had been to establish a list of the fifty most important modern buildings of the province's metropolis, Montreal, to be presented at the third International Conference in Barcelona that same year (realized in part with subsidies from Ministère de la Culture et des Communications du Québec). Among these, Beaver Lake Pavilion stood out as the logical choice to introduce the new group and its actions: the building was identified as an icon of modern architecture in Quebec after World War II.

AT THE TIME Docomomo Quebec had already sent a letter to the city's Executive Committee advocating the pavilion's restoration. It had conserved its original volumes but, left without proper care for decades, it was the mere shadow of the glorious building it once was. Its altered appearance made it unpopular, especially to those already unenthusiastic about modern architecture. Nevertheless, Docomomo's letter remained unanswered. In June 1996 Docomomo Quebec's



Fig. 1.
The pavilion
before
restoration,
2003

© Garry Conrad, Montréal

president, France Vanlaethem, at the time also editor of *ARQ Journal*, took the opportunity of putting together a special edition dedicated to modern architecture. Once more the pavilion was a cover page subject.

IN 1999, when the demolition of the Pavilion was still an option, it is this *Journal* that Patrice Poulin, a City of Montreal project manager, claims to have brought on site to support the restoration option. The *ARQ's* cover, and its introductory study, supplied a helpful insight into the building's real value.

A PAVILION IN THE PARK

Beaver Lake Pavilion is located in the glades between the three summits that form Mont Royal: a hill 232 m high, and 3 km in diameter in the heart of Island of Montreal. As early as 1874, the City of Montreal voted the first law in Quebec protecting a natural site, an article protecting 14% of the hill in order to develop a park.¹ That same year the city hired Frederick Law Olmstead for the park's landscaping. Only part of his layout was implemented, but the lake that he imagined in the glades was redesigned and realized in 1938 by Frederick Todd, one of his former apprentices. Established in Montreal since 1900, Todd is recognized as the first Canadian landscape architect. Under his design, the lake adopted its more modern amoeba-like shape.

WITH THE 1950s came the city leaders' widely shared desire to modernize Montreal's infrastructures, and to bring its public spaces within a closer reach. Along with other North American cities, Montreal endeavored to "supply facilities for constructive use of leisure against a background of beauty in public parks."² In 1953, within the Parks' General Superintendence, a new special department operating under the motto "Beauty for Recreation"³ was devoted to the city's parks. Thus, many recreational centers,

pavilions, and shelters were then built on the island, but none was as innovative as the Beaver Lake Pavilion. On April 21, 1955, Montreal's Executive Committee agreed to erect a new pavilion to replace a wooden kiosk on the Beaver Lake banks. The new pavilion was not only meant to be used by visitors all year round to rest, get warm, fix their sporting gear, or have a meal at the restaurant, but also to become a landmark in the park. Canadian architects Hazen Sise (1906–1974) and Guy Desbarats (1925–2003) were commissioned to design and build the pavilion.

IN THE 1920s AND 1930s Hazen Sise, the Pavilion's principal architect, a former student of McGill University (Montreal) and MIT, traveled to Europe where he worked for various architects such as Le Corbusier. Later, when teaching at McGill University, he met Guy Desbarats, Dimitri Dimakopoulos, Ray Affleck, and Fred Lebensold with whom he formed the firm Architects In Co-partnership, one of Quebec's most important modern architecture studios (Place des Arts, Montreal



Fig. 2. The restored Pavilion, front view

© Frédéric Sola, Montréal

1958–1963; Place Bonaventure, Montreal, 1964–1967; Fathers of Confederation Building, Charlottetown, P-E-I, 1964). Although the firm did not exist at the time of the pavilion's commission, the partners already shared an office.

Guy Desbarats graduated in 1948, and was also giving lectures at McGill when he teamed up with Sise in 1955

to design the pavilion. He too had traveled in Europe, and went to the Festival of Britain,⁴ whose constructions are seen by many critics as possible models for the pavilion. The use of a thin corrugated concrete roof does indeed share some similarities with the English pavilions at the Festival, but in a 1998 interview Desbarats argued that Beaver Lake Pavilion was rather his first attempt at regionalist architecture.⁵ According to him, the pavilion's massing and its relation to the hill it was built on were inspired by a farmhouse with verandas he had seen in Quebec's countryside. He did not believe in a regionalism that was based on imitation but instead tried to use his Quebecer and Canadian roots to design new forms.

WITH THE RUBBLE STONE service block at ground level on its rear, the large first floor balcony on its three sides, and its cantilevered roof, the pavilion was also compared to Alpine constructions or Swiss cottages. Coincidentally, these types of buildings were in vogue in the Laurentians since the 1920s and in the north of Montreal, cottage architecture between the 1920s and the 1960s draws

The pavilion is formed of two rectangular volumes juxtaposed on their long side. When approaching from paths circling the lake, the larger volume stands out two stories high. Only a concrete slab sliding from the first floor into a monumental balcony delimits levels from otherwise clear glassed walls. Mullions mark the rhythm of the transparent first floor's panes, whereas on ground level, windows, doors and solid panels of rectangular and square shapes, constitutes a modern composition of alternating solid bright colors and clear glass. The five 6 by 12 ft. wall panels clad with autumn colored ceramic tiles were designed by renowned Quebec artist, Claude Vermette.

THE BUILDING can be accessed from all sides on its different levels. The ground floor access leads to changing rooms, washrooms, and a hall where skaters or skiers can warm up or put on their gear. The first floor restaurant, dining hall and terrace are accessed via a walkway to the left of the building, heading from a higher level of the hill at the back, and by a monumental

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Fig. 3. The restored Pavilion, overall view

mostly from traditional Quebecer and Alpine references. But their massive volumes, wood and rock finishes, steep roofs, small wooden windows, and their square panes, have nothing to do with the Beaver Lake Pavilion's design. Here, although the Pavilion does not reflect on the rest of his career with Sise, Desbarats carried out his ambition of redefining regionalism, thus creating an urban and modern version of leisure architecture. The main concern in designing the pavilion was its relation to the setting. The lake, a national depression, cannot be seen from Remembrance Road, passing north of the site, or from any other lookouts built along the park's paths. But without disrupting the landscape, the structure had to become a landmark for passersby.

concrete stairway on the pavilion's right. Visually separated is the stone covered service block located at ground level so that supplies can easily be transported from Remembrance Road to the restaurant's kitchen.

THE ARCHITECTS understood the challenge posed by the location, and their suggestion was inventive. In 1956, when construction was about to begin, Sise wrote to the City's Public Works Director: "... I feel that the unusual character of the building needs emphasizing at this time. Since it is to be a prominent element in what is probably the most beautiful landscape in Montreal, it was agreed from the beginning that it should be at a distance from across the lake. This accounts for the unusual form

of the building and also explains why it [has] already aroused interest in architecture magazine."⁶ Sise then refers to the publication of the project's sketches in major national architecture magazines. Once finished, in 1957, the building was also the subject of several articles in national publications. On inauguration in 1958 the pavilion was a success with critics as well as the general public.

RESTORING THE PAVILION

At the end of the 1990s citizens and city representatives were concerned with revitalizing the Beaver Lake area, making it more efficient and accessible to the general public. A suggestion was to tear down the pavilion and rebuild a contemporary structure, despite the fact that the pavilion was still close to its original state, and definitely of architectural interest. But Patrice Poulin, the city's project manager, did not think building a new facility was the solution and supported the decision taken in 1999 in favor of maintaining and restoring the existing pavilion.

worked in a team consisting of architects R  al Paul and Pierina Sa  a, and engineers. Entrepreneurs and contractors later joined the interdisciplinary group without which the project manager refused to do modern building restoration. The team formed was a key element in ensuring the result's coherence.

MODERN ARCHITECTURE turned out to be a particular challenge for Poulin. Firstly, most craftsmen have no experience in its restoration: the pavilion is one of the rare modern buildings in the province that was completely restored. Furthermore, modern architecture bears certain formal and esthetic similarities with contemporary architecture that make it difficult to intervene in a noticeably contrasting manner, attesting to the different historical layers in the building. But Patrice Poulin stresses the fact that all the people involved deeply cared about the building, and were thus dedicated to finding the best solutions when problems occurred. Each action was carefully studied in order to preserve the building's characteristics.



Fig. 4. The restored Pavilion, lateral view

The park on the mountain is a very sensitive matter since it is not only a heritage site but also a public one. City officials, the province's government, and various heritage groups such as Les Amis de la Montagne have their say in actions carried out on its location. Early in the process, Wendy Graham, landscape architect for the city, formed an advisory committee of specialists to assist the decision process concerning the new landscaping of the area, and also in part the building. Patrice Poulin also

WHEN QUESTIONS arose and problems occurred, were there any tools that helped to solve them? Although reports were made by architects early in the restoration process, they did not offer any historical or analytical insight into the building's major features. As a matter of fact, restoration projects' budgets do not usually include preliminary studies other than those that can shed a light on the material state of the building. To appraise the pavilion's situation, professor R  jean Legault held a

study seminar on the building with the students of DESS Connaissance et Sauvegarde de l'Architecture Moderne (today DESS en Architecture Moderne et Patrimoine, Université du Québec à Montréal) and in May 2003, the report produced by the seminar's students was handed in to the municipality for whom it served as a major decision making tool.

As with most modern constructions, the major issue was that the pavilion maintain its transparency. Original window panes were already double glazed but had to be replaced by improved panes whose transparency was tested before installation. Mullions were corroded and punctured and had to be changed, but a solution was hard to find as the original models were no longer available on today's market.

Architects Réal Paul and Pierina Saia came up with the idea of covering the mullions' exterior face with a cap retaining original appearance while being more effective insulation-wise. However the cap had to be crafted specially by a sub-contractor, A & D Prevost, and the result is far from being an industrialized product. Similarly, the concrete needed repairing. The balcony and staircase's concrete structure was rough after removal of framework, so that contractor Luc Gendron had to make sure that the original lines were reproduced on the repaired surfaces and that the initial pattern was reproduced before it was repainted in the initial light hue, rather than with the pastels colors used over time.

IF CONCRETE AND GLASS prevail outside, the interior shows an abundance of wood paneling and stone surfaces. The reinforced concrete prismatic roof is doubled indoors by cedar slats creating a feeling of lightness and movement. Every column, as well as the ground floor walls, was clad with narrow cherry-wood planks. Cedar slats and cherry-wood planks were merely oiled initially, but were later painted in different pastel colors. The pieces, however, remained in good condition, and a meticulous cabinetmaker took every piece to his studio where he restored them to their original state. Between the ceiling and the slats were neon lights that provided indirect lighting to the dining hall and played a major role in maintaining the pavilion as one of the park's landmarks at night, but their visual aspect and the crude lighting they produced were not considered optimal by today's standards. Originally, the ground floor was lit with metal and fiberglass wall fixtures that were wore down. New suspended metal fixtures and wall lamps constitute one of the rare new additions of restoration architects. Before they were accepted and crafted, tests were carried out to make sure that they would shed the appropriate light. The lengths of the suspended fixtures' cords were adjusted to follow the ceiling's curbs to prevent them from creating a visual barrier in the first floor's open space.

BUT THE PAVILION could not resume its original character without the art work it once displayed on outdoor panels at the base of the building, although these were removed long ago because they were not fit to resist winter climate. The first suggestion was to replace panels by transparent colored panes, but these would not have had the same effect of weight which for many was evocative of the masonry foundations found in traditional Quebec houses or Alpine cottages. Therefore, the original authors, artists Claude Vermette and his wife, Mariette Rousseau-Vermette, were asked to be advisors to the architects for the architectural treatment of the exterior panels. The result is the fruit of their close collaboration over months of work. Even if they do not have the same texture as the initial ceramic cladding, the tints of the autumn-colored enameled metal sheets are close to what the artist had initially suggested which Sise and Desbarats had apparently rejected because it seemed too bright. Let us hope that the ultimate realization of their project brought joy to the couple that passed away a short time after its completion. It certainly won public acclaim.

IN CONCLUSION, we would like to consider two situations that are still not completely resolved. Firstly, the building's efficiency: owing to its unusual design, and even with all due precautions, thermal bridges remain, making the pavilion

Fig. 5. The restored Pavilion, façade detail of the second floor





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Fig. 6. The restored Pavilion, interior view of the second floor restaurant

highly energy-consuming. In this day and age can this be overlooked in modern architecture restoration? Secondly, the building's upkeep: even a restoration as good as this one does not ensure the building's proper ensuing maintenance. Here, no further measures have been taken to secure the pavilion's state. How can a restoration remain successful when the building is threatened as soon as the project is considered finish?

OVERALL, Docomomo Quebec's work may seem like a drop in the ocean of actions and negotiations that have taken place around the pavilion's conservation, but the impact of their actions can not be suitably evaluated. How can the importance of people's awareness in such a long process be assessed? According to the project manager, there is no doubt that the restoration would not have had the same result if the craftsmen had not been as devoted to the project. Hopefully their work will touch the public and owners enough to increase, in return, their level of awareness. Be that as it may, such a successful restoration helps not only the cause of other buildings at risk, but also serves to promote modern architecture's value... With proper knowledge may come better care.

I would like to thank Patrice Poulin, Project Manager, City of Montreal, for his time, and help in documenting this project.

MARIE-FRANCE BISSON completed the DESS *Connaissances et Sauvegarde de l'Architecture Moderne*, at Université du Québec à Montréal, with particular interest in the relation of vernacular architecture and modern architecture. As a freelance art historian she deals with built heritage in Quebec.

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- 2 Claude Robillard, "An Urban Park Service. Montreal," *Royal Architecture Institute of Canada Journal* 34: 12 ([December] 1957), 473.
- 3 DESS Connaissance et Sauvegarde de l'Architecture Moderne, "Pavillon-restaurant du Lac aux Castors," Rapport d'Étude, Montréal, Université du Québec à Montréal ([May] 2003), 5.
- 4 Festival of Britain, National exhibition held across Britain in 1951.
- 5 Jim Donaldson, "Guy Debarats" [interview], *McGill School of Architecture* (November 11, 1998), on line: <http://www.mcgill.ca/architecture/aluminterviews/desbarats/>, consulted on August 29, 2007.
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Modern Heritage and Folk Culture in Atlantic Canada

STEVEN MANNELL

In the second half of the twentieth century, modern buildings were a key symbol of progress across Canada, embodying society's aspirations for economic, social and technological progress. Modernist forms, shared internationally through improved communications and travel, and paid for by global industrialization, engendered a marked leaning towards internationalism, perceptions of equivalency between diverse places, and the establishment of universal 'type' solutions to common problems and concerns.

MODERNITY has always existed in uneasy relationship to local vernaculars, especially in the many regions of Canada outside the major population centers. Here modernity is a work in progress, imperfectly achieved or perhaps never truly begun. Federally-funded industrialization and regional development strategies create massive disruptions of traditional cultures largely defined by resource extraction and traditional harvest economies. Each wave of economic development proves no less capricious than the traditional harvest economies, while the 'modernization' of farming, forestry and fishing results in increased overhead and indebtedness, destroying traditional subsistence economies. With no substantial and lasting industrialization, these societies have jumped directly from pre-modern resource extraction to post-modern service economies. Young people are left with a choice between low-paying jobs in call centers and restaurants, or 'go in' down the road' to Toronto or Fort MacMurray, the Canadian version of the internal migrant worker exile widespread around the world.

TOURISM, ANTI-MODERNISM AND THE QUEST OF THE FOLK

Mass tourism is modernity's answer to the failure of industrialization and the loss of subsistence means. Official and popular reception of modern architecture in Atlantic Canada is poised on an uneasy edge between the desire to be 'up-to-date' and the need to serve the folksy image marketed by the tourism industry. Beginning in the 1930s, the rise of the tourist industry in the Maritime Provinces

and Newfoundland was accompanied by the development of the notion of an Atlantic Canadian 'Folk.' The region's tourist image is a carefully constructed amalgam of unspoiled nature and pre-modern buildings

Fig. 1. Nova Scotia Tourism magazine advertisement, 2005

Now, what to do with
your return ticket?

Time simply feels different in Nova Scotia. Townscapes are almost unchanged over nearly three hundred years. The folks you met yesterday feel like life-long friends. And days unwind in a sweet, slow waltz. It's funny how it seems you were born knowing the words to the song, 'You'll wish you could stay forever.'

This is
NOVA SCOTIA
Canada's Seacoast

Go online or call to book your Nova Scotia vacation and order your free 400-page Doers' & Dreamers' Guide.
novascotia.com/treasure 1-800-565-0000 op 338

visit our neighbours at novascotia.com/neighbours

© Nova Scotia Department of Tourism and Culture



Fig. 2. **Cummings & Campbell** Architects & Engineers, St. John's, NL (architectural firm), Angus Campbell (design architect), *Bowring Brothers Store*, St. John's (Newfoundland and Labrador), 1950s. View of the parking ramp and stair tower at the back of the building facing the harbor, 2001

and settlements. Ethnographic fieldwork built a body of folk songs and stories, and of traditional crafts and folkways. Documentary evidence has been supplemented by a series of invented 'folk' elements, including heraldry, handicrafts and myths of origin, intended to create a seamless image of tradition and simplicity for consumption by visitors 'from away.' Evangeline, Anne of Green Gables, Gaelic New Scotland, the all-pervasive Nova Scotia tartan, the hooked mat, all have been invented or perfected since the 1930s, supported by schools devoted to bagpipes, weaving and step dance. According to Ian McKay: "Between 1935 and 1964 the government of Nova Scotia pursued a consistent policy of developing historical resources to promote tourism and respond to a public hungry for a reassuring 'presence of the past.' The revival of a golden age, with its restored fortresses and tall ships, was an applied romantic antimodernism . . ."¹

THE ROMANCE of the distant past has little place for the dreams of progress of the recent past. Tourism marketers in Nova Scotia (soon imitated in the rest of the Atlantic region) developed a story line emphasizing that "[t]he province was essentially innocent of the complication and

anxieties of twentieth-century modernity."² Preservation of pre-twentieth century buildings and precincts was supported by the tourism industry in the 1970s, while a desire to express the comforts of the distant past has maintained post-modern historicism as the expression of choice for many new buildings. Buildings with modern expression spoil the illusion, and as a result many have been 'historicized' to support the tourism story line—for example, the pseudo-traditional brick wallpaper applied to the street frontage of Angus Campbell's Bowrings Store in St. John's. The wonderful modern composition of stair tower, ramp and deck, out of sight of the harbour, remains intact, while an inch-thick veneer of a past that never was replaces the sweeping concrete canopy and plate glass window that formerly negotiated the bend in the street.

SOME EARLY BUILDINGS serving the tourism industry aspired to a critical framing of regional characteristics. Alexander Tzonis and Liane Lefaivre define "defamiliarization," a tactic of Critical Regionalism, as the use of place-defining elements in a way that resists sentimentality.³ The Interpretive Centre at Port aux Basques, Newfoundland⁴ originally greeted travellers debarking the ferry from mainland Canada with an abstract white geometry of forms, capable of evoking alternately the sense of an iceberg on the ocean, rock formations of the local fjords, schooner sails returning from the banks, or a traditional outport fishing shed or 'lean.' Recent tourism marketing campaigns have repainted the center, covering the white superstructure with primary colours taken from fishing sheds, "re-familiarizing" the abstract forms by closing down the alternate readings in favour of the ruling Folk narrative. Le Pays de la Sagouine in Bouctouche, New Brunswick is a more insidious manifestation of the Folk imperative. In the absence of any actual pre-modern artefacts in the area, an ersatz Acadian village was constructed of whole cloth, a physical embodiment of the fictional setting of Antonine Maillet's popular tales of the charwoman "La Sagouine." The settlement pattern borrows more from theme parks and shopping malls than from study of traditional villages, while the architectural expression employs a generalized 'pastness' drawn from post modern historicism, supplemented with a few recognizably Acadian motifs. This 'familiarization' evokes a soothing nostalgia in the visitor, creating an emotional connection to a fictive past. Kenneth Frampton notes that such populist expressions "seeks to evoke not a critical perception of reality, but rather... to attain, as economically as possible, a preconceived level of gratification."⁵ A place that allows real tourists to visit fictional locales, the project stands in the tradition of "Green Gables" on Prince Edward Island's north shore, deemed to be the setting for Lucy Maud Montgomery's Anne novels; this tradition also includes the many



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Fig. 3. Bowring Brothers Store, view of the original storefront facing Water Street, with continuous plate glass display windows and cantilevered canopy, 1970s

simplified and romanticized interpretations of past peoples, traditions and events that annotate actual historic sites throughout Atlantic Canada.

The all-pervasive character of the tourist milieu has turned this outward image back upon the place and its people, with 'quaint' and 'folk' increasingly coming to define the self-image of Atlantic Canadians. According to Ian McKay: "From the 1920s on, the state systematically created a complex network of words and things to make the 'outsiders' experience of Innocence the 'insiders' lived life experience." And further: "For outsiders who wanted to be insiders, for Nova Scotians torn between leaving and staying, the Folk offered a way of conceptualizing identity and dealing with the painful uncertainties of modernity."⁶ A clear and distinctive image of 'the simple life' back home is especially consoling to Atlantic Canadian exiles, such as the migrant construction workers from Cape Breton bunked up a dozen to a house working the Alberta oil sands. "Farewell to Nova Scotia" is now the provincial anthem, and regret for a life we were told we once lived replaces our true memories of the place we left.

What does not fit this ruling narrative is dealt with rather ruthlessly. Cases in point are two projects that gave expression to an optimistic and progressive vision of the future of the region; now that these visions run counter to the myth of Folk innocence, the buildings themselves are destroyed or abandoned to the elements.

Conceived in the early 1970s by the New Alchemy Institute, a Boston-based group devoted to a renewed integration of science and the humanities, the PEI Ark was powered by sun and wind, grew its own food on



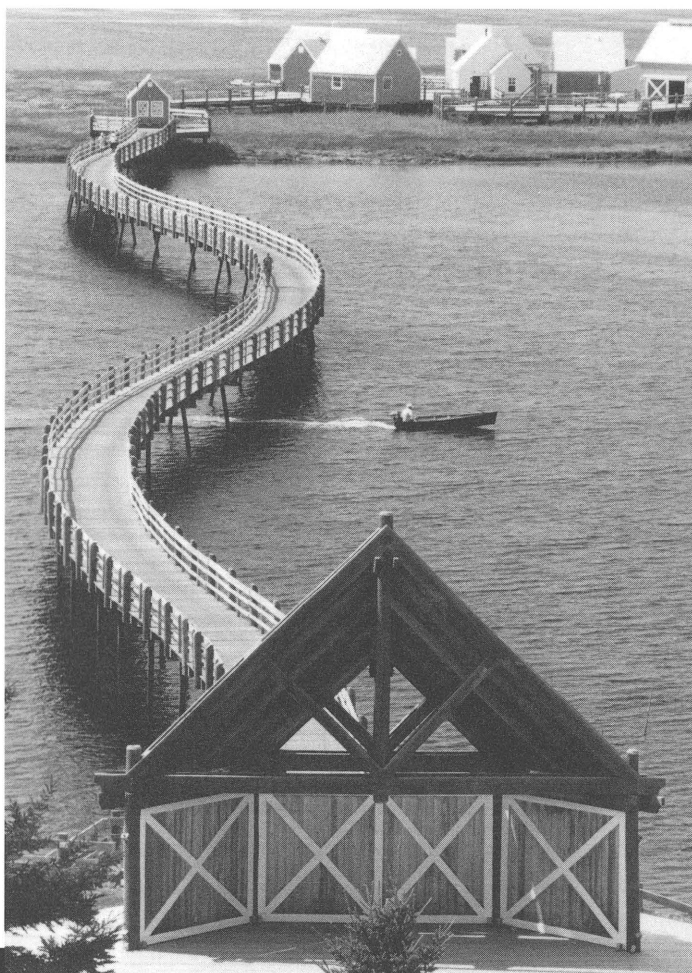
© Steven Mammell

Fig. 4. Bowring Brothers Store, view of Water Street frontage after the application of a historicist veneer of brick and punched windows in the 1990s, 2001



© Beaton Sheppard collection

Fig. 5. Beaton Sheppard Ltd., St. John's, NL (architectural firm), Beaton Sheppard (design architect), Port aux Basques Interpretive Centre, Port aux Basques (Newfoundland and Labrador), 1976–1978. View across the driveway, n.d. [1978]

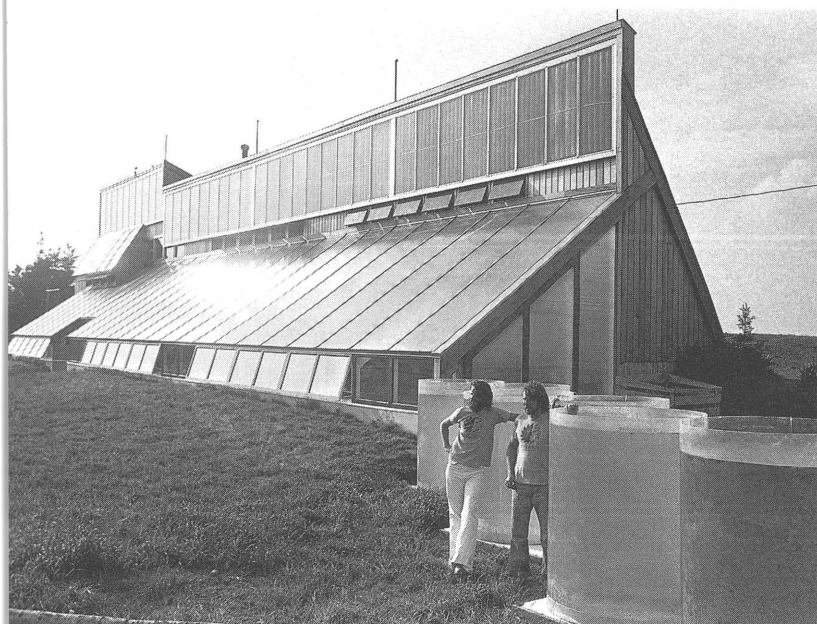


© Architects Four collection

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Fig. 6. **Architects Four Ltd.**, Moncton, NB (architectural firm), Elide Albert, Diane VanDommelen (principal architects), Jeff VanDommelen (design architect), *Le Pays de la Sagouine*, Bouctouche & Ile-aux-Puces (New Brunswick), 1991 & 1999. The boardwalk looking toward Ile-aux-Puces, n.d.

Fig. 7. **Solsearch Architecture**, Charlottetown, PE and Cambridge, MA (architectural firm), David Bergmark, Ole Hammarlund (design architects), *the PEI Ark*, Spry Point, Little Pond, Prince Edward Island, 1975–1976 (demolished). David Bergmark and Ole Hammarlund in front of the south wall and solar collector panels, n.d.



© Bergmark Hammarlund Jones collection

the grounds and in its greenhouse, and treated itself its own water and wastes. Like a traditional Prince Edward Island homestead, the Ark was intended to be fully self-sufficient on its rural site. The technologies were in the spirit of the Whole Earth Catalog: an urban and science-based rediscovery of traditional country ways and means, deployed in resistance to the growth paradigms and input-output mentality of industrial modernism. Architectural expression was self-described as “conservative modern.”⁷⁷ Abstract pitch-roof masses evoked local barns, while the site planning learned lessons in wind and solar advantage from vernacular examples. Traditional Island values were echoed in the Ark’s publicity, with an emphasis on “prudence - skill and good judgement in the use of resources”⁷⁸ as the guiding principle of design and operation. Here Island folkways were ‘defamiliarized’ through a hippy reading and representation.

PIERRE TRUDEAU, Prime Minister of Canada and paragon of social progress, offered these opening remarks in 1976: “This Island . . . is now providing hospitality to a new commitment, a commitment that the environmentalists refer to as ‘living lightly on the earth.’” The Ark was conceived at a time of enormous optimism and appetite for the future in Canada. But the remote site and the emphasis on self-sufficiency suggested a retreat from organized society. ‘The Ark’ was so-called because the project was designed to survive the coming economic holocaust. Other young ‘new pioneers’ moved to the rural Maritimes in the 1970s based on their estimation of the fallout patterns from a nuclear strike on the US eastern seaboard. In this contradiction the Ark reflected the unresolved motives of the back to the land movement in its attempt at building an Arcadian utopia while at the same time securing an escape from the coming technological apocalypse.

The Ark had a chequered career, especially with the rediscovery of cheap oil and consumerism in the 1980s. For a short while the Ark was converted to a bed-and-breakfast inn, but it was abundantly clear that Anne of Green Gables never slept there. The image of the Ark and the social and ecological ideals it expressed were irreconcilable with the preferred image of green gables, red soil and jolly fiddlers that had been pre-sold to its guests. Its demolition in 2000 came just too soon for the Ark to be rediscovered as a pioneering work of sustainable design. The Ark embodies an important but suppressed story in recent Maritime history, that of the draft dodgers, hippies and back-to-the-landers of the 1960s and 1970s. Their legacy of social justice and environmental activism remains mostly undimmed in Atlantic Canada, thanks to a shortage of local opportunities to sell out to ‘the Man.’ As yet, there is no official hippy tartan, and little place for this episode of history in either school curricula or tourism guides.

NEWFOUNDLAND HOUSE was commissioned by Premier Joey Smallwood in 1958 as part of his controversial Russwood Ranch pig farm. Newfoundland House was conceived as the central villa to Smallwood's personal experiment in modernity and progress, a large-scale pork ranch. While traditional outport houses and outbuildings can simply be 'launched' due to their lack of permanent foundations,⁹ Newfoundland House is rooted in its knoll, emphasizing its tie to place and symbolizing the need for the agicultural and industrial workers of Newfoundland's future to be rooted to the land, in contrast to the restlessness of fisherfolk. The extensive development of the landscape, with encircling carriage drive, reflecting pond, stone walls and gates, also contrasts with traditional settlement patterns that either neglect the ground altogether, or fence off areas for pasture or kitchen gardens. While the house responds in subtle ways to the character of its site and climate, the forms and geometry offers little familiar material to Newfoundlanders; instead, like Smallwood himself, Newfoundland House is a provoking symbol of coming progress and change.

The house is the focus of a prominent view across the reflecting pond from Roaches Line, and was long an inescapable landmark on the route from St. John's to the summer vacation area of Conception Bay South. A gas station and restaurant across the road provided travelers with an ideal vantage point to take in Joey's house and his vision of progress. Joey Smallwood was a pariah in Newfoundland for his role in the referendum that ended independence. As premier of the new province Smallwood was evangelical in his desire for progress and modernity, with megaprojects like the Churchill Falls dam and power plant and the trans-Newfoundland highway, myriad industrial and mining projects, and above all the forced relocation of numerous outport fishing settlements in an effort at physical and cultural modernization. Newfoundland House, commissioned by the Newfoundland premier from a Newfoundland architect, was an image far from reassuring to Newfoundlanders who felt the uncertainties of confederation and relocation.

Joey Smallwood gave the house to the people of Newfoundland as a continuing symbol of his legacy of modernization, but no subsequent government has been willing to fulfil this wish. Instead, a Smallwood center exists at Gambo, Joey's tiny and remote home village, keeping the Smallwood legacy at a healthy distance from St. John's and emphasizing his early, pre-Confederation, pre-modernization policy years. The Newfoundland House stands in dire straits, abandoned. Even the regional road system has been redesigned to move the main route well away from views to the house. Newfoundland House offers the potential to house a significant interpretive center of Smallwood and post-Confederation Newfoundland, easily accessible

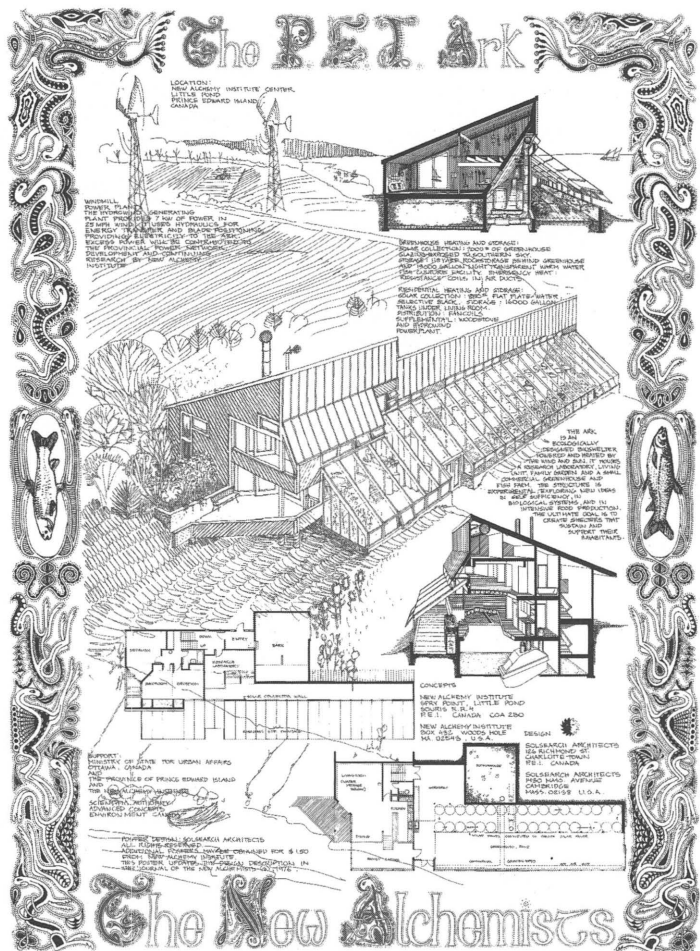


Fig. 8. "The PEI Ark: The New Alchemists" poster, n.d. [1978]. Two-color lithograph

to tourists and Newfoundlanders alike. Such an institution would be an important step for Newfoundland in coming to terms with the difficulties of the recent past. In the PEI Ark, the aim was to console, in Newfoundland House to provoke, but in both projects the specifics of place, landscape and climate are embodied, tempering the cultural material brought from away. In each case the result is an image that is neither reassuring nor easily commodified in the Folk/tourist market. The architectural images challenge viewers to think critically about the culture and destiny of place. The sad neglect of 'Newfoundland House' and the demolition of the PEI Ark indicate the post-modern retreat from a positive view of progress and the future, and exemplify the cold disregard paid to authentic cultural artefacts that no longer fit the ruling Folk/tourist narrative.

SO WHY WORRY about modern heritage in a region where many feel that modernity has failed? There are the worthy reasons, including our obligation to bear witness to the continuum of our heritage, not just to an imagined once-upon-a-time 'golden age.' Ian McKay observes that the problem with touristic narratives, whether imposed or adopted, is that: "... full and free citizenship in a society of equals requires an open dialogue with the past, and such an open dialogue becomes increasingly unlikely if



Fig. 9. **Cummings & Campbell**, Architects & Engineers, St. John's, NL (architectural firm), Angus Campbell (design architect), *Newfoundland House* (Joey Smallwood Residence), Roaches Lin (Newfoundland and Labrador), 1958-1960. Premier Joseph Smallwood in the living room of Newfoundland House, 1961

canons of significance, criteria of identity, and the very concept of community all come to be structured according to commercial criteria."¹⁰ (QF 40-41) Our built modern heritage is a legacy of ambition, will and symbolism, left for our benefit and use by those who came before us; it is folly to ignore the significant embodied energy, both cultural and material, in modern buildings. It is puzzling that contemporary Atlantic Canadians are easily motivated to conserve buildings from the pre-modern era, a time that most would find oppressive to inhabit in social, political and economic terms, yet are uncomfortable recognizing the value of the built heritage of the post-war era, which expresses such legacies as democratization, human rights, social mobility, access to education and health care, access to decent housing and the arts, women's and minority rights, and improved standards of living. When we casually destroy the buildings, what exactly do we say about the values they express?

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to work on modern heritage, he has published studies on spatial improvisation in modern lightweight building techniques, and on the Toronto Water Works Extension and twentieth century public works.

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Fig. 10. *Newfoundland House*. Painting by Reginald Shepherd, 1964. Oil on canvas. William Smallwood collection



GUIDEBOOK CANADA DISCOVERING MODERN MONTREAL AND THE ESTÉREL RESORT IN QUEBEC

Last autumn I spent a short and fairly busy week in Montreal, but on no account was I going to miss out visiting this North American 'megacity' with its Mediterranean effervescence. To this end, a playful spirit slipped into my hands a guidebook of modern architecture in Montreal from the 1930s to the 1980s. Accordingly I tested this recently published book, just as a sports journalist samples a new ultra-light mountain-bike, or a gastronomy expert tastes slow food in Rome.

Before starting out on a harvest of the city's remarkable buildings, it is absolutely compulsory to read (in French or in English, the book is bilingual) the six-page introduction. It outlines, in a crystal-clear way, the frame of reference of urban development within which built objects are and were inserted, thus charting a history of Montreal's transformations, from a missionary outpost on the New World's doorstep to Quebec's metropolis of the future.

One of the book's strong points is to organize, in a series of half-day outings, the discovery of the 150 or so buildings that it has itemized. Beyond its practical aspect crucial to all guidebook-readers, to inquisitive strollers or dedicated researchers alike, these tours cast virtual nets allowing the visitor to grasp the city and to link the introduction's content with the buildings in front (or inside) of which they stop.

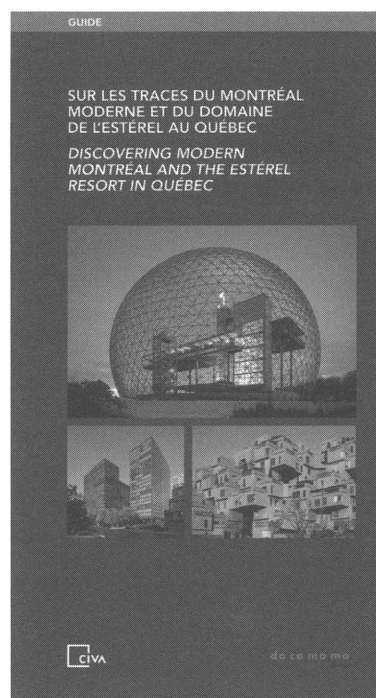
Six walking tours are located within the heart of the city: the modernist city-center, at the foot of the Mont Royal; the eastern city-center and the old Montreal; Expo 67, on the banks of the Saint-Laurent river; Montreal's underground; Mies van der Rohe in Montreal; Rosemont district and the Olympic Park. The seventh outing is outside the city, north of Montreal, and covers the Estérel Resort in the Laurentians, a creation of the baron Empain. Except for the last, all tours can be

made using the public transportation and begin with a Metro station, itself the subject of a visit.

The guidebook provides a rapid introduction to the tour's itinerary as well as a map. All the selected buildings are signaled by color photographs—all taken ad hoc by the same photographer, Michel Brunelle, which accounts for the book's graphic coherence—and a clear and pointed bilingual note.

The book's value naturally pertains to the selected works, and their number substantiates the high level of modern architecture in Montreal. How interesting to realize that the surprise caused by R. Buckminster Fuller's geodesic dome (1965–1967) owes more to the spatial quality of the current sphere—renovated thanks to a modest and intelligent project—than to its innovative structure. What a pleasure it is to discover Mies van der Rohe's superbly composed and built Westmont Square (1964–1969)—what a shame that the esplanade's initial travertine stone has been replaced with granite!—or the graded piles of prestressed concrete modules in Moshe Safdie's Habitat 67 project (1960–1970), which are just as interesting for their hollow interior space as for their intricate exterior geometry. The Place Bonaventure ensemble—this "real megastructure" according to Reyner Banham—is striking, its concrete shell textured by vertical sand-blasted grooves tightly circling a multifunctional compound of shopping malls, central square, showrooms, conference center, garden-hotel, grafted at the junction of mechanized flows consisting of railway, subway, urban highway.

The relevance given to art works is noteworthy. These marked contributions to Montreal's modern architecture are methodically pointed out and detailed. In short, while using a guidebook that turns out to be a significant



means of understanding the metropolis, the pleasure of all of Docomomo Quebec's members is perceptible: the satisfaction of having designed and written a work producing heritage and introducing it to the general public. As a final point, the guidebook's shape is worth mentioning: thanks to its dark blue shade it can be spotted without difficulty if forgotten on a bench during a visit, and thanks to its dimensions (13 x 23 cm) and weight (450 grams), it is easily carried around in a coat pocket. Finally, its slightly glossy and resistant paper wears well: it stood the test of wet snow that heavily fell in Montreal on the November morning I spent pacing tour A.

FRANZ GRAF, architect, Docomomo Switzerland.
Translated by **Isabelle Kite**

France Vanlaethem, Danielle Doucet, Sophie Mankowski, Conrad Gallant. Sur les Traces du Montréal Moderne et du Domaine de l'Estérel au Québec / Discovering Modern Montreal and the Estérel Resort in Quebec. Photographs: Michel Brunelle Docomomo Quebec, CIVA: Brussels, 2007 ISBN: 978 2 930391 28 1 217 pages, color photos and illustrations Bilingual, French/English

BOOKSHELF FROM THE VERNACULAR TO THE PARTICULAR

The historian, teacher and anthropologist Paul Oliver is considered one of the world's leading authorities on vernacular architecture, as anyone who has consulted his monumental three volume work *The Encyclopaedia of Vernacular Architecture of the World* (Cambridge: 1997) will know. This work will shortly be available in digital form. Dr Oliver's latest book covers the field in a much more personal way, bringing together in one volume, *Built to Meet Needs* (Oxford: Architectural Press, 2007), a series of his own essays on a variety of cultural issues related to vernacular architecture. Written by a precise observer of local, national and international customs and cultures, it presents articles that indicate Dr Oliver's developing attitude to the study of vernacular architecture over three decades and also sets out clearly the growth of this relatively new discipline. No one has more closely followed this growth than the author.

What should be of interest to Docomomo members is the sheer international scope of the studies that refer to communities, social mores and buildings in East and West Africa, Nepal, Iran, Turkey,

Greece, to Mexico, Arizona, Peru and Costa Rica. Attractively produced and meticulously edited the book fleshes out a parallel tradition to the modern movement in architecture, of a more anonymous, custom-designed local vernacular tradition producing affordable buildings, often for urgent social needs and in most cases without architects.

Paul Oliver. *Built to Meet Needs: Cultural Issues in Vernacular Architecture*. Oxford Architectural Press (Elsevier), 2006. ISBN 0-7506-6657-9

ECO-FUNCTIONALISM

Designing for social needs is also the theme behind the new book on the work of the leading London based architectural practice of Penoyre Prasad: *Transformations: The Architecture of Penoyre and Prasad* presents a wide-ranging survey of their architectural projects since 1988. It surveys in depth the purpose and form of this work as well as its use and its re-establishment of functionalist values and concerns about current ecological issues.

A dense and rich text pervades the whole book, reinforcing the intellectual gravitas of a practice that has produced well-designed, thoughtful—as well as award winning—buildings, much appreciated and well used by their clients. Dr Sunand Prasad, who has written the eight essays (Purpose, Construction, Time, Content, Art, Care, Learning and Limits), helps to set the book apart from typical practice monographs. There is real substance here in the well-edited and referenced pieces that make a valuable contribution by explaining the connection between a practice's theoretical underpinnings and the work in hand.

Prasad is currently the President of RIBA and also personally involved in trying to help establish a Docomomo chapter in India.

With his partner Gregory Penoyre, he worked for a number of years in the office of the London based architects, Edward Cullinan Architects, an original craft-based modernist practice noted for its influence on the education of its assistants and for nurturing their latent talent, as well as for some very original work. This was recognized this year by the award of Britain's prestigious RIBA Royal Gold Medal to Ted Cullinan.

Greg Penoyre & Sunand Prasad. *Transformations: The Architecture of Penoyre & Prasad*. London: Black Dog Publishing, 2007. ISBN 978 1 904772 67 5

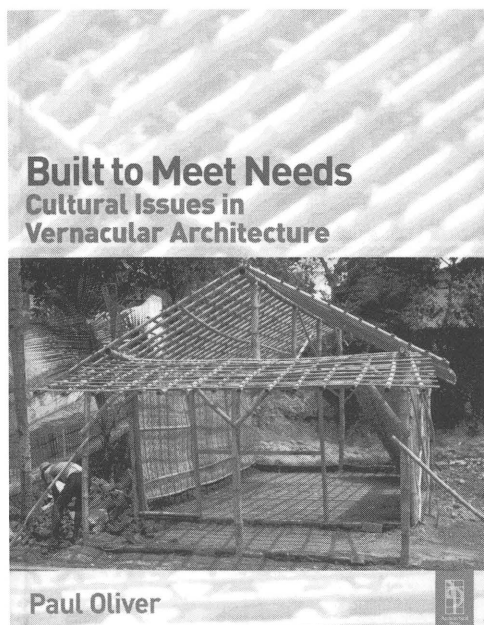
NORDIC SCENE

The Norwegian firm Snohetta is the subject of a rather different type of book to those just mentioned: *Conditions: Snohetta – Architecture. Interior. Landscape*. (you are meant to note the full stops!) is a vanity type of publication, not without graphical interest, on the work of this Nordic practice best known for their winning design for the Biblioteca Alexandrina in Egypt, and now an international multi-faceted practice (begun in 1987) with a staff of 80 and offices in Oslo and New York City.

Snohetta. *Conditions: Snohetta – Architecture. Interior. Landscape*. Baden: Lars Müller Publishers, 2007. ISBN 9783037781180

A SENSE OF PLACE

An holistic-phenomenological and Buddhist approach to architecture is the theme of the book called *The Act of Creation and the Spirit of a Place* by Technion and AA trained Israeli architect Nili Portugal. This rather unusual book has been published by the enterprising Axel Menges of Stuttgart. The opening personal text follows the influential lines in the sand drawn out by Christopher Alexander and Prof. Geoffrey Broadbent, theorists and teachers who have examined the roots of creativity in planning terms and



the interpersonal relationships in the built environment. An ambitious book, it sets the scene for a wider discussion of these issues but applies them to the various cases on which Nili has worked. It is about thought processes that capture the imagination, and it possibly demands a gentle face-to-face discussion with the arguments embraced by the author rather than a trawl through many projects. It is not always possible when you are leafing through the pages of a book of modest size and large intentions to really come to terms with the author's wider intentions.

Nili Portugali.

The Act of Creation and the Spirit of a Place: A Holistic-Phenomenological Approach to Architecture.
Stuttgart/London:
Axel Menges, 2006.
ISBN 3-936681-05-8

XL MODERN

For Taschen, size matters. It is profitable and clearly it keeps readers happy. Whether it is sex, photography, fashion, art or architecture, Taschen have taken the high ground with their publishing programs which exhibit a Teutonic logic and a close attention to detail.

At one end are the books for the exclusive international collectors' market, and at the other, the economical, well presented, and mostly well written, basic architectural monographs that range from Wagner, Loos, Hoffman and Schindler to Ando and Calatrava, an affordable series which is helping to provide an introduction to the work of these masters for new generations of students. The big book bang began with a wonderful volume on the west coast *Case Study Houses 1945-66* followed shortly afterwards by the complete works of Richard Neutra. Both volumes are still available.

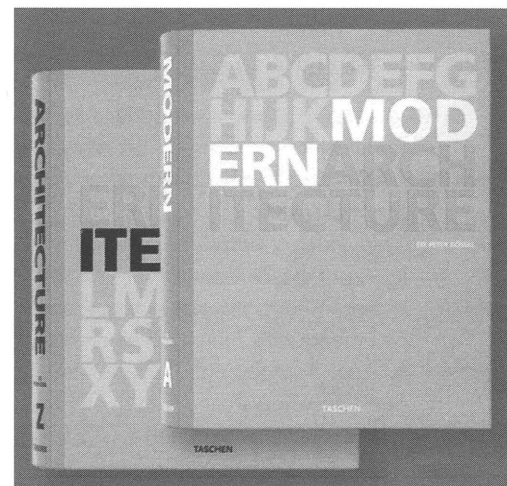
Now we have the monumental two-volume edition of *Modern Architecture A-Z* edited by Peter Gössel and a distinguished group

of contributing editors. There are over a thousand pages in the two volumes, some 600 entries and over 5,000 illustrations. The importance of the architects covered is acknowledged by the number of allocated pages and in the scope of the incredibly well reproduced illustrations. All the big names are here, as one would expect: Foster, Meier, Gehry and Hadid lead the pack of recent names, one paralleled of course by the modern movement masters from Wright to Le Corbusier. The 'isms' of architecture are dealt with in separate sections. The book, despite the fact that it is essentially a picture book with shortish accompanying texts, is intriguing in that you can play games with yourself—or even others—of guess and chance through its alphabetical sequence: is this or that architect/engineer there or not there, coming up with some fascinating answers. From a publishing, printing and editorial point of view, it is a magnificent production. If you have a table strong enough and pocket big enough to afford this volume, or indeed capable of screwing in four legs into the stout slip case, then this heavyweight production by Taschen is not to be missed in any language.

Peter Gössel (ed.). *The A-Z of Modern Architecture*
(two volumes in a slip case).
Köln: Taschen GmbH, 2007.
ISBN 978-3-8228-6313-8

VAN DOESBURG VERSUS ARP

A new publication on the work of Sophie Taeuber-Arp is rather slender and basically a bilingual (English and German) catalogue for a limited exhibition at the Museum Bellerive, Zurich. However, it does have a good deal to say about the famous Aubette Cabaret in Strasbourg, which more often than not is attributed to Theo Van Doesburg and therefore seen as de Stijl-ish. Taeuber-Arp, writing to her friends the Hildebrandts in 1929, says she and Hans Arp brought in Doesburg and affirms that their designs were only their



own: "I did none of my work jointly with Doesbourg (sic), except of course we kept the project as a whole in mind . . . He even published two of my husband's works as his own . . . and was excluded from a big exhibition because of this false claim."

Designer Dancer Architect
Sophie Taeuber-Arp.
Zurich: Verlag Scheidegger & Spiess, 2007.
ISBN 978-3-85881-196-7

CONCRETE CANADA

A publication on Canadian post-war modern architecture provides a most detailed and useful guide to the modernist buildings in Toronto, focusing on the prosperous

**SOPHIE
TAEUBER-ARP**
GESTALTERIN ARCHITEKTIN TÄNZERIN
DESIGNER DANCER ARCHITECT

MUSEUM BELLERIVE EIN HAUS DES MUSEUM FÜR GESTALTUNG ZÜRICH
 SCHEIDEGGER & SPIESS

period of post-war development in Toronto from the 1950s to the 1970s. It shows the way in which a modern concrete architecture transformed the city, providing it in 1965 with what Sigfried Giedion called the "first civic center worthy of its name in Viljo Revell's City Hall," a masterpiece that sits in this great city along with John Andrews's brilliant Scarborough College and CNN Tower and Parkin's Bata Offices (sadly now gone). There are a number of informative and particular contributions on the 52 structures featured in the text.

Michael McClelland and Graeme Stewart (eds). *Concrete Toronto: A Guidebook to Concrete Architecture from the Fifties to the Seventies.* Toronto: Coach House Books, 2007. ISBN 978-1-55245-193-9

CRITICAL ASPIRATIONS

Objective, impartial and well-informed architectural criticism is rare. Often linked to commercial ends or company promotional aims it is still hard to come by. Acting in an independent capacity in this area, the Aga Khan Award for Architecture, who previously held an important seminar on Architectural criticism in Malta in 1987. In collaboration with CICA (The International Committee of Architectural Critics) and

ARCHITECTURAL CRITICISM AND JOURNALISM: GLOBAL PERSPECTIVES



Aga Khan Award for Architecture

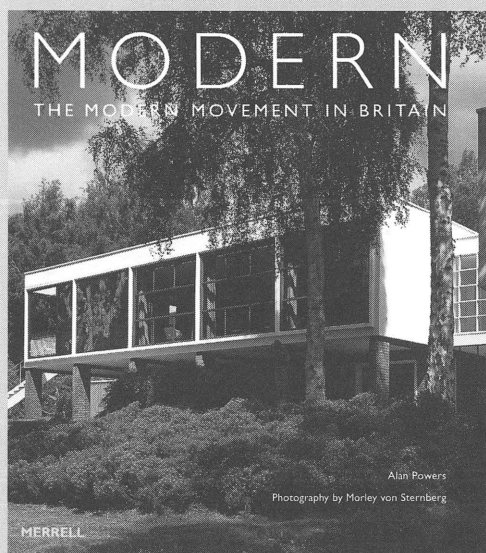
the Kuwait Society of Engineers, they held a conference called Architectural Criticism and Journalism: Global Perspectives in Kuwait City in 2006. A unique and well-edited report on the conference, now available from the AKAA, examines the subject from the perspective of critics and journalists working in the Middle East, Europe, Asia, North America and Mexico.

Mohammad Al-Asad with Majd Musa. *Architectural Criticism and Journalism: Global Perspectives.* Geneva: AKAA, 2006. ISBN 88 422 1480 9

DENNIS SHARP, *Dennis Sharp Architects* is currently vice-president of AA London, chair of CICA and co-chair of Docomomo UK and member of Docomomo ISC/Registers.

THE POWER OF NATIONS MODERN ARCHITECTURES IN HISTORY

The ambitious universal ambitions of the modern movement no longer seem sacrosanct as everyone has become increasingly curious about specific cultural and environmental contexts. Docomomo has consistently celebrated diversity. Nonetheless, national and local cultures still seem problematic given legitimate apprehension about nationalist fervor and provincial backwardness. Despite such misgivings nations remain salient factors, even in today's global world. Each one translates dominant images and ideas into its own idioms. Both natural and cultural environments vary considerably. Construction necessarily responds to formal regulations, informal conventions and indigenous materials, both natural and industrial. Legacies of economic conditions, social categories and political tensions affect what is possible—and what is built. National imaginaries sustain shared notions about the public sphere and private lives, influencing even those who want to challenge such norms. These configurations are never cohesive essences,



Modern: The Modern Movement in Britain

by Alan Powers

Photography by Morley von Sternberg

ISBN 978-1-8589-4405-0

Published by Merrell. RRP £24.95

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although patterns are evident, albeit difficult to explain.

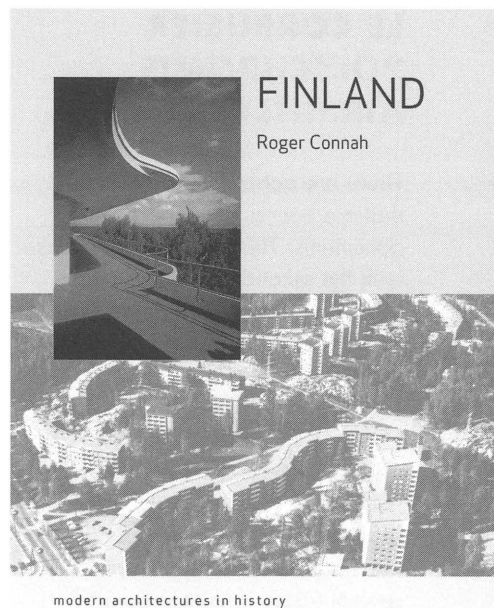
Reaktion Books has taken the topic in hand with a new series, "Modern Architectures in History," which explores the distinctive if overlapping narratives of countries around the world. Vivian Constantinopoulos, who conceived of the project, explains, "I wanted to structure the series as a way to broaden our understanding of national cultural histories, but also to move beyond a style-driven approach to architecture. The series engages with styles and aesthetics but relates them to larger frameworks of needs and desires, demonstrating how architecture has responded to social considerations, political pressures and economic forces throughout the history of modernism to the present day."

Interweaving continuities and particularities, this broad-based project undercuts accusations of parochialism. Indeed, qualities that are especially evident in one place later come into focus as minor themes elsewhere. Within a shared timeframe, each author asserts a particular moment for modernism's origin in that country, orchestrating a distinctive sequence of themes. The language is unfettered by jargon or vague assertions since the series is addressed to architects, students of architecture and the larger public, both local and international.

More than fifteen books have already been commissioned, with more to come. The histories of Greece, Italy, Austria, the Netherlands and Spain will soon appear. Volumes on Brazil, China, Israel, India, Japan and Turkey are also in the works. The three handsome books published thus far establish a compelling template. Roger Connah investigates how modernism in Finland became identified with national character when the country gained independence in 1917. Modern architecture helped remap the new nation, layering a heroic cultural

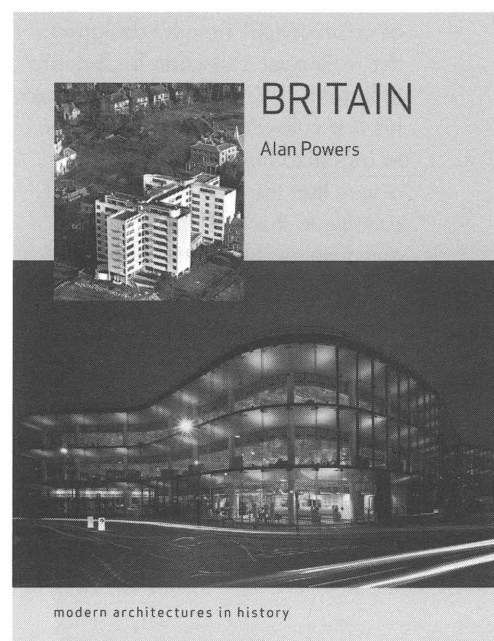
and social agenda onto a unique natural landscape. Connah focuses on public institutions like architecture schools, museums and governmental agencies, placing the work of less familiar architects alongside well-known figures. By contrast, Britain has had a far more ambivalent relationship with modernism. Alan Powers asks whether the connection was willing or forced, but he also shows that modernism was never as foreign or unpopular as most people assumed. Overlapping discourses considered multiple relations between the old, the extant and the new. Since Britain was not a 'natural nation' but an agglomeration of individual countries, he emphasizes how modern architects engaged local and regional differences.

Gwendolyn Wright rejects the idea that modernism was brought to the USA by European emigrants and the 1932 MoMA exhibition. She contends that the aftermath of the American Civil War (which ended in 1865) fostered a national economy, unprecedented industrialization and a mass media exuberant about what it called "modern architecture." Large corporations needed skyscraper office-buildings; middle-class families embraced mass-produced ornament to 'individualize' their dwellings; complex public buildings served large and increasingly diverse urban populations. Not incidentally, most of the world now considered 'America' the epitome of modernity. *Modern Architectures in History* reveals surprising genealogies. Even resolute modernists interacted with producers, clients, politicians, artists in other realms and various segments of 'the public,' often frustrated but also inspired by the challenges. This approach catapults us beyond patronizing tolerance for 'other' or 'alternative' modernisms on the periphery. As a welcome alternative these national histories present a constellation or a matrix that is visible yet always seen differently, depending on one's perspective.



Color insert: Alvar Aalto, Paimio Sanatorium (photo Jussi Tiainen); main image, Osmo Siperi, Herttoniemi Housing, Helsinki (photo Museum of Finnish Architecture/Heikki Kaitera)

Modern Architectures in History.
Reaktion Books.
 Roger Connah. *Finland* (2005).
 ISBN: 978-1-86189-250-8
 Alan Powers. *Britain* (2006).
 ISBN: 978-1-86189-281-2
 Alexander Tzonis and Alkistis Rodi. *Greece* (2008).
 ISBN: 978-1-86189-379-6
 Gwendolyn Wright. *USA* (2007).
 ISBN: 978-1-86189-344-4



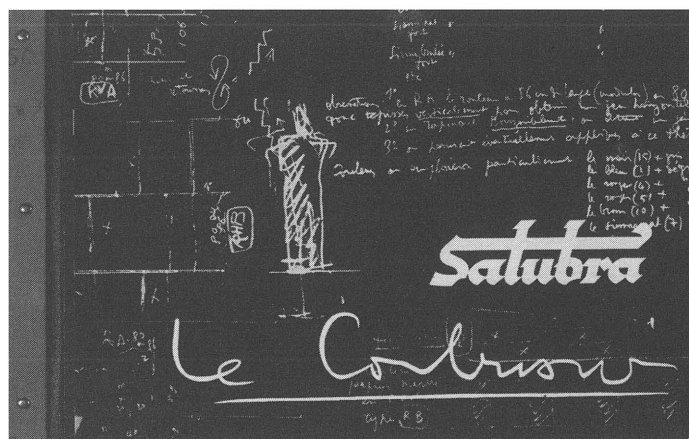
Black and white insert: Lubetkin and Tecton, Highpoint One, London (photo RIBA); main image, Foster & Partners, Willis Faber Dumas Headquarters, Ipswich (photo Nigel Young).

LE CORBUSIER POLYCHROMIE ARCHITECTURALE

There are books in architecture that are bound to become key documents. This is certainly the case with the second revised edition of Le Corbusier's *Polychromie Architecturale* alongside the well-known color keyboards produced for the Swiss wallpaper factory Salubra. As the curator of the book noted: "The three-volume publication found a large circle of interested readers worldwide, and—most gratifyingly of all—left several traces in contemporary architectural production." (9) The book thus serves a double group of users: architectural historians will gain a deeper insight into Le Corbusier's attempt at integrating colors into architectural conception; architects will inquire about these colors as a reference for their works. Incidentally moreover, a reason why the re-print was conceived is that Le Corbusier's color keyboards (also known as Salubra I, 1931 and Salubra II, 1959) are among the most wanted and expensive Corbu publications in the collectors' market.

Le Corbusier's first attempt at polychromy largely pre-dates these publications, although "by the game of coincidence" he only designed the wallpaper collection for Salubra in Basel in 1930. Then he developed his first collection with the intention to organize his palette in such a way that the "atmosphere" most suitable to the client's personality could be easily pointed out. The Salubra II collection came much

Second
Salubra
Collection
"Le Corbusier"
(Salubra II),
1959



later, when Le Corbusier's architecture after 1945 was marked by a more patent presence of color as exemplified in the apartments of the Unité d'habitation in Marseilles. In 1957 Salubra discussed the possibility of a small new collection of 15 monochrome wallpapers. The second color keyboard came into trade in 1959. It is a sample book that at first contained the series "Mur" and "Marble," followed by the block of 20 single color patterns.

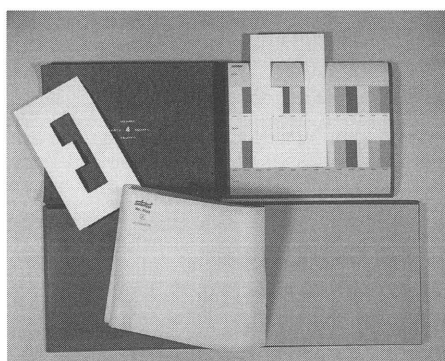
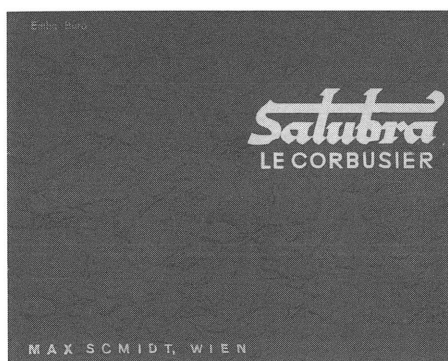
Thus, via the Salubra collections, Le Corbusier formulated a well-founded theoretical approach to color, or, as he would say in 1936: "Color in architecture—a means as powerful as the ground plan and section. Or better yet: polychromy, a component of the ground plan and section themselves." Le Corbusier based his reflection on his insightful appreciation of the effect of color on spaces and human minds. Each of the Salubra pattern cards represented a different color mood that was designed to create a very specific atmosphere when applied.

Originally intended as assistance to practical application, this systematic study of color accentuation inevitably gained relevance for modern design and reached far beyond architecture. Consequently, Le Corbusier's functional production was not only a useful tool but also testified of his purist color theory, at the origin of a work of art in its own right.

The Birkhäuser 2006 edition is a hybrid between reprint and facsimile. It consists of three volumes collected in a slipcase. The edition is trilingual, in German, French and English. The general editor is Arthur Rüegg, a practicing architect and until recently professor at the ETH in Zurich. Rüegg is world famous for being a Le Corbusier scholar and a very sophisticated investigator of all aspects of Corbu's researches for new materials in building and design products.

The first volume, richly illustrated, includes a long and well-documented essay written by Rüegg, and the heretofore unpublished text by Le Corbusier entitled *Polychromie Architecturale*, dating from 1931 and initially intended to complement the contemporary Salubra I collection.

The second volume contains the 12 color keyboards of the Salubra I collection, with a total of 43 monochromes as well as two sheets of 20 monochromes included



First Salubra Collection "Le Corbusier"
(Salubra I), fall 1931

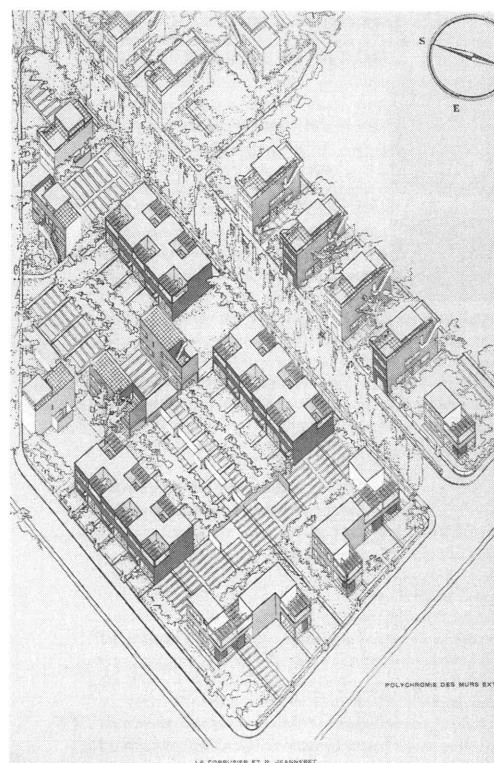
in Salubra II. Four Bristol board templates are stored in a pocket and may be used to determine the combination of 3 to 5 color tones. The third volume contains the 63 full-page color sheets with the full range of Salubra tones. These serve as samples; they show the rich contrast in color shades as well as the true luminosity and warmth of the various tones.

The importance of this new edition is based on a more advanced technique of color reproduction which in the 1997 publication had turned out to be a sticky question. The first edition used a copy from the Salubra archives that had seen much use; its colors were produced after an industrial blending of synthetic and organic pigments. The 2006 edition benefited from the research of an enthusiastic paint chemist, Katrin Trautwein, who worked with the natural and synthetic mineral pigments that had originally been used. She was successful in establishing

Le Corbusier's color definition, based on mineral pigments that were the commercial standard in his days. The new (or renewed) color palette has proved to be of high value for restoration, especially of Le Corbusier's work, but also for contemporary architecture and furniture design.

Arthur Rüegg (ed.),
Farbenklaviaturen von 1931
und 1959 – Color Keyboards
from 1931 and 1959 –
Les Claviers de Couleurs de 1931
and 1959.
Le Corbusier Polychromie
Architecturale.
Second revised edition, Birkhäuser:
Basel, Boston, Berlin, 2006. I
SBN-10: 3 7643 7475 6
First volume: 174 pages
and approximately 400 color
and black and white illustrations.
Second volume: 31 pages, full color.
Third volume: 128 pages, full color.

MARISTELLA CASCIATO, chair,
Docomomo International



Le Corbusier, Les Quartiers Modernes Frugès, Pessac (France), 1924–1926.
Axonometry with an indication of coloration, described by Le Corbusier in his *Polychromie Architecturale* (from *L'Architecture Vivante*, 1927)

CONFERENCE PROCEEDINGS

CONSERVING THE MODERN IN CANADA LA SAUVEGARDE DU MODERNE AU CANADA

Bilingual proceedings are now available for Canada's first national conference on the conservation of mid-twentieth century buildings and landscapes. Conserving the Modern in Canada: Buildings, Ensembles, and Sites brought together architects, historians, planners, academics, conservators, engineers, landscape architects, and others at Trent University, where they met colleagues, presented work, and discussed issues. The conference focused on buildings, structures, districts, and landscapes constructed after 1945.

The proceedings contain papers from over thirty authors.

The papers are organized by the five conference themes as follows:

1. Documentation, addressing the processes by which modern buildings, sites and ensembles are documented;
2. Evaluation, addressing the analytical processes by which the significance of specific modern buildings, sites and ensembles are determined;
3. Conservation, addressing the processes by which modern buildings, sites, and ensembles are conserved, including preservation, restoration, and rehabilitation;
4. Stewardship, addressing issues related to the integrated management of modern heritage within the broader scope of current social, economic and environmental goals; and
5. Education, addressing activities related to developing and imparting the knowledge and skills related to understanding modern heritage.

The proceedings, fully illustrated and over 250 pages in length, are available in hard copy in either English or French. In addition, *Peterborough Modern* was published as an illustrated bilingual guide to the architecture of the 1950s to the 1970s in Peterborough, Ontario. All three publications (English proceedings, French proceedings, and bilingual city guide) are also available together in electronic format on CD-Rom. Contact info@moderncanada.ca for orders.

JAMES ASHBY, conference co-chair, is the director of Docomomo Canada-Ontario.

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Authors who would like to contribute to this issue are kindly invited to contact the guest editor, Miles Glendinning, at m.glendinning@eca.ac.uk

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