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**THE ARCHITECTURE OF EXPO 67:
NATIONAL IDENTITIES AND THE SIGNS OF TIME**

by
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The Faculty of Graduate Studies and Research
In partial fulfillment of
The requirements for the degree of
Post Professional Master of Architecture

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Abstract

Architecture has the capacity to communicate with a user or passer-by. The interpretation of these 'messages' or 'poems' depends very much on the experience and cultural background of each individual. In this research, the connection between the articulation of built forms and the cultural values of a society will be considered. To that end, the buildings of an international exhibition offer the perfect research ground in that they have as their program the expression of a national identity. The Universal and International Exhibition of Montréal of 1967 will be the object of my study. Based on the assumption that architecture exists in time and that it generates meanings depending on its relationships with history, my observations on Expo will focus on the signs of time - past, present and future - perceptible in the design of the pavilions.

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I. INTRODUCTION

A. THESIS OUTLINE

To celebrate the Canadian Confederation Centennial, Expo 67 added a very publicized and international outlook to the festivities. The event took place in Montréal between April 28 and October 27 of 1967 on an extensive site on the St-Lawrence Seaway. What makes Expo 67 of particular interest is: the universal theme “Man and His World” that set the tone for the event, the pluralist approach of the architecture of the sixties, the high level of international participation, and the autonomy of the participants to take responsibility for the design of their own pavilions. Akin to other expositions that are typically planned for a six-month period, Expo 67 stands as an ephemeral event.

Consequently, we could expect to observe in the architecture of the pavilions qualities of lightness and transparency with flexible construction techniques. In fact, we find a broad range of design approaches. Architects used their freedom to create distinctive forms with the materials and methods they believed were best suited for what they wanted – or were asked - to communicate. In trying to best represent their countries, the participants made implicit statements about their national identity by placing emphasis on either the use of pure forms, styles from the past, massive volumes, light and transparent materials, or new technologies. In many cases, the architecture of the pavilions gave a clear indication of the cultural values and political ideologies of the time.

Architecture has traditionally been thought of as an art of space, but it is closely related to the notion of time as well. In fact, architecture can be further defined as a “spatial

expression of human life and experience in time.”¹ Time functions as a benchmark against which we measure things by generations or cultural periods. Architecture falls somewhere in the range between ephemerality and eternity; it outlasts the human life cycle but also perishes by destruction triggered by natural or social events. To be more precise, architecture “is not a fashion, nor is it something for eternity, it is part of an epoch.”²

A city usually presents the layering of time, with older constructions juxtaposed with new and renovated ones. Despite its limited physical site and short timeframe, Expo 67 offers a snapshot of an ideal city. The presence of that ideal city is:

in perpetual oscillation between past and present. Its past is its concrete, built forms, juxtapositions and superimposition of so many already past futures. Its future is a projected, homogeneous, and empty time outside of history, an abstraction, an order suspended in a universal time and place.³

On the exhibition grounds, we find many contrasting simultaneities and discontinuities in the appearances of the pavilions; one “may stand as the visible symbol of historical continuity, or equally as the enforced announcement of newfangled demands.”⁴ This variety found at Expo also reflects the different cultural values of the participants. Moreover, international exhibitions have a long tradition of uncovering an extensive gathering of artefacts from all corners of the world, while also offering a glimpse of an optimistic future with the greatest achievements of the period. In this respect, Expo 67

¹ Asghar Talaye Minai, Architecture as Environmental Communication (New York: Mouton Publishers, 1984), 175.

² Mies van der Rohe, quoted in Alison and Peter Smithson, Without Rhetoric: An Architectural Aesthetic 1955-1972 (Cambridge: The MIT Press, 1974), 21.

³ Diana Agrest, Architecture from Without: Theoretical Framing for a Critical Practice (Boston: The MIT Press, 1991), 125.

⁴ Roger Scruton, The Aesthetics of Architecture (London: Methu & Co., 1979), 15.

skillfully combined past, present and future in a non-linear way, offering the opportunity to reflect on a more heterogeneous history of architecture.

Based on the exploration of architectural theory and thorough observations, this thesis will present a new perspective on the architecture of Expo 67 by revealing the diversity and similarity of design approaches as a reflection of a nation's position about its history. Secondly, it will provide additional information on the architecture of the 1960's, and acknowledge the impact of the Montréal exhibition on the development of architecture in Canada. As part of this research, I will introduce the social and political context in which Expo was created, and also present a theoretical framework on perception, language and semiotics to establish an approach for the interpretation of the architecture of Expo. The subsequent chapters will deal with the notion of time, more specifically with the relation between the architecture of the pavilions and the history of a nation. I will initiate a reflection on the concepts of universality and timelessness. For that, the influence of the theme "Man and His World" on the pavilions and the masterplan will be examined, as well as the notion of geometry and design standards. Next, I will investigate how references to the past were expressed in the architecture of the pavilions, by highlighting the styles that emphasise a desired continuity with tradition. I will also discuss the use of bold and heavy construction that suggests a strong inclination towards permanence. Afterwards, the correlation between the ephemeral nature of Expo and the pavilions using flexible construction systems with light and transparent materials will be studied. Finally, I will look at the pavilions that made use of newly developed technology in their construction and created new expectations by projecting a positive outlook on the future.

The diversity of design approaches in the Expo pavilions will lead to the conclusion that the consideration of a nation's cultural identity and historical background are of prime importance to form a just interpretation of its architecture.

As a methodology for this research, I will first explore how we perceive and interpret our built environment. This thesis will draw from the theoretical concepts of perception, language and communication in architecture as discussed by George Baird, Sigfried Giedion, Denis Hollier, Charles Jenks, and Christian Norberg-Schulz. I will also examine the study of semiotics as investigated by Diana Agrest, Roland Barthes, Umberto Eco, Asghar Talaye Minai, and Donald Preziosi. Additionally, physical descriptions, models, drawings and photographs from the public archives will be compiled about the different national, thematic and private pavilions on the site of Montréal Expo (see table A). I will rely extensively on the documentation available on the architecture of Expo 67, giving special consideration to reports by Robert Fulford, statements by Expo's chief architect Edouard Fiset, and writings by Saint-Exupéry that inspired the universal theme for the exhibition. I will examine the stated design objectives by the participating countries, review public surveys conducted on the architecture of Expo, as well as records of the event and criticisms from books, popular magazines and newspapers. Finally, the pavilions will be grouped following their design approach and discussed as they relate to the past, present or future.

B. BACKGROUND ON THE PROJECT OF EXPO 67

When Canada first considered hosting an international exhibition in the late 1950's, the federal government's foremost interest was to portray a positive image of the country abroad and to foster a sentiment of national unity among Canadians. For the province of Québec, the timing of Expo 67 seemed to coincide with signs of newly developed political reforms, which further made possible the prospect of an ambitious undertaking. Considerable efforts were made under the leadership of Mayor Jean Drapeau to position Montréal in the same league as other renowned cities like Paris, London and New York. It was thought that Expo would "leave a memory of an event hallowing and symbolizing Canada's accession to the company of great nations."⁵ Although this project was approached from different angles, the success of the exhibition was to validate the capacity of the three levels of government to collaborate on a performance of international standing. More importantly, Expo 67 strengthened the unfolding of diplomatic relations with a significant number of countries. From the 150 nations that were invited to contribute to the exhibition, 60 responded positively, which constituted the largest international participation to-date.

The project for an international exhibition in Montréal was the result of political motivations. Conservative deputy Sevigny was the first to introduce the idea of an international exhibition to Prime Minister Diefenbaker as an event that could solidify the party in the late 1950s. The suggestion was generally well received, the federal government seeing in this project an opportunity to foster Canadian unity. The concept

⁵ Edouard Fiset, "Architecture and its Setting," Architecture Canada (July 1966): 29.

was then presented to Québec Premier Maurice Duplessis and Montréal Mayor Jean Drapeau. In 1957, Drapeau was defeated by Sarto Fournier, but Sevigny persisted with his idea. In 1958, a federal delegation was assembled and sent to Paris to the Bureau International des Expositions (BIE)⁶ to express Canada's formal interest in hosting the next international exhibition to celebrate its Confederation Centennial.⁷

In 1962, the BIE awarded the right to hold the exhibition to the Soviet Union. However, the Soviets withdrew from the competition when Communist party leaders realised that a display of abundance from the Western countries could pose a serious threat to their system. By that time, the political situation had changed in Canada: Drapeau was back as Mayor of Montréal, Maurice Duplessis had passed away and his government defeated by the Liberal party of Jean Lesage. Drapeau was convinced that an exhibition could give Montréal international standing and prestige. The international exposure that Expo would bring was in line with the modernization of the political system and public institutions that had begun in the province of Québec. After obtaining the necessary support from the Lesage government, Drapeau went to the Canadian Prime Minister to expedite its nomination. Before Montréal could be confirmed as the proposed site for the exhibition, Toronto Mayor Nathan Philips was offered the opportunity. Luckily, he did not seize it.

⁶ The BIE had been established in 1928 to bring about a certain control over the administration of the types, regularity, and locations of future exhibitions.

⁷ It is at the Exposition Internationale et Universelle of Brussels in 1958 that Mark Drouin, president of the Canadian Senate, first declared that Canada was contemplating organising the next exhibition of this kind.

Canada submitted a revised application to the BIE, and on November 13, 1962, was granted the right to hold its exhibition for 1967. The Montréal exhibition was classified by the BIE as a universal (all subjects) and international (all nations) exhibition of the first category, for which every nation was responsible to build its own pavilion. The last exhibition of this kind had been hosted by the European city of Brussels in 1958. This particular type of exhibition came with a few restrictions: it should not last any longer than six months and it should not be repeated in the same country for fifteen years.

A federal law was passed on December 20, 1962, to establish the *Canadian Corporation for the 1967 World Exhibition*, an agency responsible to conceive and organise the exhibition. The financing for the exhibition was to be assembled as follows: 50% from the federal government, 37-½% from the Québec provincial government, and 12-½% from the city of Montréal. Canada's Prime Minister named the first administrative team, composed of Paul Bienvenu as general commissioner and Cecile Carsley as his assistant, in January of 1963. The team was changed not long after the liberal Lester B. Pearson defeated Prime Minister Diefenbaker in 1963. Montréal Mayor Drapeau convinced Prime Minister Pearson to name Pierre Dupuis, Canada's ambassador to France, to the position of general commissioner. Robert Shaw was chosen as assistant-commissioner, and Edouard Fiset as chief architect.

The first challenge that awaited the organisers and politicians who supported the exhibition was to get the population of Canada to accept this bold project. There were those who thought that world fairs were a tired institution. Others concluded that the

possibility of success for Expo was not realistic, in view of the high standards set by the international class, and the apparent lack of resources and experience Canada had in holding such an event. The considerable expenses related to the construction of Expo were also difficult to justify, especially in consideration of the more immediate needs like the revitalization of many decrepit neighbourhoods. The strategy developed by Dupuis to convince Canadians of the great benefits of Expo was to first persuade foreign countries to participate. He was able to achieve this through the use of his extensive personal connections.

The first and main objective of the Expo organisers was to produce a successful and glamorous event. The exhibition was to be a spectacle to bring attention to Montréal, a show organised by the government leaders for the enjoyment of the population. The imposing scale planned for the event would translate into the overall masterplan as well as the architecture and construction of the pavilions themselves. John Summerson would say that "monumentality in architecture is a form of affirmation; and affirmations are usually made by a few to impress the many."⁸ He had already observed in the late 1940s that "the whole idea of formal assembly in public ha[d] withered; and with it ha[d] gone the need for an architecture reflecting that collective sentiment which goes with the love of formal assembly."⁹ Expo would be the exception, and Mayor Drapeau would confirm his intentions to promote monumental ideas and impressive results by declaring that "a fair is for the masses and not for the thinkers. What the masses want are monuments."¹⁰

⁸ John Summerson, Heavenly Mansions (New York: Norton and Co., 1963), 205.

⁹ Ibid., 204.

¹⁰ Brian McKenna and Susan Purcell, Drapeau (Toronto: Clarke, Irwin and Co., 1980), 145.

Fig. 1: Overview of Ile Ste-Hélène and Ile Notre-Dame.

Fig. 2: Ile Notre-Dame with the Pavilion of Canada in the Foreground.

II. ARCHITECTURE AS MEDIUM OF EXPRESSION

Ces couleurs de la terre et du ciel, ces traces de vent sur la mer, ces nuages dorés du crépuscule, il ne les admire point, mais les médite. Semblable au paysan qui fait sa tournée dans son domaine et qui prévoit, à mille signes, la marche du printemps, la menace du gel, l'annonce de la pluie, le pilote de métier, lui aussi, déchiffre des signes de neige, des signes de brume, des signes de nuit bienheureuse.¹

We can observe in Saint-Exupéry's writing an acute awareness and sensibility towards the physical environment. As part of the pilot's experience, the plane is envisaged as an instrument that reveals the world in a new light. And then, as the machine gets perfected, it fades in the background and becomes an extension of the pilot's own body. "The plane not only reveals our planet in a wholly new perspective which modifies our relationship to the familiar world, but it permits us to discover fresh insights into our own natures."² It is the solitude of the pilot, his freedom to fly and his encounter with the natural elements that strengthen its relationship and dependence to the earth.

In a similar way, we respond to architecture depending on the way we engage with our environment. As the plane is for the pilot, we have to look at tools that can help us express what we see and feel. "It is generally supposed that what is spoken or written about works of architecture is merely a tracing of them, an always less than adequate reflection of their reality."³ This is perhaps because perception is always related to a

¹ Antoine de Saint-Exupéry, *Terre des Hommes* (Paris: Editions Gallimard, 1939), 33.

² John S. Beynon, *Saint-Exupéry, Vol de Nuit and Terre des Hommes* (London: Grant and Cutler Ltd., 1990), 34.

³ Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (New York: Thames and Hudson, 2000), 12.

personal experience. A more accurate and objective description of the architecture of Montréal Expo must take into account two complementary approaches. First, we need to base our findings on a rigorous collection of facts, archived photographs and documents describing and commenting the physical presence of Expo. We also have to remain critical with regard to secondary sources of information and understand their limitations. Secondly, to build a just interpretation of the architecture of Expo, we have to gain a good comprehension of the way one perceives the built environment and how a building communicates. This also implies getting familiar with the language analogy and semiotics.

A. PERCEPTION AND COMMUNICATION

Norberg-Schulz suggests that the basic purpose of perception is to provide us with useful information, which we can then classify through generalizations and ordering of experiences. In fact, perception cannot be reduced to a passive reception of impressions because we first experience phenomena through ourselves, thus activating a dynamic relationship between the individual and the environment. "Perception is our primary form of knowing and one does not exist apart from the a priori of the body's structure and its engagement in the world."⁴ This is illustrated by Saint-Exupéry's active involvement with a series of physical obstacles he overcomes to gain a better appreciation of mankind.

⁴ Alberto Perez-Gomez, Architecture and the Crisis of Modern Science (Cambridge: The MIT Press, 1983), 3.

The novel *Terre des Hommes* is narrated by Saint-Exupéry following a multiplicity of fragments in the form of analogies, images and metaphors. These kinds of imageries found in the novel play an equally important role in architecture. In fact, we can say that generally speaking, the visual tends to dominate our experience. As a downside, we can suspect that the prominence of visual awareness has also led to a decline in other forms of sensory perception – the senses of touch, hearing, smell and taste. “The subject of a representational work of art is also the subject of the thoughts of the man who sees or reads it with understanding; to enjoy the work is therefore to reflect upon its subject.”⁵

The way a building looks and sounds to us is closely tied to the value and meaning of our personal experience, along with feelings that come to dominate our perception and colour the situation. In fact, aesthetic understanding consists “in the organization of perception and feeling. To grasp the expressive character of a building is to *feel* its significance, to know what its character is like, to feel the inward resonance of an idea or way of life.”⁶

An exposition is a spectacle for the senses with the visual experience at the forefront. It is, “essentially, an assault upon the eye . . . From a thousand visual impressions, the visitor gathers, and recalls, a total picture, the meaning of which transcends the sum of all the parts.”⁷ Also, the pavilions are more than a shelter for the artifacts displayed within; their architectural form is an important aspect of the exhibition. Beyond serving a particular function and responding to a program, architecture is generally recognized as an artistic representation of our physical world. Hollier even restricted the definition of

⁵ Roger Scruton, *The Aesthetics of Architecture* (London: Methu & Co., c1979), 186.

⁶ *Ibid.*, 205.

⁷ Charles Siepmann, quoted in Robert Rydell, *World of Fairs* (Chicago: The University of Chicago, 1993), 198.

architecture to the aesthetic component of an edifice. Architecture stands as a very visible evidence of people's life. "Architecture is public; it imposes itself whatever our desires and whatever our self-image. Moreover, it takes up space: either it crushes out of existence what has gone before, or else it attempts to blend and harmonize."⁸

Architecture has also been used in several occasions to put forward well-defined values and interests. "Architecture represents a religion that it brings alive, a political power that it manifests, an event that it commemorates, etc."⁹

The exhibits shown in the pavilions served at Expo 67 to give an incomparable indication of the leading ideas and values of a variety of cultures of that time. In the national exhibit of Canada, for example, the main concern was to represent the exploitation of the natural resources and the development of communication and transportation as means to negotiate the vastness of the country's landscape. The design intention behind the American exhibit, as explained by Terry Rankine, Harvard professor of architecture, was "to show the craftsmanship, inventiveness and creativity of the American people."¹⁰

Accordingly, the exhibit was named Creative America, and its content was intended to charm and entertain rather than persuade and show off. In the exhibit of France, pride in French cultural roots dominated. Through the arts, France had invented for itself an image associated with grace, charm, eloquence, delicacy and lightness. Great Britain on the other hand, became better known for its character of simplicity, boldness, honesty, and of industrious quality. Its exhibit contained the kind of humour found in magazines,

⁸ Roger Scruton, *The Aesthetics of Architecture* (London: Methu & Co., 1979), 15.

⁹ Denis Hollier, "Architectural Metaphors," in *Architecture Theory Since 1968*, ed. Michael Hay (Cambridge: The MIT Press, 2000), 192.

¹⁰ Robert Fulford, *This was Expo* (Montréal: McClelland and Stewart Ltd., 1968), 58.

which generated a varied, lively and unorthodox atmosphere. The designer's objectives were to "demonstrate the British virtue of tolerance, of live and let live."¹¹ Without passing in review all of the pavilions, we can assert that international exhibitions offer a highly visible platform for communicating national ideologies and political views. Also, more than representing specific cultures, international exhibitions are "concerned with selling and with representing a view of the world."¹²

While the intentions of each nation are clearly expressed within the content of an exhibit, we can expect to find the equivalent in the architecture of the pavilion. In fact, "a phenomenological consideration of our relationship with architectural objects tells us that we commonly do experience architecture as communication, even while recognizing its functionality."¹³ Eco goes even further by providing a list of the common characteristics between architecture and mass communication. First, the architectural discourse commonly "aims at mass appeal" since it is based on a certain level of social consent. It is "psychologically persuasive" by promoting a way to use space and "fluctuates between being rather coercive . . . and rather indifferent." Also, architecture "can never be interpreted in an aberrant way", it "belongs to the realm of everyday life" and is "experienced inattentively." Finally, architecture is "a business" subject to similar economic conditions as mass culture.¹⁴ The communication analogy is limited however by the failure of architecture to act as means through which two individuals could speak

¹¹ James Garner, quoted in Robert Fulford, *This was Expo* (Montréal: McClelland and Stewart Ltd., 1968), 173.

¹² Hans Dieter Schaal, *In-Between: Exhibition Architecture* (London: Edition Axel Menges, 1999), 38.

¹³ Umberto Eco, "Function and Sign: the Semiotics of Architecture," in *Rethinking Architecture: A Reader in Cultural Theory*, ed. Neil Leach (London: Routledge, 1997), 182.

¹⁴ *Ibid.*, 196.

to each other or carry on a dialogue with the author of the architectural message through the same medium.

Even as a one-way communication, “any building is constantly sending out ‘messages’ – visual, acoustic, thermal and so on – which can be received by one of the senses and ‘decoded’ according to the observer’s personal experience.”¹⁵ The architectural message can sometime remain ambiguous however since “the architectural figure always alludes to – aims at the representation of – some other object, whether architectural, anthropomorphic, natural or technological.”¹⁶ Nonetheless, international exhibitions offer the perfect opportunity to communicate messages through architecture. Werner noted to that effect that “with the start of the 20th century and its far-reaching world-political distortion, exhibitions of every hue were increasingly transformed to express ideological messages.”¹⁷ Some pavilions at the Montréal Expo exploited this potential by using propaganda techniques. The Cuban pavilion for example, was a bold architectural design consisting of a series of geometrical figures projected in all directions.¹⁸ The long square tubes had screens at their ends upon which films illustrating the different aspects of Cubans life were projected to the public outside. Inside, the exhibit presented the spirit of the Cuban Revolution and the development of the country with big words, slogans, and posters. Czechoslovakia opted for a more subtle approach to present its political ideas. When asked about the Communist tone of the pavilion, a spokesperson answered in this

¹⁵ Geoffrey Broadbent, “A Plain Man’s Guide to the Theory of Signs in Architecture,” Architectural Design (July 1977): 476.

¹⁶ Peter Eisenman, “The End of the Classical: The end of the Beginning, the End of the End”, in Architecture Theory Since 1968, ed. Michael Hays (Cambridge: The MIT Press, 2000), 530.

¹⁷ Frank Wener, “Space Times and Time Space: Ephemeral Architecture Reflected in History,” in Hans Dieter Schaal In-Between: Exhibition Architecture (London: Edition Axel Menges, 1999), 12.

¹⁸ The Cuban pavilion was designed by architects G. Baroni and Vittorio Garatti.

way: "We think the best propaganda is the truth, to show the people the true picture of a country."¹⁹ It is with the display of art that the Czech message was conveyed, from Gothic paintings to new forms of cinema that allowed opportunities for visitors' interaction. The architecture of its pavilion was very simple and elegant.²⁰ The exhibit within had a fantasyland character and assembled a collection of outstanding images, objects, glass sculptures, hand-made toys, and colourful textiles. This approach was successful in communicating a positive impression on the general public. "The medium was the pavilion itself, and the message was a country which could produce a walk-through art object as delightful as this one must be, in some significant way, admirable."²¹

The way a nation wishes to be represented may well differ from reality. At the same time, architecture cannot give a complete and objective portrait of a society. As Hollier mentions, "architecture does not express the soul of society but rather smothers it."²² In the context of an international exhibition, the potential for discrepancies appears on a greater scale. "Just as a politician's image may be only what his speechwriters want us to see, so a country's image at a world fair may represent no more than a notion cherished by a few well-placed bureaucrats, a few talented (or untalented) architects and designers."²³

¹⁹ Stepanek, quoted in Robert Fulford, *This was Expo* (Montréal: McClelland and Stewart Ltd., 1968), 126.

²⁰ The pavilion of Czechoslovakia was designed by architect Miroslav Repa.

²¹ Robert Fulford, *This was Expo* (Montréal: McClelland and Stewart Ltd., 1968), 134.

²² Denis Hollier, *Against Architecture* (Cambridge: The MIT Press, 1989), 47.

²³ Robert Fulford, *This was Expo* (Montréal: McClelland and Stewart Ltd., 1968), 174.

To illustrate this point, we will take a closer look at how the provinces of Ontario and Québec chose to represent their cultural differences (fig. 25). The pavilion of Ontario was bordered by water on three sides and located in proximity to the pavilions of Canada and Québec.²⁴ It consisted of playful pyramidal-shaped roofs made of translucent canvas supported by metal frames, with a sculptural landscape of granite cubes for people to sit. The open exhibit area allowed for free movement of the visitors and gave an overall impression of being somewhat uneven, cluttered and bizarre. The neighbouring Québec pavilion was more isolated, placed over a pool of water and connected to the main land by a single bridge.²⁵ It was designed as a sleek fifty-foot-high truncated pyramid with inclined reflective and tinted glass walls. Its exhibit was set above ground, around transparent circular elevators, abstract forms and geometrical displays, and included few references to religion, folklore, or history. Against the general expectations, Ontario was portrayed as robust, creative, and a little awkward. Québec was presented as cool, restrained, and sophisticated. These observations lead us to believe that the government of Ontario had wished to put an end to its traditional image, to look freer and more open, while the Québec government had aspired to eliminate its rural, religion-dominated, old world image and to assert that it had entered the modern world. The respective intentions of the governments of Ontario and Québec appear to have been expressed with images contrasting their respective reality; "the Ontario pavilion [was] like the Québec people, and the Québec pavilion [was] like the Ontario people."²⁶ In fact for most visitors,

²⁴ The pavilion of Ontario was designed by architects Fairfield and Dubois.

²⁵ The Québec pavilion was designed by architects Papineau, Guérin-Lajoie, Leblanc, with Luc Durand.

²⁶ Robert Fulford, *This was Expo* (Montréal: McClelland and Stewart, 1968), 165.

"French Canada came through as 'square,' while English Canada seemed to emerge as really 'swinging'." ²⁷

B. ARCHITECTURAL LANGUAGE

Communication necessarily derives from a form of language, whether verbal, written or corporeal. Throughout history, architecture has frequently been considered as a means of communication, following syntactic rules and holding narrative potential. During the Romantic movement of late eighteenth-century Germany, language was considered the ultimate manifestation of a nation's soul. In this respect, "Goethe saw that architecture, like language, was not simply a medium of individual expression, but more importantly expressed the entire collective identity of particular people, the *Volksgeist*." ²⁸ The comparison with grammar can be noted in *Précis des leçons d'architecture* written in 1802 by the French architect Durand, who suggested that the process of learning architecture, presented as a set of principles and elements, was similar to learning a language. In the 1831 novel *Notre Dame de Paris*, Victor Hugo implied that the materiality of a cathedral could convey a narrative. He wrote "that as human ideas changed their form they would change their mode of expression, that the crucial idea each generation would no longer be written in the same material, so that the book of stone, so solid and durable, would give way to the book of paper." ²⁹ Another reference to the book

²⁷ Ibid., 175.

²⁸ Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (New York: Thames and Hudson, 2000), 76.

²⁹ Victor Hugo, quoted in Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (New York: Thames and Hudson, 2000), 71.

can be identified in Ruskin's *The Stones of Venice* as he mentioned "thenceforward the criticism of the building is to be conducted precisely on the same principles as that of a book."³⁰

International exhibitions display an incredible collection of facts in the form of a three-dimensional encyclopaedia throughout pavilions representing the different civilizations of the world:

At first contact and first reaction, exhibitions assume the form of an inventory, an enormous gathering of evidence from Stone to Space Age, an accumulation of objects useless and precious, an immense catalogue of things produced by man in all countries over the past ten thousand years, displayed so that humanity will not forget them. They seem to be a final recapitulation in the face of a hypothetical end of the world.³¹

The best way to convey a considerable amount of information is perhaps through the use of narratives. A narrative gives the expression of time a human scale and measure, by organising a series of events in a sequence that we can remember easier. Fragments of narratives, even presented out of order, can be appreciated and potentially reconstructed chronologically to generate a picture of the whole story. "We all are born, grow up, and die, and this, the most important sequence to us, creates the basic narrative structure behind all others."³²

International exhibitions offer a theatrical narrative in an informative and entertaining way. The architecture of the pavilions and the displays that are found within are carefully

³⁰ Ruskin, quoted in Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (New York: Thames and Hudson, 2000), 73.

³¹ Umberto Eco, *Travels in Hyper Reality* (New York: Harcourt Brace Jovanovich Publishers, 1968), 292.

³² Charles Jencks, "Architectural Time – Between Melancholy and Narrative," in *Anytime*, ed. Cynthia Davidson (New York: Anyone Corporation, 1999), 188.

choreographed to tell a story about human life, akin to the way that Saint-Exupéry chose to narrate his own life experiences. The novel *Terre des Hommes* is a scattered recollection of hazardous adventures that do not follow a simple linear progression and where the narrated actions are constantly interwoven with passages of philosophic reflection. "The selection and ordering of these autobiographical episodes serve a purpose beyond them, that of finding significance in the welter of past experience and of making experience yield what might be called a philosophy of life."³³ The architecture of an international exhibition also contains a narrative element, an elaboration of a story or description, to which we relate to personally. Through its distinctive occurrence on the site and its relation with other pavilions, each pavilion contributes in its own way to the story line.

The reading of the architecture of the pavilions suggests an analogy with the semantic and syntactic aspects of language. The single most language-like feature of architecture is perhaps this "mutual dependence between parts and whole, and the sense that a 'significance' might arise from its operation."³⁴ The combination of architectural elements can work in a synergic way to heighten the density of meaning, and draw on the poetical content of reality as a frame of reference. It could also be said that "the standard form of building is its common or internal language – determined by pragmatic, constructional and technical requirements. In contrast, the poetic form of architecture is responsive to issues external to building, and incorporates the three-dimensional

³³ John Beynon, *Vol de nuit and Terre des hommes* (University of Sussex: Grant and Cutler, 1990), 30.

³⁴ Roger Scruton, *The Aesthetics of Architecture* (London: Methu & Co., c1979), 173.

expression of the myths and rituals of society.”³⁵ At Expo 67, the character of the pavilions gained primary importance in becoming an expressive presence in the environment.

The syntactic aspect of architecture relates to the form, the articulation of the architectural parts and its structure. Concrete examples can be found at Expo with the use of modular constructions, the combination of geometrical patterns, and the application of a system of rules for the generation and transformation of architectural forms. Even if creative results were generated at Expo from that process, too much emphasis on the form can also have the negative effect of weakening its meaning. As Broadbent mentioned, “whilst syntactic rules obviously are important for the analysis of underlying ‘structures’ in architecture, it seems that those who pursue syntax for its own sake, at the expense of the semantic dimensions, finally are doomed the same way as the ‘functionalists’ themselves.”³⁶

If architecture can be read as narratives, it differs significantly from spoken or written language. “An architectonic formation will continue to broadcast long after the more ephemeral transmissions of a speech act, whose traces remain in the auditory channel only momentarily.”³⁷ More importantly, since architecture is not as precise as speech, it cannot communicate a clear message or entertain a dialogue, and the multiplicity of

³⁵ Michael Graves, quoted in Jonathan Hale, *Building Ideas: An Introduction to Architectural Theory* (New York: John Wiley & Sons, 2000), 152.

³⁶ Geoffrey Broadbent, “A Plain Man’s Guide to the Theory of Signs in Architecture,” *Architectural Design* (July 1977): 479.

³⁷ Donald Preziosi, *The Semiotics and the Built-Environment: An Introduction to Architectonic Analysis*, (Bloomington; London: Indiana University Press, 1979), 6.

interpretations prevents the formation of a universal understanding. It is the same imprecision and ambiguities that contribute to the rich diversity of our built environment and allow for poetic reflections. Scruton explains that when someone uses written or spoken language, “the concept of truth and falsehood applies to his behaviour. What he says may now correspond, not just to his inner states, but to *reality*”, and “its syntax derives from the meaning of its parts.”³⁸ Architecture is not restricted however to the same rigidity of rules, and its true meaning is harder to grasp. In fact, with few exceptions, a social contract regulating the meaning of architecture does not exist.

The language analogy was first vigorously criticized with modernist thinking and the promotion of the autonomy of architecture. “Within orthodox modernism, works of architecture were not there to be ‘read’ as narratives to external events – they were there to be themselves.”³⁹ Despite the found similarities between architecture and linguistic, namely the preponderance of conventions and rules, architecture cannot pretend to be its equivalent. It can mediate certain things as language does, but architecture fails to fully conform to the grammatical rules that are found in written and spoken language.

However, the value of language as a metaphor is still an effective tool to talk about architecture. Since a metaphor is not intended to represent every aspect of the object to which it is associated, it can be said that for certain aspects of architecture, language still provides a workable and suitable metaphor.

³⁸ Roger Scruton, The Aesthetics of Architecture (London: Methu & Co., c1979), 164.

C. SEMIOTICS

Semiology essentially draws from the language analogy and pushes it a step further. The subject became of particular interest for architects and critics struggling to find meaning in architecture in the 1950s and 1960s in order to justify the value of practice. The preoccupation of that period is certainly of some importance when analyzing the architecture of Montréal Expo. If we reflect on the question of meaning, two important points can be made: “(1) that every act, object and statement that man perceives is meaningful (even ‘nothing’) and (2) that the frontiers of meaning are always, momentarily, in a state of collapse and paradox.”⁴⁰ Jencks poses the following dilemma that we have to face: “since everything is meaningful, we are in a literal sense condemned to meaning, and thus we can either become aware of how meaning works in a technical sense (semiology), or we can remain content with our intuition.”⁴¹ In order to deal more effectively with the question of meaning, we will now explore semiology and its application to this research.

It was Saussure in Switzerland and Pierce in the United States who were the first to bring forward the study of semiotics. It was articulated by Saussure primarily through the distinction of *langue* and *parole*. *Langue* is seen as “the collective aspect of the phenomenon, and the *parole* the individual aspect.” *Langue* is also understood as “the unconscious aspect of a social phenomenon, and the *parole* as the conscious aspect.”

³⁹ Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (New York: Thames and Hudson, 2000), 73.

⁴⁰ Charles Jencks, “Semiology and Architecture,” in *Meaning in Architecture*, eds. Charles Jencks and George Baird (London: Barrie and Rockliff, The Crescent Press, 1969), 13.

⁴¹ Ibid.

Moreover, the “*langue* of a social occurrence is considered to be its ‘code’ and the *parole* its ‘message’.”⁴² Language requires a consensus, an implicit agreement between people of a society regarding the meaning of each word, and the way words can be used. A parallel can be made with architectural styles, which act as a sort of social contract between people who have agreed to a set of rules for the use of certain architectural elements. *Langue* can also be seen as a system with an underlying structure of rules and conventions that restrict the specific acts of *parole*. This brings about the notion of changes within a more permanent framework. “While particular acts of *parole* may be continually changing with the passage of time, beneath these ‘surface’ effects lay the deep and timeless structure of *langue*.”⁴³

Barthes further expanded the theory of semiotics to the context of contemporary culture by analysing the system of signs in the domain of garment, food, furniture, as well as architecture. In his view, “to signify means that objects carry not only information, in which case they would communicate, but also constitute structured systems of signs, i.e., essentially systems of differences, of oppositions and contrasts.”⁴⁴ Barthes observed a kind of struggle between the activity of an object’s function and the inactivity of its signification. He also noted that meaning often surpasses the object’s use, and that in some instances, the object’s sign is presented as a spectacle of its function. Eco shares the same conviction about the dialectic between purpose and meaning with regard to architecture. It is “this continuous oscillation between primary function (the conventional

⁴² George Baird, “La Dimension Amoureuse in Architecture,” in *Architecture Theory Since 1968*, ed. Michael Hay (Cambridge: The MIT Press, 2000), 43.

⁴³ Jonathan Hale, *Building Ideas: An Introduction to Architectural Theory* (New York: John Wiley & Sons, 2000), 135.

⁴⁴ Roland Barthes, *The Semiotic Challenge* (Berkeley: University of California Press, 1985), 180.

use of the object, or its most direct or elementary meaning) and secondary functions (its related meanings, based on cultural conventions, and mental and semantic associations) [which] forms the object as a system of signs, a message.”⁴⁵ In the case of the pavilions of an international exhibition, their primary function as shelter is small compared to their semantic potential. In fact, exhibition architecture has been used to suggest symbolic meanings, with its primary functions being played down. Eco makes it quite clear that “if we look at the buildings in an exposition as structures to live in or pass through, they are out of scale, but they make sense if we look at them as media of communication and suggestion.”⁴⁶

In response to our subjective understanding of the world, the study of semiotics proposes to decode the environment in a more objective manner, using a system that breaks down an object into a set of mathematical equations between its different components. It initially assumes that our surroundings are made of a dynamic and unravelling set of signs that exist in time and space. Also, each individual is a receiver and interpreter of messages by means of stimulus in the form of similarities and differences. The nature of the message can be “environmental (physical, natural), behavioural (socio-cultural, psychological), and finally, symbolic (associative meanings relative to environmental and behavioural messages).”⁴⁷ The semiotic system can be illustrated by a triangle showing a direct relation between language, thought and reality where each relation holds different degrees of truth (fig.3). Semiotics can be used to present a more objective description of

⁴⁵ Umberto Eco, “A Theory of Expositions,” *Travels in Hyper Reality* (New York: Harcourt Brace Jovanovich Publishers, 1968), 298.

⁴⁶ Ibid.

⁴⁷ Asghar Talaye Minai, *Architecture as Environmental Communication* (New York: Mouton Publishers, 1984), 144.

architecture by systematically exposing the differences and similarities between architectural forms and components. “Any individual sign in a code has a particular meaning by virtue of its distinctiveness from every other sign in that code.”⁴⁸ The presence of contrasts and discontinuities between entities can easily be observed in our immediate surroundings: “every object, every space-cell, every locus of actions and interaction, may be distinguished through its boundedness, separation or enclosure (by what ever physical or material means).”⁴⁹

The two principal weaknesses of semiotics are that it focuses on the form rather than the content of language, and that it allows variable interpretations. The fact that the same object might hold variant associative meanings depending on the context makes this system somewhat unreliable. This method can also lead to a very extensive endeavour and yet remain unsuccessful in providing meaningful results. Other justifications can be given to explain why architects and intellectuals started to react against the semiotic model in the mid-1970's. First, “it was argued that the attention to what the work signified or symbolized drained attention away from the work itself.” Second, “semiology, as a theory of semantics, was called into question by posing alternative theories of linguistic meaning.” Lastly, “semiology entirely failed to take into account the production of spatial objects, nor adequately described how meanings might be constituted out of lived experience.”⁵⁰

⁴⁸ George Baird, “La Dimension Amoureuse in Architecture,” in *Architecture Theory Since 1968*, ed. Michael Hay (Cambridge: The MIT Press, 2000), 47.

⁴⁹ Donald Preziosi, *The Semiotics and the Built-Environment: An Introduction to Architectonic Analysis* (Bloomington; London: Indiana University Press, 1979), 12.

⁵⁰ Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (New York: Thames and Hudson, 2000), 83.

The direct application of semiotics as a tool to discuss the architecture of Expo cannot provide us with a complete understanding of its meanings. As a result, architectural accounts of Expo will be used to support the findings of this research. What we will retain from semiology however are its basic principles: the relation between thoughts, language and objects, and the general perception of the environment as a set of similarities and contrasts. The most critical idea in semiology regarding meaning in architecture is “that any form in the environment, or sign in language, is motivated, or capable of being motivated.”⁵¹ Every building communicates messages, and they are particularly strong and persuasive in the context of an international exhibition. When looking at the differences and similarities in the architecture of the pavilions at Expo 67, we find that they were generated from certain associations with time. The designs of the pavilions either corresponded to a look back at history to try to re-create it or a move forward to find the inspiration for new architectural forms. The next chapters will deal more specifically with the notion of time - the universal, past and permanence, future and ephemeral – and reveal how it was expressed in the architecture of the pavilions.

Fig.3: The Semiological Triangle.

⁵¹ Charles Jencks, “Semiology and Architecture,” in *Meaning in Architecture*, eds. Charles Jencks and George Baird (London: Barrie and Rockliff, The Crescent Press, 1969), 11.

Fig. 4: Plan of Cité du Havre.

Fig. 5: Partial plan of Ile Sainte-Hélène.

Fig. 6: Plan of Ile Notre-Dame.

Fig.7: Plan of La Ronde on Ile Sainte-Hélène.

III. THE UNIVERSAL

On chemine longtemps côte à côte, enfermé dans son propre silence, ou bien l'on échange des mots qui ne transportent rien. Mais voici l'heure du danger. Alors on s'épaule l'un à l'autre. On découvre que l'on appartient à la même communauté. On s'élargit par la découverte d'autres consciences.¹

La vérité, c'est ce qui simplifie le monde et non ce qui crée le chaos. La vérité, c'est le langage qui dégage l'universel.²

The planning of Expo 67 started early on with the search for a universal theme that would set the tone for the entire event. However, the intent was not to achieve a uniform image as for the 1893 World's Columbian Exposition in Chicago, which imposed Classic Revival architecture for its pavilions to show national unity and convey the idea of democracy. The organisers of the Montréal exhibition also wanted to dissociate themselves from the commercial focus surrounding the 1964 New York World Fair. The first step in that direction was to avoid any reference to a 'fair' and to name the exhibition 'Expo', a very popular Parisian contraction for the French term 'exposition'. This approach was supported by Montréal Mayor Jean Drapeau, who considered it a sacrilege to describe Expo 67 as a mere fair. For him, "a fair was horses, cows and Ferris wheels in a pasture. A 'fair' such as New York was planning for 1964 was a slightly vulgar display of industrial hardware and Disney cartoon."³ To reach their objectives, a retreat was organised in the spring of 1963 at Montebello, Québec, with a group of intellectuals to discuss a theme for Expo. After much deliberation, the novel *Terre des Hommes* by

¹ Antoine de Saint-Exupéry, *Terre des Hommes* (Paris: Editions Gallimard, 1939), 42.

² Ibid., 201.

³ Brian McKenna, and Susan Purcell, *Drapeau* (Toronto: Clarke, Irwin and Co., 1980), 148.

the French pilot and poet Antoine de Saint-Exupéry was chosen. In referring to this literary source, the organisers aspired to echo the sense of humanity - the need to create bonds among human beings, the sensitivity about the natural environment, and the dreams and hopes for a better future - that prevail in the writing of Saint-Exupéry into the character of Expo. "To be a man is to be responsible, to feel that by placing one's own stone, one contributes to building the World"⁴ actually served as the cornerstone for the concept of Expo 67.

The novel, *Terre des Hommes*, shares with Expo the idea of grandeur, optimism and fostered union of men towards a common project. The theme Man and His World was "intended to convey the accomplishments of the human mind, irrespective of national boundaries and embracing fields of thought, economic affairs, technology, science, culture and religion. Its final aim [was] to contribute to the development of a genuine unity of mankind, based upon respect for human personalities."⁵ The true vocation of man, as exposed in the novel *Terre des Hommes*, involves the obligation to go beyond his limits and surpass his workaday self. Without challenges, Saint-Exupéry suggests that there can be no creative human responses, but only the inevitable decline of men subjected to the monotony and absent-minded routines of life. It is the heroism and accomplishments of men seen as ideals, which become the focus of attention in St-

⁴ Translation of "Être homme, c'est précisément être responsable . . . C'est sentir, en posant sa pierre, que l'on contribue à bâtir le monde." Antoine de Saint-Exupéry, *Terre des Hommes* (Paris: Editions Gallimard, 1939), 54.

⁵ Guy Beaudry, "Fact Sheet No.1," (RG71, Vol.16, file ARC-71-16-27. National Archives. Montréal: August 1963), 1.

Exupéry's story telling. It is with this spirit of challenge that the project of Expo was approached and realised.

While the following chapters will each address different design approaches in the architecture of Expo, this section will deal with design similarities generated by universal and timeless concepts. I will first examine how the universal theme Man and His World functioned as a guideline to ensure a sense continuity and visual order in the overall master plan. The presence of clear geometrical forms in the design of the pavilions will also be explored as an indication of universalism.

A. SITE AND MASTERPLAN OF EXPO

The land that welcomed the pavilions and plazas for Expo had been generated in part from earth fill coming from the excavation of the Montréal Métro. "The site of Expo 67 was to be *created* by man's hand and, little by little, in the name of beauty and unabashedly human interest, it would emerge quietly from the waters."⁶ The existing Mackay pier, off the main land between the sheltered harbour and the swift St-Lawrence Seaway, was lengthened to become Cité du Havre (fig.4) where most of the permanent structures were located. The landscaped park on the small island formerly called Ile Verte, now Ile Sainte-Hélène (fig. 5), was extended to the south to house a mix of national, private and thematic pavilions, and to the north to create the amusement park La Ronde (fig. 7). Ile Notre-Dame (fig.6), bounded by the St-Lawrence Seaway and the

⁶ Jean Marie Faber, Terre des Hommes. Man and his World (Montréal: Canadian Corporation for the 1967 World Exhibition, 1967), 38.

Lemoyne Channel, was primarily created from earth fill to become the largest exhibition area, and included many lakes, lagoons and water canals. The whole site covered approximately 620 acres and the four distinctive areas were linked by the existing Jacques-Cartier Bridge, the new underground subway line, and the Concordia Bridge.

Mayor Jean Drapeau and his vision played a key role in the choice of location for Expo. Although he was heavily criticized for the incredible expense of creating new land for the exhibition, the islands granted the visitors with a clear and defined overview of Expo from the city and provided an exceptional setting. Once the land was made ready for construction, the conceptual ideas imagined for the master plan were to be developed without any limiting spatial constraints:

The planners were presented with a virgin site, with three-quarters of it built from scratch and free from any previous structure or any vested interests, moreover, they were granted an unrestricted budget combined with more control over the development of the plan than usual. These factors which contributed to the image of Man and His World as the prefiguration of a dream city rather than of a workable town.⁷

The fairy and magical quality associated with the Islands was also found in the official theme song: "If you hold on to my hand; You'll step into a dream; Onto a magic island; Like a painted summer scene."⁸

The ideal city the Expo organisers had in mind was composed of three types of pavilions; some sponsored by private companies, others by national governments, while a few

⁷ Jean-Claude Marsan, Montreal in Evolution (Montréal: McGill-Queen's University Press, 1981), 365.

⁸ James Gladstone, "Magic Islands," in Expo 67. The Memorial Album of the First Category Universal and International Exhibition Held in Montreal from the 27th of April to the 29th of October 1967, ed. Jean-Louis De Lorimier (Toronto: Thomas Nelson and Sons, 1968), 14.

others represented the exhibition's theme. Instead of grouping them by categories, private, national and thematic pavilions were mixed together and spread out evenly on the different areas of the site. However, for practical reasons, the festivities were contained in a separate area on the northern portion of Ile Sainte-Hélène. The planning group felt that the amusement park La Ronde should not penetrate the exhibition, because it would have longer hours and become a permanent installation. Administrative buildings were also strategically located somewhat remote from the main exhibit activities. The permanent buildings were placed on Cité du Havre across the Old Port of Montréal in the hope that, with the Habitat project, they would be the beginning of a new community.

The design of the master plan was lead by Sandy Van Ginkel, who was assisted by seven other architects. As part of the team, Moshe Safdie identified four main areas of concern in planning for Expo: "One, there was the location of the exhibition itself and the relation of each part to the others. Two, relating very closely to the first, there was the exhibition's transportation system, within the site and in relationship with the city. Three, there was the problem of urban design. Four, there was the details of making the thing work on the site."⁹ The first challenge was to allow projects of different magnitudes to be well integrated in the overall scheme, and this was addressed by dividing the master plan into different lot sizes. By doing so, an interesting diversity and balanced rhythm of scales were achieved on the site. The distribution of the pavilions was also decided according to their own anticipated public appeal. "In order to maintain interest and in a sense to contain the Exhibition, lots for the largest and perhaps the most spectacular

⁹ Moshe Safdie, Beyond Habitat (Montréal: Tundra Books, 1986), 65.

pavilions, [were] placed in terminal positions to form poles of attraction. Lots for the smaller pavilions, to avoid their being hidden, [were] clustered in groups in the central areas, partly surrounded by the lots for the pavilions of medium size."¹⁰ The site was also designed to channel the crowds towards areas of lesser interest. For that reason, Moshe Safdie explained that "the Canadian pavilion, the pavilion of the host country, should not be at the entrance, it should be at the end of the circulation path. In the same way, more or less as if we were designing a shopping centre, we said the U.S. and the Russian pavilions ought to be at opposite ends of the circulation pattern, like two big department stores, with all the small pavilions in between like small shops."¹¹

To achieve a sense of order, continuity and coherence on the site, strict guidelines were developed for the design of the master plan. These served as a uniform framework to attain the preset objectives, which were to:

Achieve volumetric equilibrium by grouping the most important and largest pavilions at the extremities and around the periphery of the different areas . . . Group equally important pavilions of similar character, or create ensemble on a geographic basis . . . Establish perspectives by specific alignments and orientations. Control the composition of Visitors' Services . . . Also control the composition, disposition and integration of landscape architecture and street equipment . . . And, lastly, adopt a judicious policy of graphics and of colour . . .¹²

In addition, the general regulations governing the development of Expo 67 stated that the pavilions could not cover more than 60% nor less than 40% of their lots to create satisfactory building density.¹³ This close-knit structure of built forms helped to enhance

¹⁰ "Objectives of the Master Plan," (National Archives. RG71, Vol.1, file ARC-71-1-7).

¹¹ Moshe Safdie, *Beyond Habitat* (Montréal: Tundra Books, 1986), 66.

¹² Edouard Fiset, "Introduction of an Urban Concept in the Planning of the Exposition," (RG71, Vol.13, file ARC71-13-6. National Archives).

¹³ "Objectives of the Master Plan," (RG71, Vol.1, file ARC-71-1-7. National Archives).

the scale of the plazas, recesses, and other open spaces, and sought to create a generally balanced environment. Forecourts, the result of setbacks adjoining common areas, were to be envisioned as extensions of the public spaces, and access to the pavilions was to be from the most "active" nearby spaces. On a smaller scale, the site details including street furniture, lighting, and signage were also conscientiously designed to bring order to the site and to bring about a sense of place.

The goal of the master plan was also to bring the human experience to the foreground and make the scale of the project easily negotiable by everyone. The site was designed for the enjoyment of pedestrians, with walking paths, outdoor lighting and furnishing, flowerbeds, and pools of water. The principal public routes formed patterns, partly coinciding or varying from the canals, increasing the visitors' awareness of their physical environment. The interaction between man and the natural elements occupies an important part in Saint-Exupéry's writings. At Expo, water became the primary physical element on the site. Partially developed for circulation (and to reasonably reduce the amount of infill necessary to the enlargement of the islands), water served to bring order to the site and permitted the visitor to appreciate the full view of the pavilions from a distance. To achieve a more peaceful experience, the motorized circulation was separated from the pedestrians and elevated from the ground. The main ride on the Expo Express and the secondary loops of the Minirail played an important role in the appreciation of Expo. This attractive transportation system went beyond getting people from one place to another; it became part of the exhibition itself. It allowed people to

acquire a personal sense of the whole exhibition by moving at a variety of speeds and from different heights, in addition to creating interactions between the pavilions.

B. THEME PAVILIONS

The participants of Montréal Expo were encouraged to take advantage of the theme in the planning of their exhibits and construction of their pavilions. Emphasis on the human condition – the grandeur, virtues, spirituality and accomplishments of men - was promoted, recalling the true wealth as perceived by Saint-Exupéry. The theme's multiplicity of interpretations created a greater opportunity for inventive projects. In its exhibits, the United States chose to present itself as 'Creative America' in a show of popular arts mixed with space technology; the USSR presented man's exploration of space; and France touched upon man's sensibility with a show of music and light. The story within the Canadian pavilion unfolded the challenges Canada faced with the vastness of the land, the country's social and political growth, and the development of its natural resources.

Each nation was also asked to participate in the thematic pavilions developed by Canada. Seventeen sub-themes were defined and grouped under different pavilions, including Man the Creator, Man the Producer, Man the Explorer, Man the Provider, and Man in the Community. These were meant to serve as gateways and to hold didactic functions. Serving as focal elements and points of orientation on the site, the structures were located adjacent to the transition areas of the transportation system, and were linked with other pavilions or plazas. "The Theme Areas [were] centre pieces for the National and Private

Exhibits and their purpose [was] to present the Theme of the Exhibition, in powerfully moving ways, each drawing attention to broad regions of human endeavour, setting frames of reference within which the National and Private Exhibits can be more meaningfully explored, and engendering a spirit of anticipation and inquiry."¹⁴

The pavilion "Man the Explorer" on Ile Sainte-Hélène included the sub-themes of Man in Life; Man, his Planet and Space; Man and the Oceans; and Man and the Polar Regions. The pavilion "Man the Producer" faced the Expo-Express monorail station on Ile Notre-Dame and covered the Resources for Man; Progress; and Man in Control. Both pavilions were designed on the concept of the repetitive combination of the truncated tetrahedron cells.¹⁵ As a construction method, the modules were bolted together, creating a variety of patterns through different juxtapositions. In the end, the pavilions took the appearance of large hexagonal inclined faces, impressive by their size more than by the degree of resolution of the details. On Ile Notre-Dame, the pavilion "Man the Provider" was constructed with a horizontal profile and focused on the role of agriculture in a changing society. On a seven-acre lot, nine low-rise pavilions were grouped in a circular arrangement around a field named the "Sun Acre" and marked by a sundial. In Cité du Havre, along with the other permanent pavilions, the pavilion Man the Creator included an international exhibition for the fine arts and photography in a modernist building made principally of concrete on a square floor plan. A separate pavilion was built next door to house an exhibition on industrial design, and contemporary sculptures were displayed further away amidst the rose gardens on the exterior grounds of Ile Sainte-Hélène. Works

¹⁴ "Objectives of the Master Plan," (RG71, Vol.1, file ARC-71-1-7. National Archives).

of art were integrated into the site and provided an interpretation of the exhibition theme. The outdoor sculpture by Alexander Calder (fig. 8) was a very significant piece that still remains today.

Perhaps the most successful thematic pavilion, architecturally speaking, was "Man in the Community" by Erickson Massey, which was meant to pose the questions confronting man about the city. The pavilion also included the section "Man and his Health" in an adjoining construction sharing a similar appearance. The project gave a strong impression of its geometry following the principle that "form must be simple and geometrically concise, as elaborated forms and fussy details show weakness."¹⁶ Wood was chosen as the main construction material for its symbolic association with the Canadian West Coast. The roof was framed with large wood beams stacked on each other on hexagonal foundations, the lower ones being deeper at the base and decreasing in size towards the top to form a geometric trellis (fig. 10). The enormous tent of wood was meant to extend the space to infinity, vertically in the centre and horizontally on all sides. The relation of nature was also well integrated in the design by arranging the exhibition around a quiet garden landscaped with flowers and a pool of water. Interestingly, the roof apex was left open to permit the rain to fall into the pond in the centre of the pavilion and translucent canvas covered the fenestrated walls from the inside to allow natural light to come in.

¹⁵ The pavilions Man the Explorer and Man the Producer were designed by Affleck, Desbarats, Dimakopoulos, Lebensold and Sise.

¹⁶ Arthur Erickson, "Introduction," in *Canadian Architecture, 1960-1970*, ed. Carol Moore (Toronto: Burns, 1971), 5.

Habitat 67 (fig. 12) by Moshe Safdie complemented the subject of the adjacent pavilion, “Man in the Community,” by exhibiting a permanent housing compound that proposed a new form of urban architecture. The objective behind the project was to achieve a density of dwellings using mass production techniques, while providing privacy, comfort and direct access to a garden from each unit. The complex was made of a series of modular concrete units that stepped back to create private terraces and allow views in many directions and let in natural light. The structural approach was to form a continuous system where all its parts participated as load-carrying members connected with high-tension rods, cables and welding. In all, 354 modular units were necessary to assemble 158 houses of 19 types varying in layout and size from one to four-bedrooms. They were fairly distributed on thirteen levels and connected by a system of circulation composed of three elevator cores and horizontal covered pedestrian streets, creating a three dimensional city.

C. GEOMETRY OF THE PAVILIONS

The use of geometrical forms in architecture is a concept closely tied to our own individual experience. As Perez-Gomez mentions, “the body has a dimension. Through motion it polarizes external reality and becomes our instrument of meaning; its experience is therefore ‘geo-metrical’.”¹⁷ The principles of geometry are commonly understood by most societies. “The variance of geometry has been utilized, along with number, since antiquity by all cultures in the service of cosmology, philosophy, and

¹⁷ Alberto Perez-Gomez, Architecture and the Crisis of Modern Science (Cambridge: The MIT Press, 1983), 3.

architecture to denote truths about the universe, the three principal symmetrical figures of circle, square, and equilateral triangle being most frequently employed.”¹⁸ Geometry and numbers belong to an unchanging world of abstractions, relations and equations, and are prototypes of the ideal. They are symbols of the highest order. Geometric knowledge is often linked to the realm of everlasting truths, contrasting with the varying truths of everyday life. Moreover, “geometry has traditionally been a matter of finding the *unchanging* quality of a spatial relationship, the rule under which it operates.”¹⁹ Despite the universal character of geometry, its utilisation among architects throughout history has by no means resulted in a consistent approach to architecture. In the past, mathematical relationships were subtly used as guidelines to establish the ideal proportions between the different elements of a plan or a façade. In contrast, what we see at Expo 67 is a more direct and explicit application of recognisable geometrical forms in the architecture of the pavilions.

The architecture of Montréal Expo was very revealing in terms of volumes, textures and colours. These characteristics were also greatly emphasised by the scale by which they were expressed. Pavilions of different sizes could be found on the site. The largest ones were erected for the host country, the thematic pavilions, and the then-powerful countries such as the United States, the USSR, France, Great Britain, and Germany. In contrast, more modest pavilions were built by states like New York, Maine and Vermont, and small or far-away countries like Ceylon, Haiti, and Jamaica. The element of scale played

¹⁸ Paul-Alan Johnson, *The Theory of Architecture: Concepts, Themes and Practices* (New York: Van Nostrand Reinhold, 1994), 359.

¹⁹ *Ibid.*, 358.

an important role in the general impression of the pavilions, and at the same time gave an indication of the interest and capacity of production of each nation.

The pavilions were visually distinguishable from one another by the clear shape they took. On the exhibition grounds, rectangular-shaped pavilions were predominant, sometime using standard construction methods and materials without offering the finest architecture. However, architect Carlos Villanueva did find a way to depart from the monotony of the square with his pavilion for Venezuela (fig. 13) designed as three cubes of polished metal sheets painted on each face with a primary colour and sitting on a white concrete base. The pavilion of Greece took a similar approach with nine separate white cubes made of concrete blocks and joined together with glazed passageways adjoining a courtyard. The well-known housing complex on Mackay Pier designed by Moshe Safdie is another notable example of the use of boxes as the basic unit for construction in a creative way. Also, the pavilions of Israel and Cuba used projected rectangular forms in their facade in a playful manner, and the European communities pavilion had a striking composite geometry with the reflective surfaces of a precious stone.

At Expo, we also see a departure from the simple boxes of the earlier Moderns. "The desire for individual characterization of buildings and places implies an articulation which offers more possibilities of variation than the ascetic and somewhat insubstantial forms of early Functionalism."²⁰ Curvilinear forms were used in the design of several pavilions. The pavilions of USSR and Italy used a concrete sweeping roof, the pavilion

²⁰ Christian Norberg-Schulz, Meaning in Western Architecture (New York: Praeger Publishers, 1975), 405.

of the West Canadian provinces was conceived in the shape of a sloped shingled mountain, and the pavilion of Germany had an irregular tent roof supported by masts set at different heights. France's pavilion was created on a circular plan around an interior atrium, and the Kaleidoscope offered a colour spectrum on vertical fins around a cylindrical structure. In its use of the sphere, the United States pavilion was unmatched with its impressive geodesic dome on Ile Sainte-Hélène (fig. 11).

The pyramid was clearly expressed in the overall shape of the theme pavilion Man in the Community designed by Arthur Erickson as an interwoven wood structure. The pavilions of Québec and Australia were presented as truncated pyramids with inclined glass walls, and the pavilions of Canada and Ontario had pyramidal roofs made of semi-translucent canvas. The pavilion of the Canadian Pulp and Paper Industry was designed with bright green pyramids representing a forest of trees. The pavilion of Yugoslavia was a good example of the manipulation of the triangle with its seven large triangular bays. Also using the triangle as a generative form, as well as the pavilion of the Steel Industry made use of a succession of light 'A' structures on a blue steel roof. Similarly, the pavilion of Austria consisted of white triangular framed-surfaces to form its exterior skin. Also, the pavilion of Vermont combined a small triangular volume with a cube made of wood and slate with a long inclined footbridge leading to its entrance.

In the manipulation of the pyramidal form, the main structure of the Canadian pavilion (fig. 9) was quite striking, and deserves additional consideration. The architects for the

Canadian pavilion, a consortium of three firms from Ottawa²¹ with Arthur Erickson as consulting architect, developed an architectural concept that aimed at creating both a focal point for the exhibition and a unique artistic expression. The pavilion consisted of a group of nine distinct parts dominated by a twelve-story high structure named Katimavik, for "gathering place" in Inuit. The Katimavik took the form of an inverted pyramid engineered with steel members sloped outward at thirty degrees angle, opened to the sky, and clad with semitransparent vinyl fabric. The space of Katimavik was opened to the sky, and its slanted walls clad with semitransparent vinyl fabric on which sculptural objects were displayed. Stairs were provided in three corners, with an inclined elevator at the fourth, to give the visitors access to a top promenade offering an exceptional overview of the exhibition's grounds. If we examine the spatial quality of Katimavik, we observe that its size and shape suggested the sense of expansiveness, emptiness, and simplicity that characterize the Canadian landscape.

The Canadian pavilion was a cluster of different elements, and its main exhibit spaces covered an extensive area around the Katimavik, under fourteen pyramidal roofs made of translucent vinyl fabric and supported by large wood members. In the foreground stood a six-story high structure representing a Canadian maple tree. The trunk was constructed of laminated wood, the suspended leaves consisting of silk screen photographs of Canadians. Two spiral ramps and platforms made the leaves accessible to the visitors from within. There was also an Arts Centre set on one side in a square-shaped building of steel and bronze glass, with a red Canadian leaf painted on a white background on its

²¹ The consortium of architectural firms for the pavilion of Canada was composed of: Ashworth, Robbie, Vaughan and Williams; Schoeler and Barkham; and Z. Matthew Stankiewicz.

roof. A concrete volume screened a 500-seat theatre at its core, and was surrounded by an art gallery and a library. There was an extensive use of public open spaces around the Canadian exhibits: restaurants, small kiosks, and an outdoor stage for daily performances were spread out over a landscaped area that incorporated water elements, terraces and brick paved walkways set at various levels.

Katimavik became the focal point of the Canadian pavilion and provided orientation to the visitors. The manipulation of the pyramid in the design of the pavilion stimulates the imagination, and makes us wonder if its inversion carried a more substantial meaning than mere architectural originality. The form may well have been borrowed from a popular green glass ashtray, as the widespread anecdote suggests. The exhibition's official information manual also attempts to find meaning in the form of the Canadian pavilion by stating that "the pyramid-shaped roofs suggest, in profile, the crystalline nature of Canada's mineral resources, while the unusual shape of the Katimavik is, in itself, a striking architectural concept and an achievement in engineering."²² In fact, Katimavik was conceived as a sculptural object and its form suggests a return to the nature of architecture as art. "Architecture's value no longer lay in its redemptive social power, its transformation of productive processes, but rather in its communicative power as a cultural objects."²³ Acting as a pole of attraction and podium, the impressive and easily recognisable form became a symbol. This type of approach for the design of the Canadian pavilion is also noticeable in many other pavilions at Expo. The main objective

²² Expo 67 Information Manual: Universal and International Exhibition of 1967, Montreal, April 28 – October 27 (Montreal: Information Services – Expo 67, 1967), 3.

²³ Mary McLoed, "Architecture and Politics in the Reagan Era: From Postmodernism to Deconstructivism" in Architecture Theory Since 1968, ed. Michael Hay (Cambridge: The MIT Press, 2000), 683.

shared by most participants was in fact to leave a powerful and favourable impression in people's mind, which would last long after the closing of the event.

In addition to geometry, the use of design standards can also be linked to the idea of universality. To achieve a total harmonious effect, the organisers of Expo imposed on the participants a set of rules through the creation of a building code to have better control on the overall aesthetic of the pavilions. An information package was also given to each participant, which included examples of construction methods used in Canada and brochures promoting Canadian materials. In addition, the preliminary designs and final proposals for each pavilion were regularly reviewed by the architectural branch of the Canadian Corporation for the 1967 World Exhibition as part of the official approval process.

In spite of the construction standards and imposed site regulations, Expo architects were encouraged to be inventive. With the emergence of standardisation and mass communication, "each country shows itself by the way in which it is able to present the same thing other countries could also present."²⁴ As a result, each participant was forced to go beyond the use of common building techniques and typically accepted forms. Also, creative and imaginative methods became more significant in representing a nation's knowledge, ability, and expertise. Notable differences were observed in the architecture of Expo. While some pavilions blended in with their surroundings, others stood out by their imposing scale and artistic features. It is clear that some countries invested more in

²⁴ Umberto Eco, "A Theory of Expositions," *Travels in Hyper Reality* (New York: Harcourt Brace Jovanovich Publishers, 1968), 296.

the architecture of their pavilions, and that some others put more efforts in the development of the exhibits within. Many pavilions displayed authentic materials shipped from their country of origin and used them with traditional construction methods, but a large majority of countries chose to convey modernity. A number of pavilions were also constructed the same way one would find a building on a typical city street, using bricks, concrete, and paned windows, while others tried to distinguish themselves by experimenting with new and advanced technologies. As most pavilions were the representation of a single country, others reunited many nations under a common structure: the five Scandinavian countries, the sixteen nations from Africa, and the Eastern and Western Provinces of Canada. We see in these different design approaches an indication of how each nation chose to express itself through architecture. We can also deduce that standardised techniques and materials do not necessarily limit the diversity of results when used creatively.

Fig. 8: Calder's Sculpture.

Fig. 9: Pavilion of Canada.

Fig. 10: Interior of Man in the Community.

Fig. 11: Pavilion of the United States.

Fig. 12: Roof Top View of Habitat.

Fig.13: Pavilion of Venezuela.

IV. PAST AND PERMANENCE

De même que les colonnes d'un temple, émergeant seules du sable, montrent encore les vestiges de la table qui s'est éboulée, ainsi ces piliers solitaires témoignent d'un vaste plateau qui les unissait autrefois.¹

Une forêt antédiluvienne jonche le sol de ses fûts brisés. Elle s'est écroulée comme une cathédrale, voilà cent mille ans, sous un ouragan de genèse.²

A series of reflections in *Terre des Hommes* confirm Saint-Exupéry's preference for a pre-industrialised and rural world. The sophisticated technology required for flying is played down to prize the manual skills of the pilot. Metaphors are also repeatedly used to associate the pilot's dexterity with the one of the craftsmen and peasant. The author's tone leads us to assume a certain longing for a simpler world where the values of the countryside represent a morally satisfying way of life. "This idealized and sentimentalized image of French rural society reflects a nostalgia for the archaic, and this nostalgia testifies to the supreme importance granted by Saint-Exupéry to notions of order, continuity and hierarchy."³ We also find in the author's personal account of the desert an eternal quality, a belief in the durability of the earth and a need to be assured of a permanent home for mankind. Faced with the evidence that natural phenomena outlast man, he shows an admiration for the age of the world and a strong fascination with the landscape seen as a sign of permanence and continuity. He also feels the "pride that

¹ Antoine de Saint-Exupéry, *Terre des Hommes* (Paris: Editions Gallimard, 1939), 69.

² Ibid., 158.

³ John S. Beynon, *Saint-Exupéry, Vol de Nuit and Terre des Hommes* (London: Grant and Cutler Ltd., 1990), 47.

comes from recognising the power of human consciousness to stand apart from this inert natural world and to make sense of its fragmentary evidence.”⁴

Just like we find in Saint-Exupéry’s writing an inclination towards permanence and historical continuum, we observe a corresponding characteristic in the architecture of Expo 67. On the exhibition grounds, there were a great number of pavilions incorporating historical references, long-lasting materials, and traditional construction methods to project an illusion of duration. As Eco suggests, “the paradox in an exposition is that the buildings, which are supposed to last just a few months, look as they have survived, or will survive, for centuries.”⁵ For the purpose of a temporary event like Expo, it is hard to understand why the participants would opt for heavy and static pavilions with demolition in mind as a justifiable end. As a partial explanation for this approach, everyday constructions and traditional methods and materials might have been chosen for the comfort level set by familiarity at the expense of innovations. Also, the period of exposure of an exhibition tends to be less important than its intensity and the manner by which the nations’ leaders want their society to appear in front of an international audience.

In this chapter, I will investigate how the value of tradition was translated into the architecture of some of the pavilions at Expo by looking at examples of historical recreations, and stressing the fact that individual perception is always influenced by

⁴ Ibid., 40.

⁵ Umberto Eco, “A Theory of Expositions,” in *Travels in Hyper Reality* (New York: Harcourt Brace Jovanovich Publishers, 1968), 299.

references to cultural symbols. In the second part, I will discuss the choice of massive constructions for the design of many influential nations as a more contemporary interpretation of permanence.

A. SYMBOLS AND TRADITION

When contemplating an object, a piece of art or architecture, the viewer “sees with much more than his eyes; he sees with his mind, his memory, his emotions, his linguistic and visual habits, his culture patterns, his value systems, his expectations.”⁶ Our understanding of the world is associated with our cultural and social background. For that reason, “the consideration of the built environment or any other system of signification implies that the information conveyed must be seen in terms of the culture that produces these objects.”⁷ In looking at the architecture of the national pavilions at an international exhibition, one must acknowledge the obvious cultural differences that influenced the outcome of the design. Imitation and identification are an integral part of the socialization process that defines a culture. Norberg-Schulz explains that imitation “consists in *taking over* cultural elements like knowledge, beliefs, and symbols, while ‘identification’ means that we come to understand and accept the mediated *values*, i.e., that the expectations and objects the signs designate are of different importance.”⁸ Also, the appreciation of a culture involves the knowledge of its system of symbols.

⁶ Clifford Geertz, ed., Myth, Symbol, and Culture (New York: Norton, 1974), 203.

⁷ Diana Agrest, Architecture from Without: Theoretical Framing for a Critical Practice (Boston: The MIT Press, 1991), 17.

⁸ Christian Norberg-Schulz, Intentions in Architecture (Cambridge: The MIT Press, c1965), 39.

At Expo 67, we are dealing with an orchestrated setting where a mix of cultures is represented, offering a wide range of readings in close proximity. As general observation, great contrasts can be found between the advanced capitalist cultures that explore the excitement of choices and new possibilities, and the less developed countries that usually embrace their prized tradition and spiritual assets in a more conservative way. This extreme range of attitudes and mind-sets is responsible for the diverse and rich quality of the exhibition. The differences are even more remarkable because of the competitive setting that incites the participants to outdo one another. Also, "the basic ideology of an exposition is that the packaging is more important than the product, meaning that the building and the objects in it should communicate the value of a culture, the image of civilization."⁹ Undoubtedly, international exhibitions yield a great opportunity to communicate national identity and cultural messages globally.

For a message to be meaningful, it "presupposes the use of symbol-systems which are connected with systems of expectations, and that the message has to contain a certain moment of surprise, without breaking completely with the expectation."¹⁰ Many international exhibitions at the dawn of the industrial age were remembered for their large-scale symbols; the 984-foot Eiffel Tower at the Exposition Universelle of Paris in 1889, and the 260-foot high Ferris Wheel at the World's Columbian Exposition of 1893 in Chicago are fine examples. Other icons can be found in more recent exhibitions like in Brussels in 1958 with the Atomium structure, and in Seattle in 1962 with the Space

⁹ Umberto Eco, "A Theory of Expositions," in *Travels in Hyper Reality* (New York: Harcourt Brace Jovanovich Publishers, 1968), 299.

¹⁰ Cherry, quoted in Christian Norberg-Schulz, *Intentions in Architecture* (Cambridge: The MIT Press, c1965), 60.

Needle. The organisers of Expo 67 decided on a more abstract symbol in choosing the universal theme Man and His World for the event. Also, the concept of man was successfully captured in the graphic pictogram for Expo. It referred to an ancient sign representing Man by a vertical line with outstretched arms, linked in pairs to illustrate friendship and repeated in a circle to represent the world.

Eco described different types of symbols that were found in the architecture of Expo 67. First there exist open symbols that are ambiguous and give a broad range of interpretations to the perceiver. Then, there are symbols that are conventionalized visually based on a commonly understood code. Finally, symbols can be identified in an allegorical representation and more traditional denotative communication established by familiarity and repetition.¹¹ The pavilion of Great Britain was given by Eco as an example of open symbol because of the ambiguity of its irregular mass, its tapered tower abstracted from the Union Jack and its cave-like interior, which made the architecture appear in opposition to the image of contemporary Britain. The pavilion of Québec on the other hand, offered the same rational simplicity in the design of its exterior than its interior: the architectural façade was sleek and transparent, and corresponded to the quality of the geometric volumes employed inside to represent the natural landscape. The American pavilion, which stood out as a model of great engineering, made use of very familiar symbols to convey its history. Its exhibit included a collection of objects belonging to important public figures, a display of cutting-edge art pieces with gigantic photographs of movie stars, and a simulated lunar landscape with spacecraft models and

¹¹ Umberto Eco, "A Theory of Expositions," in *Travels in Hyper Reality* (New York: Harcourt Brace Jovanovich Publishers, 1968), 300.

artefacts. As a last example, the Israeli pavilion used in its exhibits images with strong connotations in reference to the Holocaust, which allowed no ambiguity for the visitors.

Other symbols were found in the architecture of the pavilions at Expo. The pavilion of Austria was meant to convey the many facets of the country through its building structure. In one single pavilion the "thoughts of mountains, precious stones and romantic scenery [were] evoked as well as concepts of precision, science and engineering, mental activity, logic and art."¹² The European Communities shared a similar desire to express the idea of multiplicity in the design of their pavilion.

Accordingly, "its architectural conception evokes the form of a diamond with multiple facets, symbol of a Europe whose influence radiates under the most varied forms."¹³ The use of steel as the principal material was a symbolic gesture, representing the moment when the six countries of the Old World decided to replace the old rivalries with the merger of interests by establishing the Coal and Steel Community, the first common market in Europe. Finally, the overall image that the pavilion of Monaco conveyed to the visitors was an important consideration in its design. The pavilion was conceived as "a haven of rest, open air and peace on the Emplacement, thus reflecting the picture of that which the Principality of Monaco wishe[d] to be in the World."¹⁴

Symbols are closely tied to the concept of national identity and tradition, which involve principles that are significant and have some intellectual, conceptual or social foundation.

¹² "Description of Expo 67 Pavilions, National and Para-National, as Written by the Participants Themselves," (RG71, Vol.12, file ARC-71-12-4. National Archives).

¹³ Ibid.

¹⁴ Ibid.

Tradition can either be employed to represent “an inherited way of going about things” or “a very self-conscious choice of a line in philosophy based upon interpretation of connections in history that carry a particular pattern of meaning.”¹⁵ In any case, a number of nations clearly choose to denote the importance of traditional values. They stood out among the presence of modern forms on the site of Expo by their ornate façade, ancient materials and quality of craftsmanship. In a general way, traditional architecture involves natural materials, non-industrial building methods, historical models, and custom architectural elements. A good example of traditional representation is the pavilion of Thailand (fig. 15) located on Ile Notre-Dame in the foreground of the imposing USSR pavilion. The pavilion consisted of a replica of a famous Buddhist shrine that was shipped to the site in pieces and a reproduction of Thailand’s distinctive Royal Barge displayed in a reflecting pool. This architecture had merit for its elaborate details, and it offered to the visitor “the famous scenic beauty and typical oriental atmosphere of Thailand. [...] The pavilion, with vivid colours and intricate carvings, capture[d] the spirit of Thai architecture.”¹⁶ Its immediate neighbour, the pavilion of Burma (fig. 14), also shared this attention to details and tradition. The pavilion was conceived in the traditional Burmese style using colourful patterns, elaborate woodcarvings of floral design and lacquered paintings with detailed line drawings.

¹⁵ Colin St John Wilson, quoted in Michael Wheeler and Nigel Whiteley, eds., The Lamp of Memory: Ruskin, Tradition and Architecture (New York: Martin’s Press, 1992), 190.

¹⁶ “Description of Expo 67 Pavilions, National and Para-National, as Written by the Participants Themselves,” (RG71, Vol.12, file ARC-71-12-4. National Archives).

When talking about tradition, Ruskin argues that "it is in that golden stain of time, that we are to look for the real light, and colour, and preciousness of architecture."¹⁷ The pavilions at an international exhibition cannot truthfully possess this architectural quality that Ruskin is strongly supporting, they can only try to recreate part of a nation's past, an illusion that successfully mislead many visitors. Also, some nations were inclined to show their rich heritage by re-creating a part of the past. The Jamaican government spent considerable efforts in trying to accurately represent a typical nineteenth-century country shop on Ile Notre-Dame. The two-story pavilion was situated among a small group of pavilions constricted between the Canadian pavilion and the theme pavilion Man the Producer. It combined many architectural elements from its past; with light-coloured plaster walls, upper balconies, shuttered windows, and a cedar shingle roof with deep overhangs. The detailing came from mixed influences; "from Spanish colonial past came the veranda and the use of wrought iron, and from the inns of Surrey, England, came the massive delicately aligned beams. Early carpenters, who were essentially ship builders, introduced a strong nautical influence in the construction."¹⁸ There were also some North American examples where history and traditions were successfully promoted in this fashion. The pavilion for the State of Maine on Ile Ste-Hélène was a reproduction of a typical American Colonial mansion, with white walls and a symmetrical façade ornate with green shutters. In this case, modern techniques were used to create the disguise of a colonial appearance from the past. The visual representation was more symbolic for the pavilion of the Indians of Canada, which was made out of wood in the shape of a tepee,

¹⁷ Ruskin, quoted in Michael Wheeler and Nigel Whiteley, eds., The Lamp of Memory: Ruskin, Tradition and Architecture (New York: Martin's Press, 1992), 11.

¹⁸ "National Pavilions," (RG71, Vol.11, file ARC-71-11-6. National Archives).

with its six sides representing the six aboriginal cultural groups in Canada. The pavilion also included traditionally painted murals and colourful totems guarding its entrance.

Most of the pavilions exhibiting a traditional flavour by recalling historical elements and replicas in their design were likewise smaller in scale and located inland, framed between larger pavilions. This was the case of the pavilion of Ceylon (fig. 17) that was built in front of the pavilions of Australia and Germany on Ile Notre-Dame. The three-storey pavilion was a reproduction of a medieval audience hall found in Kandy, and its façade included a colourful stain glass mural, a painted freeze in gold and black shades, rosette panels in carved wood, and an ornamental stone portal. The pavilion of Iran (fig. 16) on Ile Ste-Hélène was equally impressive with its exterior colonnades that surrounded its four sides and were decorated with delicate blue tile-work of roses and nightingales. The pavilion of Mexico was designed in the shape of a shell with soaring wings and included the replica of a small Mayan temple built from stones from Uxmal with artful sculptures of angels. Next to it, the pavilion of India marked its entrance with a triangular tower designed as a replica of a sixteenth-century sundial in New Delhi, and had its floors paved with a mosaic of sandstone and marble. Longing the LeMoyne Channel water edge, the pavilion of Morocco also included a vertical element in its design with a tall green-and-white minaret on its front approach. It had an eight-pointed shaped floor plate with decorative arches, sculptured wood, plastered ceilings, and Moroccan mosaic floors. Close by, the rectangular pavilion of Tunisia had white-and-blue tiled walls, and its exhibition was set around a central patio with pink paving and arched colonnades recalling those of an ancient palace.

Architectural details were an important feature to represent tradition. The Chinese pavilion on Ile Ste-Hélène evoked elements of traditional palaces with its green tiled roof in the pagoda style, painted bands of multicoloured patterns, and three red arched doors worked with floral patterns and contrasting with the remaining white walls of the building. The pavilion of Korea nearby had an elaborate roof structure of crisscrossing wood pieces over a white paneled base with a wood tower standing next to it. Across from the canal and close to the pavilions of Thailand and Burma, the pavilion of the United Arab Republic was a simple rectangular structure built in Arabic style. Similarly, the Kuwait pavilion was designed as a replica of a Moorish building with large Arab arches on its façade. Finally, the pavilion of Algeria was a square blue-and-white building made of steel and wood, decorated with traditional Arab style arches and imported red marble floors.

Looking at the use of traditional language in the architecture of the pavilions of Expo, we find that with very few exceptions, the nations known for their strong and long-established heritage were also the ones that displayed fragments from ancient times to represent their culture. This emphasises the utilisation of architecture as a vehicle to transmit the ideologies and beliefs of a country. Without referring explicitly to traditional architecture, other means were also employed to represent the long-lasting values of a society. We will now explore examples of constructions inspired from traditional materials and historical forms, interpreted in a more innovative and contemporary way to reveal this constant tension between past and present.

B. MATERIALITY AND PERMANENCE

In our society, there seems to be a favourable prejudice in favour of duration and a spontaneous inclination towards permanence. While the natural landscape is continually transformed with the changes in seasons, masterpieces of the past were often designed for permanence even if they could never fully attain it. Standing as testimonies, the most celebrated works of architecture such as the pyramids, the temples and castles of the world, all endured passing weather, changing fashions, transfer of ownership, and numerous battles over an extensive period of history. Ruskin said in that respect that what makes the glory of a building is not its stones, nor its gold, but rather its age:

It is in their lasting witness against men, in their quiet contrast with the transitional character of all things, in the strength which, through the lapse of seasons and times, and the decline and birth of dynasties, and the changing face of the earth, and the limits of the sea, [that a building] maintains its sculptured shapeliness for a time insuperable, [and] connects forgotten and following ages with each other¹⁹

Today, architecture is commonly approached with a twenty-five year cycle in mind. Still, “it remains ‘frozen’ music that crystallizes values meant to last for more than one person’s lifetime.”²⁰

The manifestation of permanence can be seen in the overall design of Expo 67 in the utilisation of ancient and noble materials like masonry instead of taking advantage of glass and steel construction known for its efficiency of construction. In fact, we surprisingly find a great number of pavilions made of heavy and rigid materials with standard construction methods as if they were built for long-lasting functions. As a

¹⁹ Ruskin, quoted in Michael Wheeler and Nigel Whiteley, eds., The Lamp of Memory: Ruskin, Tradition and Architecture (New York: Martin’s Press, 1992), 11.

²⁰ Charles Jencks, “Architectural Time – Between Melancholy and Narrative,” in Anytime, ed. Cynthia Davidson (New York: Anyone Corporation, 1999), 187.

result, "a defect common to many of the best, as well as the worst, of the national pavilions [was] that they [did] not have a sufficiently temporary character, thus denying themselves an appropriately light and spontaneous quality."²¹

We also observe implicit references to the past even in the contemporary architecture of Expo 67. If we believe that architecture can be understood by looking at the work "in the same spirit that it was read by its contemporaries,"²² Giedion's account of the architecture of the 1960's will certainly serve as a reliable source for the appreciation of Expo. He mentions that "the fashion of the sixties . . . flirts with the past, nibbling at random details – pointed arches, renaissance porticoes, cupolas – giving them a surrealistic flavoring, so as to achieve a 'poetic' expression."²³ He also notes how technological development has greatly contributed to an evolution of plastic tendencies in the architecture of that period. The expression of forms goes beyond their physical limits as "we have again become sensitive to the space-emanating powers of volumes, thus awakening to an emotional affinity with the earliest origins of architecture." For Norberg-Schulz, pluralism is the term that defines the architecture of the sixties. This plural approach can be seen at Expo in the use of both geometric and organic forms, simple planes and ornamented surfaces. Many pavilions embraced the same sculptural quality of the late work of Le Corbusier for Notre-Dame-du-Haut chapel in Ronchamp where "suddenly, all the proscribed forms reappeared: the plastic mass, the hole in the

²¹ "Expo 67," *Architectural Review* (August 1967): 108.

²² Clifford Geertz, ed., *Myth, Symbol, and Culture* (New York: Norton, 1974), 207.

²³ Sigfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition* (Cambridge: Harvard University Press, 1967), xlvii.

wall, the expressive curve and the cavelike interior."²⁴ Pluralism also presented a new direction for architecture that took into account the value of history.

The participants at Montréal Expo put considerable efforts into producing original and attractive structures. Plastic forms had a very strong presence in the curved pavilion of France (fig. 19) and the jagged outline of Great Britain's pavilion (fig. 18) for example. In terms of public response to each pavilion, the architecture of the British pavilion was considered plain and conservative, while the pavilion of France was perceived as quite striking. The British pavilion was an imposing structure consisting of a massive and windowless white building with a horizontal and sharp projection over its base. What drew the attention was certainly the 200-foot sculpted tower topped by a three-dimensional coloured Union Jack flag. The interior was modelled from the exterior contour, offering an interesting vertical space within the tower. The pavilion of France took the character of a sculptural form of steel and concrete wrapped with a row of aluminium lances. The pavilion was described as "a circular building, a monument of concrete, glass and aluminium, around a display of sunbreaker strips [that] convey[ed] the effect of a great sculpture, laying open new possibilities to the users of modern materials who seek to escape the tyranny of rectilinear edges."²⁵ Above the eighth floor, the roof terrace displayed contemporary art sculptures and offered an impressive view of the exhibition site. The interior of the pavilion also had sculptural qualities and was conceived as a large circular atrium where a six-minute performance consisted in

²⁴ Christian Norberg-Schulz, *Meaning in Western Architecture* (New York: Praeger Publishers, 1975), 407.

²⁵ "Description of Expo 67 Pavilions, National and Para-National, as Written by the Participants Themselves," (RG71, Vol.12, file ARC-71-12-4. National Archives).

producing flashes of going up and down tall steel cables to the rhythm of electronic music. While the British pavilion contrasted greatly with its interior filled with entertaining films and artistic displays, the French pavilion was equally elegant in its architecture and exhibits.

“Contemporary interest in sculpture and in the plastic possibilities of architecture results in an increasing interest in mural reliefs on the part of the sculptor and in the revitalization of the wall on the part of the architect.”²⁶ Apart from the textured and ornamented façades of the traditional pavilions like the ones for Ceylon and Tunisia described earlier, the Israeli pavilion used a clever articulation of the wall with white cubes projecting forward and over the main entrance in an abstract design. In many other cases, the wall seems to have disappeared, leaving the exhibits to open up with to its exterior, like for the pavilions of Ontario and Germany.

In the articulation of the roof of many pavilions, “the earliest forms of shelter reappeared: the nomad’s tent, the hanging roof used in prehistoric Russian settlements, the baldachin and other canopies.”²⁷ In this respect, the USSR pavilion showed a particularly engaging outline: its double v-shaped structure supported an inverted concrete sweeping roof over a glazed enclosure. On a smaller scale, the pavilion of Italy was also designed with a curved roof set closer to the ground. The pavilion of the Atlantic Provinces, shaped like a ‘T’, had an interesting wooden cantilevered roof sheltering the exhibit and the elevated

²⁶ Sigfried Giedion, Space, Time and Architecture: The Growth of a New Tradition (Cambridge: Harvard University Press, 1967), iii.

²⁷ *Ibid.*, xli.

Minirail. The nearby West Canadian provinces pavilion had a particularly unusual sloped roof made of cedar shingles, symbolizing the transition from the flat plains of the prairies to the high mountains of Alberta and British Columbia. The pavilion of Germany offered the best example of the use of the nomad's tent in a very playful and innovative way. Finally, Africa Place used the concept of traditional villages in its layout by spreading small red brick structures with yellow gable roofs around a shaded courtyard to represent its sixteen participating nations.

Some pavilions were less expressive in the shape they took, and chose conventional methods and materials to represent their nation alike a permanent building. On Ile Ste-Hélène for example, the Belgian pavilion was constructed of brown bricks imported from the country of origin with large tinted glazed windows. We could easily say that the pavilion shared its general appearance with many ordinary public buildings one would find on a city street and that it presented a certain sense of stability. Its neighbour pavilion of Switzerland had a softer outer shell of vertical red cedar strips above glass panels, but similarly lacked inventiveness. The architecture of the Czechoslovakia pavilion could also be mentioned here for its overall simplicity. Although appealing architecturally in its use of a solid screen of ceramic panels above tinted glazed base, its modern shape related more to a permanent building than to a temporary exhibition pavilion.

Some constructions at Expo were intended to be used after the event. As part of the overall masterplan, permanent pavilions housing administrative functions were placed on

Cité du Havre along with Moshe Safdie's housing project Habitat. By selecting the closest section of the Expo site to the city downtown, these new modern structures of heavy masonry were meant to become an extension of the activities of the city. While the majority of the pavilions were eventually demolished over the years that followed the closing of Expo, a few were donated symbolically to the city of Montréal and later renovated to accommodate new functions. In that way, the geodesic dome of the Americans was converted into a museum, whereas the French and Québec pavilions were transformed into a casino. The former art centre of the Canadian pavilion with the outdoor stage band and the pavilion of Trinidad and Tobago nearby also stand on Ile Notre-Dame as reminders of what once took place. Parallel to the efforts for preserving the pavilions, the exhibition organisers showed a strong inclination towards extending the official duration of Expo by hosting smaller annual summer festivals in the subsequent years. Also, the amusement park La Ronde on Ile Ste-Hélène, planned as a long-term attraction for the residents and tourist crowds, has continued to open every summer. In the end, Expo 67, like most fairgrounds, became an important addition to the hosting city as a park for the great benefit of its citizens.

Although international exhibitions require years to develop and usually last less than six months, their reputation often subsists well beyond their celebrated moment. The memories of visitors and the recordings of drawings, photographs and video, contribute to form long-lasting evidence for the future generations. Furthermore, exhibition grounds leave behind more than an empty place. The intensity of activities actually transforms permanently the hosting cities on many different levels. International exhibitions, like

other large-scale public events, help in expanding the city's infrastructures such as roadways, bridges and public transportation systems. More importantly, the festivities bring worldwide attention to the city and stir its economy by attracting new businesses and further developments.

Fig. 14: Pavilion of Burma.

Fig. 15: Pavilion of Thailand.

Fig. 16: Pavilion of Iran.

Fig. 17: Pavilion of Ceylon.

Fig. 18: Pavilion of Great Britain.

Fig. 19: Pavilion of France.

V. THE EPHEMERAL AND FUTURE

D'où les hommes tirent-ils ce goût de l'éternité, hasardés comme ils sont sur une lave encore tiède, et déjà menacés par les sables futurs, menacés par les neiges? Leurs civilisations ne sont que fragiles dorures: un volcan les efface, une mer nouvelle, un vent de sable.¹

Saint-Exupéry reflects on the fragility of human beings and their ephemeral disposition in the world. He sees human life constantly threatened by the more durable and stronger surrounding natural elements, such as the sea, a wind of sand, or the lava of a volcano. It is difficult to grasp what Saint-Exupéry really thinks about the fate of mankind. On one hand, he shows much optimism and confidence in the future when he describes how individuals grow from overcoming the challenges of life. However, he also often refers to the sleeping potential of men and women in a rather negative way, and even expresses a certain pity for anyone condemned to a routine existence. Faced with the constant changing reality, this ambivalence towards the future can also be felt when planning for our buildings and cities.

Since an international exhibition is usually celebrated over a relatively short period of time, the concept of ephemerality is one of its inherent features. Also, the pavilions that are planned for the duration of this type of event are temporary, regardless of the materials or construction methods utilised in their conception. It is interesting to note the diversity of design approaches that have been explored in the course of the history of World's Fairs. We observe that the aesthetic of the pavilions has changed gradually over

¹ Antoine de Saint-Exupéry, Terre des Hommes (Paris: Editions Gallimard, 1939), 67.

the years from the illusion of permanence to the erection of more transparent and flexible building forms. For example, at the World's Columbian Exposition of Chicago of 1893, an image of permanence transpired from the ensemble, which was designed with the prevalent use of classical forms borrowed from Europe. In contrast, the Brussels Universal and International Exposition of 1958 generally expressed the qualities of transparency and lightness in its architecture by displaying the modern aesthetic of industrialised steel and glass. The development of technology and the growing concern about preserving our natural environment also helped in directing the efforts of the more recent exhibitions towards the production of exhibition pavilions holding the possibility of adaptable reuse. The Seville Exposition of 1992 and the Hanover Exposition of 2000 used demountable systems for many of their pavilions and planned for a better integration of the permanent structures with the future growth of the hosting city.

There exist different levels of standards for buildings designed for a short life expectancy. It is the structures that demonstrated a high quality of architecture while addressing the temporary nature of Expo 67 that will be further considered in this study. Accordingly, priority will be given to the pavilions that successfully combined both the aesthetic (transparency and lightness) and functional (prefabrication and demountable system) elements of ephemerality. We will find out that the exploration of new technology and forward-looking designs also contributes to effectively address the question of ephemerality.

A. EPHEMERAL ARCHITECTURE

Artefacts that have survived the test of time are usually highly esteemed by societies because they exist as the memory of a culture and hold the potential to further shed light on the history of mankind. The architecture of the past is also often regarded as model of inspiration because of the social values that are attached to it. Nevertheless, this idealisation of eternity of our built environment is also conflicting with the fluctuations of our day-to-day existence. Traditional methods and materials are often favoured because they have long been proven, while new technologies are generally associated with a certain degree of risk-taking. It is regrettable to observe how the traditional way of doing architecture has often failed to deal resourcefully with change. When faced with a different owner or a new use, buildings have little of their old fabric apt for reuse and are generally completely demolished to make place for new ones. There is hope however that the importance given to fixed commodities will eventually be substituted by concerns for dynamic relationships. To that effect, Richard Rogers noted with a certain optimism that in the future, “shelters will no longer be static objects but dynamic objects sheltering and enhancing human events. Accommodation will be responsive, ever-changing and ever-adjusting.”²

Temporary buildings are not commonly understood as holding the same assets as permanent buildings and generally connote a negative impression. As Kronenburg explains, “the usual perception of temporary architecture is, however, of impermanent,

² Richard Rogers, quoted in Richard Kronenburg, Portable Architecture (Oxford: Architectural Press, 1996), 5.

transient, low-quality building, neither turned to its purpose or appropriate to its site.”³

While this might be true in some cases, it can be argued that ephemeral buildings are capable of showing the same level of quality and creating an equally identifiable sense of place than a permanent building does while offering additional flexibility of use. “It is only when one tries to create an imitation of a conventional building using thinner materials as a substitution, that this sense of inferior quality occurs. If we design with the notion of a new architectural vocabulary and not the substitution of an existing language, good design for ephemeral buildings can occur – one that bespeak of light and movement.”⁴ By looking at architecture in relation to human experiences, which are constantly changing, we begin to grasp the value of ephemeral buildings as momentous happenings. “It is therefore the power of the experience rather than its duration that is more important in gauging its meaning and effect.”⁵ The pavilions built for international exhibition are perhaps the best illustrations of transient structures designed to create a memorable impact on the visitor.

Ephemeral buildings generally display an aesthetic of transparency, lightness, and a clear architectural expression made of lightweight and compact materials assembled with authentic simplicity. Their aesthetic and functional components complement one another since there is no real advantage here to fabricate an appearance contrary to the basis of a flexible assembly. Therefore, “the condition of being ephemeral resides in the technique

³Richard Kronenburg, Houses in Motion: The Genesis, History and Development of the Portable Building (London: Academy Editions, 1995), 7.

⁴Nicholas Goldsmith, “Explorations in Ephemeral Architecture,” in Ephemeral/Portable Architecture, Architectural Design Profile No. 135, ed. Richard Kronenburg (London: Academy Editions, 1998), 31.

⁵Richard Kronenburg, ed., Ephemeral/Portable Architecture, Architectural Design Profile No. 135 (London: Academy Editions, 1998), 7.

of construction and the concept of materiality that is embedded in it.”⁶ Kronenburg identified three categories of ephemeral architecture: portable buildings which can be moved from one location to another as a whole, relocable buildings which are transported in segments and assembled on site, and finally, demountable buildings which use cellular components and offer more flexibility in size and layout. The condition for easy assembly is of significant advantage to short-term events. Prefabrication and construction techniques based on repetitive modular panels, structural frames, tensile fabrics and pneumatic principles were explored in the design of many pavilions at international exhibitions.

In practical terms, “the contemporary basis for the use of prefabrication systems in construction is greater economy, speed of erection, a higher quality product due to factory manufacture and a reduction in skilled labour at the site.”⁷ The experimental nature of ephemeral architecture also allows for the use of a greater range of innovative materials and construction techniques than conventional buildings. In many circumstances, technology was borrowed from other fields of expertise to further profit the solving of a specific demand. In the case of international exhibitions, portable and demountable buildings can be remotely manufactured in the country of origin and provide a more genuine demonstration of the national skills. These buildings also have the additional benefit of causing less environmental damage by being adaptable and using renewable resources. It should be noted however that economic and ecological concerns have not

⁶ Vladimir Krstic, “Constructing the Ephemeral,” in Ephemeral/Portable Architecture, Architectural Design Profile No. 135, ed. Richard Kronenburg (London: Academy Editions, 1998), 11.

⁷ Richard Kronenburg, Houses in Motion: The Genesis, History and Development of the Portable Building (London: Academy Editions, 1995), 78.

always been a priority in the conception of world's fairs. In fact, it was common practice to demolish the pavilions once the festivities were over. Few exceptions, such as the ingenious works of Buckminster Fuller and Frei Otto at Expo 67, have shown a lasting impact on the architecture of the fairs that followed.

By providing efficient and ecological construction solutions at an affordable cost, the application of demountable building techniques to international exhibitions seemed like a very logical match. Their relevance could also be justified outside the realm of expositions by providing alternative solutions to traditional constructions. As Kronenburg warns us, "portable architecture will never replace permanent architecture."⁸ However, the flexibility and adaptability of ephemeral architecture can influence the design of contemporary living towards lightness, transience and practicality. Yet, society's interest in the monumental, heavy, and static forms of the past is constantly testing the limits of these constructions.

At Expo 67, the ephemeral quality, paired with the open rivalry and associated prestige of the event, allowed for a newly found freedom and innovative individual expression to find its place in the design and construction of the different pavilions. The organisers of Expo had anticipated that the pavilions erected on the exhibition site would have a light and non-permanent character. In fact, they had asked the participants and their architects "to avoid the appearance of weight and feeling of permanence normally associated with conventional buildings and instead to explore the decorative possibilities of web or film-

⁸ Ibid., 133.

like materials stretched over bold frames or the frank assembly of mass-produced components fastened together in patternful ways."⁹ The pavilions that showed innovative technologies in their building envelopes to address the short timeframe requirements of the exhibition were the pavilions of the United States, the Netherlands, the theme pavilion Man the Explorer, Man the Producer, and Germany. These pavilions were, in my view, among the finest illustrations of the competitive and ephemeral nature of Expo 67 and merit further attention.

For the purpose of international exhibitions, modular systems offer the advantage of being flexible; the structure can be expanded, modified in shape, or even rebuilt in a different location if needed. The design of the theme pavilions Man the Explorer (fig. 30) and Man the Producer¹⁰ were based on the repetitive combination of truncated tetrahedron cells. The modules were bolted together, creating a variety of patterns by their different juxtapositions. The Netherlands pavilion¹¹ took the appearance of a playful building set (fig. 31). Its structural frame consisted of thirty-three miles of aluminium tubing made of three feet long pieces (fig. 27), and the exhibition space was simply suspended within the cocoon-like enclosure. In contrast with the pavilion Man the Explorer, no welding or riveting was required to put the building together. Therefore, the construction parts could simply be dismantled after their use in the reverse order they were assembled.

⁹ Objectives of the Master Plan," (RG71, Vol.1, file ARC-71-1-7. National Archives).

¹⁰ The thematic pavilion was designed by Affleck, Desbarats, Dimakopoulos, Lebensold, Sise architects.

¹¹ The Netherlands pavilion was designed by Eijkelenboom & Middelhoek architects.

Contrary to most of the pavilions on the site of Expo 67, the steel skeleton and interior platforms of the American pavilion still stand today (fig. 29). Designed by scientist Buckminster Fuller, the three-quarter sphere was constructed as a strategic climatic envelope. The structure had a transparent enclosure filtered with controlled irises placed on each hexagonal lens to modulate the interior exhibits (fig. 28). The American pavilion demonstrated that even a permanent installation could carry on the qualities associated with ephemerality by adopting a general appearance of lightness and openness. Other less prominent buildings also displayed cellular construction in their design. The pavilion of Austria was made of triangular white panels and aluminium frames (fig. 23), the Canadian National Railways pavilion was shaped with black polyhedron units, and the Québec Industries pavilion was constructed of hexagonal cells made of white fibreglass skin bolted together.

The tent is perhaps the closest Expo architects came to the idea of non-permanence by evoking the original form of shelter used by the nomadic settlers; the fabric could be easily transported from one location to another and stretched on an improvised structure of local materials. Robert Shaw, Deputy Commissioner General for Montréal Expo, had strongly encouraged the architects to "building light frames of wood or steel or aluminium covered with canvas or plastic, or cheap but attractive factory made panels."¹² Architect Frei Otto, realizing the potential of this scheme, based his design for the pavilion of Germany on the form of the tent (fig. 20). His design was guided by the principles of efficiency of form, availability of lightweight materials, and flexibility of

¹² Expo Digest, Vol.2, no.6, (RG71, Vol. 14, file ARC-71-14-7. National Archives), 1965.

purpose. Eight outward-tiled masts were distributed irregularly over an open exhibit area, holding the tensile roof at various heights with a transparent layer offering a blurred view of the sky at the top of each mast. The pavilion was in fact "just a roof, or rather a tent, without any reference whatever to articulated buildings; it was a bare shelter from which the very notions of facades and doors had been eliminated. It was reminiscent of the large circus tent under which spectators may move about freely amid displays and exhibits."¹³ All the necessary components were manufactured in Germany and erected on site in a relatively short time. As for the pavilion of Netherlands, the structure offered the additional advantage of having been designed for dismantling – with the purpose of returning to its country of origin – after the event.

The host country also used translucent stretched fabric for the roofs of the pavilions of Canada and of the province of Ontario¹⁴, using sharper lines and triangular shapes in their design. The open exhibits of the Canadian pavilion were spread around a prominent inverted pyramid named Katimavik, under fourteen pyramidal roofs made of translucent vinyl fabric and supported by large laminated wood members. The pavilion of Ontario shared a similar appearance with a system of structural tubular elements supporting the linked translucent pyramidal roofs over playfully articulated spaces. The tent construction was also developed at a smaller scale and with more simplicity by the countries of Ethiopia and Mauritius. The roof of the pavilion of Ethiopia was constructed of 750 yards of red crimson canvas attached to a translucent circular base with twelve

¹³ Jean-Claude Marsan, *Montreal in Evolution* (Montréal: McGill-Queen's University Press, 1981), 369.

¹⁴ The Canadian pavilion was designed by Ashort-Robbie-Vaughan-Williams, Schoeler-Barkham-Heaton, and Stankiewicz architects, while the pavilion of Ontario was designed by architects Fairfield and Dubois.

golden brass lion head posts, and at its peak a colourful banner (fig. 21). Similarly, the pavilion of Mauritius had a circular tent roof spread over a central pillar in an octagonal plan. These pavilions, irrespective of their sizes, contributed greatly to the ephemeral quality of Expo.

The increased use of manufactured elements and prefabrication in common constructions often impel a negative connotation by implying inexpensive materials, a hastened erection process and a banal final appearance. Many pavilions also used standardised components because of the initial cost benefits, but it is those that exploited its various other potentials that are of relevance here. For example, the Japanese architect Yoshinobu Ashihara set a high level of creativity and construction standards in using prefabrication in the overall arrangement of its national pavilion (fig. 22). The structural system consisted of prefabricated post-tensioned concrete beams that were shipped to the site for assembly. The beams were made to look like wood and were stacked in the tradition of log-built houses. Their horizontal superposition and perpendicular crosshatch ends gave the pavilion a floating appearance. Moshe Safdie's Habitat, which was built as a permanent housing complex, was also conceived as an assembly of prefabricated concrete units. The possible combinations of the various blocks created different dwelling sizes with an outdoor roof terrace for each of its occupants. For these two projects, the use of concrete as the principal material is somewhat in contradiction with the notion of non-permanence. However, the playful layout counterbalanced the rigidity of its components, leaving the sense that each piece could be taken apart and reassembled in a different configuration.

In dealing with the short-live function of international exhibitions, the advancement of technology contributed greatly to the development of ephemeral architecture. Montréal Expo 67 included many good examples of the application of repetitive elements and light materials combined with innovative technology. To better situate Expo with other contemporary international and universal exhibitions of corresponding status, we will direct our attention to the Brussels Exposition Universelle et Internationale of 1958, Expo 70 in Osaka, the Seville's Universal Exposition of 1992 and Hanover's Expo 2000.

We can trace back the use of prefabrication, modular system and steel-and-glass constructions in the pavilions of the 1958 international exhibition of Brussels, Belgium. For example, the pavilion of West Germany was erected from prefabricated parts and had its exhibits housed in eight steel-and-glass pavilions linked by covered open bridges. The Spanish pavilion shared a similar aesthetic with its exhibit connected to the exterior by large horizontal spans of glass, and its structure made of a series of hexagonal roof parasols supported by large steel drainpipe columns. Also, the Philips pavilion by Le Corbusier had an interesting undulated skin constructed as an elaborate assemblage of pre-stressed concrete panels forming a parabolic shell and secured in tension with cables.

Comparatively, Expo 70 in Osaka, Japan, was the site of serious experiments in large-scale space-frame constructions and inflatable structures with a greater number of private companies competing for the most inventive designs. The Festival Plaza was an imposing structure consisting of a steel pipe framework with six legs of support enclosing sheltered terraces set at various levels. The pavilion of Switzerland was equally

convincing with its 'Tree of Light' made of a series of vast aluminium pipes bearing an impressing number of incandescent light bulbs that would light up at night. In the category of inflatable structures, the pavilion for the Fuji Group was designed as sixteen immense air beams inflated and belted together over its main exhibit. The light and flexible tubular systems and pneumatic structures used at Osaka represented best the ephemeral nature of an international exhibition.

It is with the more recent exhibitions that a truly new direction has emerged in the application of technology. While the majority of the constructions fell prey to the demolition cranes in earlier fairs, planned reused was expected for two thirds of the pavilions at the Seville Exposition in Spain. Many pavilions also made a better utilisation of resources by means of natural and reusable materials and passive climate moderators. The best example is the British pavilion by Nicholas Grimshaw and Partners, which included a waterfall and water-filled metal containers for its walls as cooling devices, and solar panels on its roof as a renewable source of energy. Additionally, the building displayed its demountable nature in every detail by exposing its construction materials, mechanical system and structural connections.

At Hanover's Exposition in Germany, the imagery of many pavilions was inspired by the relationship between man and his environment, introducing vegetation and animated forms as part of the designs. The pavilion of Venezuela had its roof in the shape of a huge flower with petals that mechanically opened and closed. The Dutch pavilion was designed as a colourful architectural layered landscape, with its exhibition spaces

sandwiched between floors of plantings, forest, and a roof garden with windmills that provided electricity to the building. Through the use of recyclable materials and reversible assemblage, the potential of green design technology significantly impacted the architecture of the pavilions in Hanover. The Swiss pavilion used untreated pieces of timber, held together by stainless steel rods in tension instead of glue or nails, to form its walls in a labyrinth layout. Also, the Japanese pavilion consisted of a lattice of thick cardboard tubes lashed together with rope at their nodes to create a semicircle interior, and was stiffened by arched wood trusses and covered by a waterproof/fireproof translucent paper to form its roof. With these recent accomplishments, it is no stretch of mind to suggest that today's concern for the environment will contribute in bringing the ephemeral character of exhibition architecture closer to its original temporary nature.

B. FUTURISTIC TRENDS AT EXPO 67

International exhibitions are popular events that long supported the equation of economic growth and technological development with the idea of progress. At an exhibition, architects and designers are expected to take the risk of experimenting beyond conventional models and show the potentials of innovations. The history of world's fairs includes many examples where the most advanced technology of the time was presented to help solve the current sociological problems. "It was a vision of a planned future where technology and science, welded to corporate capitalism, made social and economic problems seemingly disappear."¹⁵ A concrete example of this position is the 334-foot

¹⁵ Robert Rydell, Fair America: World's Fairs in the United States (Washington: Smithsonian Institution, 2000), 136.

high Atomium structure, built in the form of a crystal molecule of iron, at the centre of the Brussels International Exposition of 1958. Designed to promote nuclear energy as a peaceful commodity, it contained exhibits at its nodes advocating the idea that nuclear power was safe and that the destiny of humanity could rely on the goodwill of the scientists. Of course, a different set of social concerns and issues has been holding sway over the more recent international exhibitions. As previously discussed, the reference to our natural environment has now become a more familiar subject to showcase.

In the sixties, architects were seen to increasingly rely on the expertise of engineers to achieve their goals, and this approach was thought to lead to a promising future for architecture. The advancement of technology contributed to the transformation of architecture by activating every part of its structural system, instead of reducing the flow of forces into single vertical and horizontal lines. It also offered the new possibility for built forms to expand in all directions at once. This is best illustrated by the loose configuration of the German pavilion by Frei Otto, where he was given the opportunity to demonstrate the spatial, economic, and aesthetic advantages of tensile structures. Technological explorations of that type can be said to have had a positive impact on the architectural practice. It was thought that “tensile structures [were] only the beginning; they [were] a big part of the future of architecture – one of the most fruitful ways of escaping from the rectangular box.”¹⁶

¹⁶ J.M. Richards, editor of *Architectural Review*, quoted in Robert Fulford, *This was Expo* (Montréal: McClelland and Stewart, 1968), 41.

The structure became an important syntactic component in the design of many pavilions at Expo. With the development space-frame constructions and modular systems, structure became the unifying element, “the whole, from top to bottom, to the last detail – with the same ideas.”¹⁷ The repetition of building elements transformed the notion of space into the concept of open growth and open forms, and offered architects many design possibilities for their pavilions. Handled through the traditional understanding about size, scale and measure, these types of constructions could be further appreciated when all of their parts appeared different by a skilful play of light and perspective. “When we ourselves are moved by repetition it is by very grand, very simple affairs; all dominated by big-scaled, repeated forms, and bent or curved on plan so that repetition in a mechanical sense melted away.”¹⁸ The Expo pavilions that used a system of repetitive elements as the generator for their building form were the American geodesic dome by Fuller, The Netherlands tubular structure by Eijkelenboom, the thematic pavilions Man the Producer and Man the Explorer, as well as the pavilions of Austria, the Canadian National Railways and the Québec Industries. These pavilions were also discussed in the previous section since their innovative design strategy also contains ephemeral qualities.

The pavilions utilising modern technologies were confronted with the prospect of being compared with other similar contemporary structures. Some pavilions differentiated themselves by displaying their structure more prominently and using large-scale elements as a design approach. For example, the Steel Industry pavilion was constructed with a

¹⁷ Mies van der Rohe, quoted in Alison and Peter Smithson, *Without Rhetoric: An Architectural Aesthetic 1955-1972* (Cambridge: The MIT Press, 1974), 21.

¹⁸ Alison and Peter Smithson, *Without Rhetoric: An Architectural Aesthetic 1955-1972* (Cambridge: The MIT Press, 1974), 32.

succession of light 'A' shaped structures with beams projecting out of its blue steel roof. Similarly, the pavilion of Yugoslavia consisted of seven prismatic sections placed side by side with the vertical end of its central section containing a large pane of glass. The USSR pavilion also had a massive frame made of a rectangular steel roof that curved upward and rested on two exposed v-shaped steel supports. To maintain a genuine industrial look, many pavilions had their building systems left exposed in addition to the structural components, with fewer finishes in their exhibits.

In their aspiration to make a mark, some nations experimented with new methods of construction to produce a unique experience for the visitors. The American dome distinguished itself by its unique form and received good reviews by the visitors who found it quite original and impressive. The pavilion took the shape of a circumscribed space contained in a three-quarter sphere, 250 feet in diameter. The sphere presented the advantage of containing the most volume with the least surface, which resulted in an economy of material as well as a reduction of energy loss. The steel star trusses that made up the frame also had significant advantages; "their compound-curved shape is inherently strong, giving a self-supporting clear span with no columns."¹⁹ The transparent acrylic enclosure was made of hexagonal acrylic lenses equipped with computer-controlled irises designed to follow the course of the sun and provide shade for its interior space. The geodesic dome became in itself an integrated part of the exhibit in the American display. Everything was designed to expose the visitors to new visual and sensory experiences, keeping an uninterrupted and remarkable visual contact with the

¹⁹ J. Baldwin, Bucky Works: Buckminster Fuller's Ideas for Today (New York: Wiley, 1996), 112.

exterior world, while the skin modulated the hostile effects of the climate. "Inside the dome, the walls start going away from you; this has an extraordinary psychological effect of releasing you for suddenly you realise that the walls are not really there. Something is keeping the rain away, like an umbrella; but you don't feel shut in, you feel protected."²⁰

Even with the recent development of mass communication and today's technology, international exhibitions continue to serve as experimental grounds for exploring new ideas. They are laboratories to test new urban concepts at a small scale and are breeding grounds for architectural experiments. The collaborating efforts of local architects with international expertise also influence the architecture and image of urban centres. Fairs promote the development of architecture by communicating design excellence. City officials also hold an important role in setting the objectives of the exhibition and planning more carefully for post-event reuse. Instead of demolishing all buildings, the organisers are now developing strategies to adapt the existing structures to new uses and integrate them into the city fabric. In some other cases, the pavilions are disassembled and put back together in the country of origin, spreading good design outside the limits of the initial event.

The plan for Expo 67 was conceived as an ideal city and proposed a new way of going about our daily living. The project attempted to achieve visual order with standardised street furniture, uniform signage, and careful arrangement of architectural forms and open spaces. By eliminating the car, circulation within the site could be organised around the

²⁰ Robert Snyder, ed., Buckminster Fuller: Autobiographical Monologue (New York: St-Martin's Press, 1979), 16.

experience of the visitor. This was emphasised by intentionally separating the elevated monorail system from the pedestrian movement. Expo also suggested an optimistic future by displaying new technologies and exciting new forms of architecture. Habitat, the innovative housing type developed by Moshe Safdie, also contributed in building an idealized world. In considering the site and theme chosen for the exhibition, Expo can be understood as representing a utopian idea. Donald Theall reflected that "as a utopia, Expo reflects the global metropolis of post-sophisticate man in which we are trying to live... As a utopia, and as a multi-sensory total environment poem, Expo will perform a special function of prophecy for the coming decade."²¹

²¹ Donald F. Theall of McGill University, quoted in Robert Fulford, This was Expo (Montréal: McClelland and Stewart, 1968), 70.

Fig. 20: Pavilion of Germany.

Fig. 21: Pavilion of Ethiopia.

Fig. 22: Pavilion of Japan.

Fig. 23: Pavilion of Austria.

Fig. 24: Pavilion of USSR.

Fig. 25: Pavilions of Québec and Ontario.

Fig. 26: Pavilion of The Netherlands.

Fig. 27: Tubular Framing.

Fig. 28: Dome Enclosure.

Fig. 29: Interior of the American Pavilion.

Fig. 30: Pavilion Man the Explorer.

Fig. 31: Structural Joints.

VI. CONCLUSION

A. ARCHITECTURE, NATIONAL IDENTITY AND TIME

Ruskin believed that we have to “render the architecture of the day historical.”¹ In this respect, we can say with certainty that as a spectacle of the moment, Montréal Expo 67 was a success. The event summed up to a great gathering of ideas and displays around the universal theme Man and His World. The architecture had a strong impact on the visitors’ experience, and in fact, was the aspect of the exhibition that they found most impressive.² At Expo, the architecture greatly contributed in shaping the aesthetic character of the exhibition ground. The very public character of the event incited the designers to come up with pavilions that continuously communicated compelling messages to the passer-by. As architecture is bound to create a multiplicity of readings because of the subjective nature and cultural background of each individual, this thesis attempted to focus on the expression of national identities and notions of time.

Exhibitions offer the right opportunity for the participating nations to stage chosen attributes of their country, expose their convictions, and put on view a way of life. The architecture of an international exhibition plays an important role, even today, in physically representing the different values of a nation to a considerably large audience. Sheila Copps, Minister of Canadian Heritage, announced in a recent speech that the Canadian government was planning to spend \$103 millions to project the image of a

¹ Ruskin, quoted in Michael Wheeler and Nigel Whiteley, eds., The Lamp of Memory: Ruskin, Tradition and Architecture (New York: Martin’s Press, 1992), 10.

² General Report on the 1967 World Exhibition (Ottawa: Queen’s Printer, v.5, 1969), 2831.

modern Canada at international exhibitions abroad.³ The current federal strategy thus validates the relative importance of international exhibitions as medium to promote national identity.

In designing the pavilions, judicious choices were made right at the beginning to create the right impression on the visitors. With the use of the same available technology and access to relatively equivalent resources, we could have expected similar results. But, as per our observations, various design approaches have been employed by the participants of international exhibitions to effectively convey their message to an international audience. Through architecture, the various nations have been successful in expressing different realities. While some countries have decided to place the emphasis on tradition by choosing long-established methods and materials, others have looked at inventiveness to show their optimism towards the future. It is by grouping and comparing the different pavilions, through oppositions and associations, that meaning could be found in the architecture of Expo.

The first distinction that was made was the relation between architecture and the past. On the exhibition site of Expo, many pavilions included historical references in the form of replicas, authentic materials and traditional ornaments. The use of architectural details from the past can be read as a way for a nation to show its preference for tradition and customary practice. The pavilions of Thailand and Burma are worthy examples of this approach. We can ask ourselves in these cases whether the intent was to truthfully

³ Sheila Copps, "Speaking Notes for The Honourable Sheila Copps, Minister of Canadian Heritage, on the Occasion of an Announcement Regarding Cultural Content on the Internet and in International

embody the memory of the past or to present the visitor with a particular interpretation of history. In reality, we can suspect an inclination for the participating countries to place emphasis on the cultural aspects and historical facts for which they were most proud of. Even in the instances where accurate recreations of ancient styles and building forms were achieved, they could not be considered fully authentic since they had been taken out of their geographical and historical context. What these pavilions were in fact communicating was a flavour of traditional cultures, inciting the imagination of the visitors.

If traditional-looking pavilions appeared as symbols of continuity with the past, the plain and unadorned constructions stood in contrast to convey a certain negation of history. A lot of pavilions were built in this way with heavy materials and conventional construction methods, appearing in opposition with the ephemeral character of the exhibition. To cite some examples, the pavilion of Great Britain was made of concrete, the Belgian pavilion had a red brick exterior cladding, and the pavilion of Greece was constructed of white painted concrete blocks. These pavilions gave the visitors the impression that they were to last much longer than the planned six-month duration of Expo.

Edouard Fiset, Expo's chief architect, saw in the exhibition "a marked contemporary tendency of getting away from the very severe and restrained expressions that has marked the last few decades in building and environment design" and the "need to depart from rigid forms and to achieve a more 'humanized' expression."⁴ Expo architects and urban

Exhibitions," <www.pch.gc.ca/min/notes/2001-06-19_e.htm> (cited June 2001).

⁴ Edouard Fiset, quoted in Robert Fulford, *This was Expo* (Montréal: McClelland and Stewart, 1968), 36.

planners were drawn towards creating places that would contribute to the enrichment of the visitors' experience. Interesting geometrical figures, expressive plastic forms, and new articulations of the wall could be found in many of the pavilion designs. Following in that direction, the Canadian pavilion was marked by an outstanding inverted pyramid, the French pavilion showed an artistic quality, and the pavilion of Israel offered a textured and lively façade. The return to more sensible spaces and creative forms appropriately coincided with the universal theme adopted for Expo and its focus on manlike experiences.

Giedion believes that the influential role of an international exhibition is one of "a medium for making our age aware of itself."⁵ We can question whether the architecture of Expo actually reflected the spirit of the time. The construction of the pavilions was necessarily influenced by the circumstances of the moment. All pavilions had to be constructed with the people and technology of the time, and were also perceived and appreciated by the individuals of that time. If we consider the contemporary architecture of Expo, several evidences reveal a common sense of departure from the modern movement in the architecture of that period that are not specific to Expo. In 1967, James Stirling had completed the Cambridge University History Faculty, and Kevin Roche and John Dinkeloo the Headquarters of the College Life Insurance Company of America in Indianapolis. These two projects manipulated forms, scale and reflective surfaces just like the major pavilions seen at Expo. The flying roof used for the USSR pavilion was also in line with Eero Saarinen's Trans World Terminal at the International Airport in

⁵ Sigfried Giedion, quoted in Gottfried Korff, "Exhibitions as Constructed Mnemonic World," in Hans Dieter Schaal In Between: Exhibition Architecture (London: Edition Axel Menges, 1999), 6.

Idlewild New York completed just five years prior to Expo. The main advantage Expo had in comparison with the contemporary architectural works found elsewhere was the effect generated from the collection of so many buildings in close proximity to each other.

Expo 67 created an opportunity for architects to propose a new direction for architecture by exploring new forms and technology. The ephemeral and festive character of the exhibition encouraged inventive designs. The use of modular systems, light and transparent materials became suitable to the short-lived purpose of the exhibition. Space-frame structures made it possible to cover large spaces cheaply and flexibly by distributing the weight of a building over the widest area possible. The geodesic dome of the United-States, the thematic buildings Man the Producer and Man the Explorer, the German pavilion, and the Netherlands pavilion, are good examples of that approach. Technological explorations also suggested a promising future for architecture. "There was so much that was fresh and different and even daring that it seemed a new world of architectural design was opening up; and some of us imagined that we might even be at the beginning of a revolution."⁶

Expo acted as a forum for new ideas, and we can wonder how it impacted the architecture in Canada. Canadian architects were offered the unique occasion to contribute to the design and construction of the pavilions in collaboration with foreign architects. This international exposure and extraordinary experience had to strengthen their confidence in their future practice. If Habitat did not become the new way to deal with urban density,

and Otto's tensile roof did not develop into a standard construction method, their daring undertaking did inspire their colleague architects and trigger the imagination of many others. "After the smoke and exuberance had cleared from Expo 67, enough had been accomplished for the Canadian thrust in architecture to have a uniqueness of its own."⁷

B. THE IMPACT OF EXPO 67

The independence enjoyed by architects at Expo led to a diverse and creative outcome, which contributed to project a positive image of architecture on the public. The exhibition was attended by a total of fifty million visitors and was much publicized locally and abroad. Expo 67 generally attracted good reviews for its artistic and innovative aspects, and the city of Montréal received the due attention and consideration from the international community it was longing for. It became a new reality for Canadians to hear about themselves through the foreign media. In the New York magazine *Holiday* of April 1967, Michael Hirsch wrote that "Expo 1967, will mark the end of the time when men of taste anywhere could speak condescendingly of Canada. It will also announce the definitive coming-of-age of Canada's great city, Montréal, a city that has long been designated as 'charming' by thousands of visitors and never taken seriously."⁸ The recognition of Canada's achievement by influential countries had the effect of reinforcing the self-confidence and national pride of Canadians. The opening of Expo inspired some to believe that the nation's history had taken an irrevocable turn.

⁶ Ibid., 35.

⁷ Arthur Erickson, "Introduction," in Canadian Architecture, 1960-1970, ed. Carol Moore (Toronto: Burns, 1971), 2.

⁸ Yves Jasmin, La petite histoire d'Expo 67 (Montréal: Editions Québec/Amérique, 1997), 183.

Peter Newman, of the Toronto Star, wrote that Expo was “the greatest thing we have ever done as a nation and surely the modernization of Canada will be dated from this occasion and from the fair. The more you see of it, the more you're overwhelmed by a feeling that if this is possible, that if this little sub-arctic, self-obsessed country of 20,000,000 people can put on this kind of show, then it can do almost anything.”⁹ The general perception of Canada on the international scene had definitely been transformed by the success of Expo. The London Observer would note that “Expo [was]n't just a world fair, it [was] glitter, sex appeal, and it's given impact and meaning to a word that had neither: Canadian.”¹⁰

Historically, the remarkable diplomacy of international exhibitions allowed these events to be staged in the most extraordinary circumstances, joining sometimes-opposing ideologies with the apparent motive of peaceful display. Since the Great Exhibition of 1851 in London, exhibitions have been a means of reinforcing good communication between nations and an occasion to show cultural diversity and the technological advancements of the time. Expo 67 was successful in creating a dynamic between sixty different countries. Throughout the event, important foreign officials visited the site of Expo on their celebrated national day. Among the royalty and important guests were Her Majesty the Queen Elizabeth II, Princess Margaret and Lord Snowdon, Robert and Jackie Kennedy, Prince Albert and Princess Paola of Belgium, Grace Kelly and Prince Rainier of Monaco, and Emperor Hailé Sélassié of Ethiopia. The visit of Général de Gaulle went well beyond common diplomacy when he brought foreign attention to the particular

⁹ Peter Newman, quoted in Robert Fulford, This was Expo (Montréal: McClelland and Stewart, 1968), 8.

¹⁰ Robert Fulford, This was Expo (Montréal: McClelland and Stewart, 1968), 37.

condition of Québec within Canada. He stirred up a political controversy by taking side in the difference between the predominantly French-speaking public of Québec and the English-speaking population of Canada with his well-known acclamation “Vive le Québec libre!”

Expo required the collaborative efforts of three levels of government, each with their own agenda. The government of Canada expected to achieve its objectives of reinforcing the sentiment of unity among Canadians, nourishing good relations with different nations, and gaining the esteem of other influential countries. The provincial government and the city of Montréal did not hesitate to express their pride and claim their contribution and responsibility in the success of Expo. The former Québec Prime Minister Jean Lesage referred to the exhibition as “an excellent demonstration of 'savoir-faire' of Québec.”¹¹ It was also said that Montréal Mayor Drapeau “had given the country a brief, shining moment.”¹² The identity of the leading organisers and the geographic location of Expo made the event to first appear as a French show. In reality, it is more accurate to say that the exhibition was a productive collaboration between French and English Canadians. Commissioner-General Pierre Dupuy was quoted in *Le Figaro* saying that “if we (meaning the French Canadians) were the conceivers, the English Canadians were the engineers and the builders.”¹³ Expo 67 was after all a demonstration of confidence in the future by the Canadian people.

¹¹ Yves Jasmin, *La petite histoire d'Expo 67* (Montréal: Editions Québec/Amérique, 1997), 180.

¹² Brian McKenna and Susan Purcell, *Drapeau* (Toronto: Clarke, Irwin and Co., 1980), 168.

¹³ Robert Fulford, *This was Expo* (Montréal: McClelland and Stewart, 1968), 40.

Expo also had a measurable and lasting impact on the development of the city of Montréal. The construction of Place Ville-Marie, Plaza Alexis-Nihon and the Château Champlain, along with other notable skyscrapers, forever changed the downtown skyline. The public transit system was restructured to include the underground Métro, which opened on October 14 of 1966 and linked different neighbourhoods with the site of Expo. Improvements to the city infrastructure and the construction of the Décarie and Bonaventure highways were also key elements in the urban projects planned in preparation for the event. The new and extended islands are perhaps the prevailing tangible addition that offered a new perspective and appreciation of the city. The islands hold the stronger association with Expo 67, and offer many evidences of that past in the details, the landscape, and the remaining pavilions and art sculptures spread out on the site. These transformations stand today as reminders of the activities that surrounded the making of the exhibition.

Over the years that followed Expo, when most of the pavilions had been demolished, more changes were done to the site to take advantage of the available land. Renamed the Jean-Drapeau Park in 2002, the islands now function as a park that welcomes many festive events throughout the seasons. In the summertime, the amusement park La Ronde on Ile Sainte-Hélène and the beach on Ile Notre-Dame attract many visitors. Also, sightseers can enjoy the shaded paths and gardens of flowers that continue to bloom where the Floralties Internationales of Montréal were held in 1980. The Lac des Cygnes on Ile Sainte-Hélène serves as a skating rink during the annual Fête des Neiges, and bike paths gets used as skiing trails during the cold season. In terms of major events, Ile

Notre-Dame receives the Canadian Grand Prix of Formula One on the Gilles Villeneuve Circuit each year. Some activities are also housed in former structures, like the French pavilion, which was converted into the Palais de la Civilisation in 1985, and became the Casino of Montréal in 1993 with the addition of the pavilion of Québec in 1996. Also, the geodesic dome now holds the biosphere, a public museum and centre of observation of the St. Lawrence Seaway since 1995.

Today, the site is an active place that has been transformed to meet the needs of its inhabitants and to reflect what the universal theme Man and His World – Terre des hommes suggests. The site belongs to a rich patrimony and stands as a permanent reminder of the achievement of all Canadians who participated in the realisation of Expo 67. It is a peaceful place to contemplate on life and find inspiration and trust in the future.

Fig. 33: Site Plan of Parc Jean-Drapeau.

Fig. 32: The Biosphère.

Fig. 34: The Casino de Montréal.

Fig. 35: Former Canadian pavilion.

Fig. 36: Former Québec pavilion with new link.

TABLE A:
Comparison Between International Exhibitions.

YEAR	EXHIBITIONS	LOCATION	AREA (Acre)	NAT- IONS	VIS- ITORS (M)	NOVELTIES
1851	The Great Exhibition of the Works of Industry of All Nations	London	26	28	6	<i>Telegraph</i>
1867	Exposition Universelle	Paris	165	32	6.8	<i>Hydraulic elevator</i>
1873	Weltausstellung	Vienna	42		7	
1876	Centennial Exposition	Philadelphia	285		9.9	<i>Telephone, typewriter</i>
1878	Exposition Universelle	Paris	192		16	<i>Ice machine, electric lights</i>
1879	Sydney International Exhibition	Sydney	15		1.1	<i>Passenger elevator</i>
1880	International Exhibition	Melbourne	63	37	1.3	
1883	Internationale Koloniale en Uitvoerhandelstentoonstelling	Amsterdam	54	28	1.4	
1885	Exposition Universelle	Antwerp	54	35	3.5	<i>Gas engine</i>
1889	Exposition Universelle	Paris	237		28.1	<i>Eiffel Tower</i>
1893	World's Columbian Exposition	Chicago	686	50	27.3	<i>Ferris Wheel, hand camera</i>
1900	Exposition Universelle	Paris	543		48	<i>Escalators, Olympic Games</i>
1902	Esposizione d'Arte Decorativa Moderna	Turin		13		
1904	Louisiana Purchase Exposition	St-Louis	1,272		19.7	<i>Ice cream cone</i>
1910	Exposition Universelle et Internationale	Brussels	217	26	13	
1915	Panama-Pacific International Exposition	San Francisco	635	24	18.9	
1925	Exposition Internationale des Arts Décoratifs	Paris	57	18	5.9	<i>Machine for living, plywood furniture</i>
1929	Exposicion General d'Espana	Barcelona & Seville	292, 170			
1930	Exposition International, Colonial, Maritime, et d'Art Flammand	Antwerp	171	21	5.2	
1933	A Century of Progress Exposition	Chicago	426		48.8	
1935	Exposition Universelle et Internationale	Brussels	371	24	20	
1937	Exposition Internationale	Paris	250	44	34	<i>Plastics, robots</i>
1939	New York World's Fair	New York	1,200	33	44.9	<i>Air conditioning, color film, television</i>
1958	Exposition Universelle et Internationale	Brussels	494	44	41.1	<i>Sputnik</i>
1962	Century 21 Exposition	Seattle	74	24	9.6	<i>Space capsule</i>
1964	New York World's Fair	New York	650	24	51.6	<i>Ford Mustang</i>
1967	Expo' 67	Montréal	900	60	50.3	<i>Habitat</i>
1970	Expo' 70	Osaka	865	38	64.2	<i>Inflatable buildings</i>
1992	Universal Exposition	Seville	415	108		
2000	Universal Exposition	Hanover	160	187		

TABLE B:
Comparison Between the Pavilions at Expo 67.

CITE DU HAVRE:

PAVILION	TYPE	ARCHITECT	COST (\$M)	LOT m2	DESCRIPTION
Administration and News Pavilion	Admin.	Irving Grossman	5.0	17,745	Three wings in a z-shaped plan, three-story concrete building.
Habitat	Theme	Moshe Safdie	10.5	33,600	Superimposed pre-fabricated housing unit blocks.
International Broadcasting Centre	Admin.	Meadowcroft & Mackay	10.0	8,130	Rectangular-shaped building.
Quebec Industries	Private	Jean Grondin	1.50	3,925	Hexagonal cells of white fibreglass skin bolted together.
Labyrinth (NFB)	Private	Bland, Lemoyne, Edwards, Shine		5,755	Five-story concrete square structure.
Man in the Community & Man and his Health	Theme	Arthur Erickson	4.8	16,060	Pyramidal-shaped wood structure.
Man the Creator: Art Gallery, Photo, Theatre	Theme	Gautier, Guité, Côté	2.2	10,425	Rectangular-shaped buildings.

ILE SAINTE-HELENE:

PAVILION	TYPE	ARCHITECT	COST (\$M)	LOT m2	DESCRIPTION
Austria	National	Karl Schwanzer	3.5	3,525	White triangular surfaces as building envelope.
Belgium	National	Rene Stapels	1.2	3,535	Brick building with glazed openings.
Brewers of Canada	Private	Fairfield & Dubois	1.5	2,520	Masonry building.
Iran	National	Abdul Aziz Farmanfarmaeian	0.8	3,250	Semi-circular towers with roses and bird prints on blue ceramic.
Japan	National	Yoshinobu Ashihara	1.5	5,450	Square cut horizontal concrete beams with crosshatch ends.
Korea	National	Kim Swoo Geun	0.2	1,260	Hand-made wood structure.
Maine	State	William & Robert Armitage	0.4	1,015	White Colonial mansion with green shutters.
Man the Explorer: his life, planet, the polar regions, the oceans	Theme	Affleck, Desbarats, Dimakopoulos, Lebensold, Sise	9.4	12,375	Truncated tetrahedron-shaped structure.

Netherlands	National	Eijkelenboom & Middelhoek	3.6	3,525	Modular steel tubular frame elements.
New York	State	Felix Stephen Gula	0.5	2,055	Canvas-topped carousel revolving around an island.
Republic of China	National	C.C. Yang	0.4	1,020	Green tiled pagoda roof with white walls & red arched doors.
Scandinavia	National	Herlow, Paatela, Johansson, Torgersen, Lettstrom	3.2	6,265	Steel and concrete square-shaped building.
Switzerland	National	Werner Gantenbein	1.0	3,535	Red cedar upper façade with glazed base.
Telephone Pavilion	Private	Gordon S. Adamson	3.5	3,715	One-level structure.
United States	National	Buckminster Fuller	9.0	15,930	250-foot diameter geodesic dome.
Vermont	State	Peter M. Acres	0.3	1,415	Small triangular form next to square-shaped building.

ILE NOTRE-DAME:

PAVILION	TYPE	ARCHITECT	COST (\$M)	LOT m2	DESCRIPTION
Africa Place	National	John Andrews		10,695	Pavilions of yellow roofs and clay tiled-walls around a court.
Algeria	National	Cardwell, Ross, Anderson		1,840	Square blue-and-white building with traditional arches.
Atlantic Provinces	Province	Douglas Shadbot	1.0	3,710	Concrete cantilevered roof on a glazed base.
Australia	National	James McCormick	3.5	2,230	Square building divided in 4 sections with interior curved wood beams.
Barbados & Guyana	National		0.5	685	Small group of kiosks.
Britain	National	Basil Spence	7.50	11,425	Sculptural white building with 3-D Union Jack tower.
Burma	National	Kyi Sein	0.4	1,350	Traditional building with wood carving.
Canada	National	Ashort-Robbie-Vaughan-Williams, Schoeler-Barkham	21.0	45,635	Group of buildings: Katimavik, people tree and gallery.
Canadian National Railways	Private	John Parkin	1.0	1,885	Black polyhedron-shaped building.
Canadian Pacific	Private	Dobush, Stewart, Bourke, Longpre, Marchand, Goudreau	4.0	3,645	Theatre & exhibit buildings in curved horizontal metal fins.

Can. Pulp & Paper	Private	Peter Acres	1.5	2,885	Green pyramids representing trees.
Ceylon	Private	V. Kandavel	0.4	425	3-level building with colourful ceramic & mural on ext. walls.
Chatelaine House	Private	Gustavo de Rosa	0.1	950	House with wood siding & panel type windows.
Christian Pavilion	Group	D'Astou & Pothier	1.3	2,590	Triang.-shaped, wood beams, stucco walls & asphalt roof.
Cuba	National	G. Baroni & Vittorio Garatti	0.4	835	Interlocking white cubes with marine blue steel frames.
Czechoslovakia	National	Miroslav Repa	1.3	5,065	Tinted glass and screens of ceramic panels above.
Economic Progress	Group	Menkes & Webb	1.0	1,315	Colour graphics on aluminium pylons with rotating story-wall.
Ethiopia	National	Jacques Benoit-Bamet Addis Ababa		1,300	Red roof tent and transparent circular base with golden lions posts.
European Community	National	Crivelli, Bowenter, Serafini	0.7	1,920	Steel and blue glass diamond-shaped building.
France	National	Jean Faucheron	10.0	11,425	Concrete and steel structure wrapped with aluminium lances.
Federal Republic of Germany	National	Frei Otto	10.0	10,760	Tent and tensioned cables strong over steel masts.
Greece	National	Nicholas C. Chrysopoulos	0.2	2,595	Nine white rectangular boxes joined with glazed links.
Haiti	National	Jodoin, Lammare, Pratte & Carriere	0.2	875	Sixteen hollow cubes with translucent panels.
India	National	Mansinh M. Rana	1.5	5,730	Pink sandstone colour walls with marble trellis.
Indians of Canada	Group	J.W. Francis	1.0	2,640	Tepee and mural on wood walls.
Israel	National	A.Sharon, D.Reznick & E.Sharon	1.5	4,335	White projected concrete blocks on a glazed base.
Italy	National	Piro, Antoneli, Greco, Rossi	3.5	5,075	Curved roof with three sculptures.
Jamaica	National	George Ebert	0.3	900	Two-story plastered-wall shop with cedar roof.
Judaism	Group	Harry Stilman	0.3	800	Rectangular building.
Kaleidoscope	Private	Irving Grossman	0.8	2,445	Color spectrum on vertical fins around cylindrical structure.
Kodak	Private	John Parkin	0.4	1,140	Rectangular concrete

					building.
Kuweit	National	Cardwell, Ross, Anderson			Rectangular shaped building.
Man the Producer	Theme	Affleck, Desbarats, Dimakopoulos, Lebensold, Sise	12.2	9,558	Hexagonal-shaped structure.
Man the Provider	Theme	Longpre, Marchand, Goudreault, Stewart, Bourke	4.0	7.5 acres	Low buildings set around a court.
Mauritius	National	A. Marcel Lagesse		630	Octagonal glass fibre tent.
Mexico	National	Antonio Garcia-Corona	1.6	5,090	Seashell form with small Mayan temple.
Monaco	National	Papineau, Guerin-Lajoie, Leblanc	0.5	755	Cylinder-shaped stucco walls around a garden.
Morocco	National	M. Mourad Ben Barek		1,670	Minaret and pointed-shaped building.
Ontario	Province	Faifield & Dubois	8.0	9,424	Irregular pyramidal roofs over an open ground.
Quebec	Province	Papineau, Guerin-Lajoie, Leblanc	7.0	8,195	Tinted glass angled walls over a concrete platform set in water.
Sermons from Science	Group	George Ebert	0.2	1,750	Auditorium and conf. theatre.
Steel Industry	Private	Mathers & Haldenby	2.0	3,020	Succession of light A's structure and blue steel roof.
Thailand	National	Chamlong Yordying	0.2	1,810	Replica of a Buddhist temple.
Trinidad, Tobago & Grenada	National	Peter Bynoe	0.3	1,100	Two-story structure.
Tunisia	National	Taib Haddad	0.8	2,175	White walls with blue tiles.
USSR	National	Posokhin, Mondoyants, Kondatiev	15.0	16,000	Glass walls under a sweeping curved concrete roof.
United Arab Republic	National	Kamal Seliva			Structure built in Arabic style.
United Nations	Group	Eliot Noyes		2,570	Circular steel and glass construction in centre of plaza.
Venezuela	National	Carlos R. Villanueva	0.2	2,510	Three cubes of primary colours.
Western Provinces	Province	Beatson, Stevens	0.9	2,707	Slopping shingle cedar roof.
Yugoslavia	National	Miroslav Pesic	1.5	2,460	Seven large triangular bays.

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