The Architecture of Line-ups at Expo 67 and their Role as Social Incubators

Figure 1"USA Queues 1" - Dixon Slide Collection

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ARCH 355 - History of Architecture 4

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March 22nd, 2011

Using Meredith Dixon's slide entitled "USA Queues 1" as a point of departure we can explicitly see a feature of Expo 67 which is continually mentioned in pieces of documentation, publications, and personal memoirs of the fair: extreme overcrowding. In the photo, Dixon captures a large group of people densely packed together in line, anxiously awaiting the 10:00 a.m. opening of The United States' celebrated Pavilion[1]. This is only a snapshot of a condition that was ubiquitous in the fairgrounds, as what seemed like infinite numbers of people flocked to Expo 67 to participate in the excitement of "Man and His World". For many reasons, Expo 67 found a success that was unprecedented, and because of this it experienced levels of crowd density and line-up congestion that were unprecedented as well[2]. While this circumstance was perceived by many as a major flaw of the fair, this paper will argue that the line-ups in fact became the ideal environment for social interaction, and intensified the sense of togetherness that Expo attempted to create.

It is useful to look at statistics and primary accounts of the number of visitors that attended the fair in order to understand more comprehensively the degree to which Expo experienced over-population. Four years prior to the opening of Expo 67, the planning stages began in what would later be called the "Montebello Conference"; where a group of Canadian architects, designers, politicians and intellectuals assembled the master plan of the exposition, or the *Design Intent*.[3] While this committee did address in detail the issues of mass circulation and organization, it was a group from the Stanford Research Institute of California that was

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[1] Expo '67 Dixon Slide Collection Web site, http://digital.library.mcgill.ca/expo-67/search/slideDetails.php?id=425
[2] Mildred F. Schmertz, "A Brilliantly Ordered Visual World," *Architectural Record*, July 1967, 115.
[3] David Wainwright, "The Design Intent for Expo '67," *Design*, January 1967, 31.

given the official responsibility of gathering data and research in order to estimate the expected number of visitors to Expo 67.[4] Looking to the New York World's fair as a model, which projected 70 million and received approximately 50 million, the group in Montreal arrived at the number 35 million for Expo, trying not to overshoot like their counterparts in New York had.[5] Immediately after the fair's opening, it became clear that the estimations were greatly miscalculated, as "every day of the opening weekend twice as many fairgoers clicked through the turnstiles as the computers had foreseen – giving Expo its 1 000 000th visitor within three days.[6] *Time Magazine* continued to chronicle this drastic underestimation of visitors, declaring "it is now obvious that Expo was as wrong in one way as New York was in the other. In the first month some 9 million people went through the turnstiles, nearly double original estimates…experts now say attendance by fair's end will reach 60 million."[7] While the final attendance numbers did not quite reach 60 million, the influx of people was overwhelming and created an environment of overcrowding that could not be accommodated.

In terms of crowd control, Expo 67 is generally praised for its innovative developments in organization and urban planning on a large scale, but is criticized for its lack of efficiency with respect to line-ups at the scale of each individual pavilion. It can be argued that this condition was pre-determined even before the first visitor stepped through Expo's gates, due to the priorities of the Montebello Conference. Specific and significant sections of the *Design Intent* were allocated for transportation systems, layout of the site, and pedestrian routes, all of which

[4] Jeremy Baker, "Expo and the Future City," *Architectural Review*, August 1967, 151.
[5] "Expo 67: Chaos Around the Corner?" *Time*, June 2, 1967, 10.
[6] "The Realm: Fulfillment at the Fair," *Time*, May 5, 1967, 22.
[7] "Expo 67: Chaos Around the Corner?" *Time*, 10.

were geared toward accommodating the massive crowds visiting the exposition.[8] The site plan took on an exciting and dynamic character due to a complex transportation infrastructure. It comprised an extensive network of different types of circulation – the Expo Express trains, minirails, skyrides, footpaths and bridges; all interconnecting the various pavilions and spaces.[9] The Expo Express was particularly effective in moving large numbers of people through the site, capable of transporting up to 30 000 people between the three islands per hour, and ultimately forming a strong link between the different elements of Expo.[10] During the most demanding times, all the transportation facilities together could move up to 60 000 people per hour, and the two parking lots, the Victoria Lot and the Long Building Lot, could accommodate 12 000 cars and 9000 cars respectively.[11]These figures show that even though estimates for the number of visitors were staggeringly low, the master plan nonetheless had to address the need for an infrastructure that could transport a great number of people rapidly through a large site. Because of this, the planning process of Expo's transportation network has often been compared to that required for a new city, albeit with a higher population density.[12]

The organization of the Expo site also reflected logical planning ideas in the manner that the theme pavilions were placed next to and therefore directly integrated with the transportation network. This organization aided in the movement of "people through and into crowded communities" and encouraged flow around the site.[13] The *Design Intent* further

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[8] Canadian Corporation for the 1967 World Exhibition, *Master plan design intent*, Montreal: The Corporation, 1963, 5.
[9] Schmertz, "A Brilliantly Ordered Visual World," 116.
[10] "How the Fair was Planned," *Progressive Architecture*, June 1967, 132.
[11] Kenzo Tange et al., "Expo 67," *Japan Architect*, August 1967, 24.
[12] "How the Fair was Planned," *Progressive Architecture*, 132.
[13] Ibid., 127.

strategized how to counter crowd congestion through the calculated placement of "mega-star" pavilions and other popular attractions. The brief stated that "in order to maintain interest and in a sense to contain the Exhibition, lots for the largest and perhaps the most spectacular pavilions, have been placed in terminal positions to form poles of attraction."[14] Along with pavilions that were expected to attract the largest crowds (i.e. the U.S pavilion), parks were located on the outskirts of the islands as well.[15] (Fig. 2) This type of organization created a balance between guests travelling to smaller, more modest pavilions and those travelling to the large, crowded ones, and avoided heavy traffic in the main circulation areas by directing it outwards.[16] The *Design Intent* went on to plan for issues of crowding around the pavilions by developing regulations that promoted spaciousness.[17] The document stated that "…pavilions cannot cover more than 60% nor less than 40% of their lots…to secure a satisfactory building density," and furthermore, "the simple intent of the master plan, is that Pavilions should generally be built close to public spaces, plazas, Activity Areas and thoroughfares…"[18] This is yet again an example of how the planners of Expo 67 envisioned an infrastructure that was intended to absorb large crowds. Strangely enough, the most prevalent, most defined, and well-contained form of crowding, queues, was absent from their agenda.

The attention to detail in the organization and layout of the site as a means of alleviating crowd congestion was not given to line-ups to the same degree by the planners of Expo 67. They lacked architectural design and complexity, the result of which enhanced the negative

[14] Canadian Corporation, *Master plan design intent*, 7.
[15] Yoshiro Ohbayashi, "Exhibit and Image," *Japan Architect*, August 1967, 30.
[16] Tange et al., "Expo 67", 37.
[17] Wainwright, "Design Intent for Expo '67," 31.
[18] Canadian Corporation, *Master plan design intent*, 7.

impressions people had of the long queues. The following excerpt from a 1967 issue of *Architectural Record* provides a nice visual of the line-up chaos that materialized in the fair:

> The citizens of Montreal, happily arriving and re-arriving by means of their handsome new subway, queue up by the hundreds at the popular exhibits, help to crowd the express and minirail platforms, clog the paths, spill over onto the grass and planting, jam the lunch counters, restaurants and bars, and stretch the lines which form outside the toilet facilities. Can the fair's attractiveness withstand this onslaught? The planners are doing their best – main thoroughfares are being widened…and more restaurants and toilets are being rushed to completion.[19]

It is clear from this passage that the Expo facilities and grounds were not equipped for line-ups of such large magnitude and the late response of the planners shows that it was a major oversight on their part. This notion of neglect was demonstrated by the architects of most pavilions as well, for whom the queues seemed to be an afterthought. Sam Abrams, a Montrealer who spent most days of his '67 summer at Expo at thirteen years old, recalls that the Czechoslovakia pavilion and the USSR pavilion were among the busiest, with line-ups clocking in at around two and a half hours each. Both pavilions were standouts of the exposition, hotspots that were chronically smothered by throngs of people at their entrances waiting in line.[20] With this in mind, it is interesting to investigate the plans of each pavilion in order to understand how they were armed to respond to the crowds. Upon inspection of the ground floor plans of each building, one can notice that queue spaces are absent from the drawings; thus it can be argued that the design of the line-ups was neglected by the respective architects to some degree. The plan of the Czechoslovakia pavilion articulates the entrance with a small flight of stairs, but it stops there. Specific portions of the plan are denoted for circulation use, such as escalators, stairs, and corridors; however the queue, which can be

[19] Schmertz, "A Brilliantly Ordered Visual World," 116.
[20] Sam Abrams, telephone interview, March 15, 2011.

regarded as an extension of this circulation, is not elaborated. (Fig. 3) Similarly, the floor plan and section of the USSR pavilion are devoid of any line-up design or indication whatsoever. Once again, the entrance is articulated, this time as a set of narrow escalators leading from the exterior of the building into the main exhibition space. (Fig. 4) This bridging of circulation between the interior and exterior spaces of the pavilion provided the architect with a perfect opportunity to suggest the form or at least the presence of a queue space, however it was not taken. This inclination of disregarding queue space was shared by most pavilions at Expo 67, and the consequence was that the ensuing line-ups assumed the simplest structure possible.

The typology of line-ups at Expo 67 was limited to very generic, primitive forms, which created a strong contrast with the avant-garde architecture to which they were attached. In most cases, the structure of the queue was defined by a simple post-and-rope (stanchion) system.[21] According to Abrams, this method of line control was not very advanced:

> They didn't handle the line-ups very well…they put out ropes but it was relatively unsophisticated. The lines were incredibly long but they weren't complex enough to move you through. Today you go to the airport for example; they move you through pretty quickly, up and down, back and forth, or at Wal-Mart they have eight cashes and the lines are divided. At Expo, there was one line and that's it…poles here and there and you just followed the line.[22]

These comments reinforce the idea that without architectural design, the queues resorted to the most basic of structures. The film *Expo 67: 40e Anniversaire* provides an abundance of wonderful video footage documenting the nature of line-ups outside various pavilions, many of which possess this same basic structure Abrams describes. A glimpse of the Czechoslovakia pavilion shows a mob of people, packed like sardines into a very long linear form. The line is

[21] Revisitez Expo '67: Plaisir, Émotion, Découverte, 40th Anniversary DVD, Société Radio-Canada and imavision.com, 2007. (Observations by author)
[22] Abrams, telephone interview.

defined by an array of posts connected by light chains or ropes, which leads the queue onto an elevated platform in front of the pavilion. (Fig. 5) What is immediately obvious is the static quality of the line; it barely moves in the minute or so it is filmed. A similar condition can be seen at the Great Britain Pavilion, where a stanchion system assembles the crowd into a long linear form extending perpendicular to the building. The width and length afforded by the stanchions are minimal though; they create a very narrow, short lane. Finally, the modern-day back-and-forth queue structure that Abrams refers to did indeed appear at Expo at the Bell Canada (or Telephone) Pavilion. Here we observe a queue of hundreds of people straddling the entire length of the building. (Fig. 6) The line-up moves in a "snake" pattern, twisting and turning, up and down around a series of metal railings.[23]

In each of the cases above, the queues were clearly organized into linear, basic structures lacking architectural design. This emphasized the fact that the pavilions and their queues were distinctly separate entities and not architecturally integrated. As a result, there was a strong dichotomy between the avant-garde, complex pavilions, and the simple line-ups that seemed to be tacked onto them like appendages. (Fig. 7) As Abrams said, "you can imagine the excitement of waiting to enter the geodesic dome, or Germany's gigantic fabric tent, or Russia's glass box…these incredible structures like nothing you've ever seen, and then the frustration of having to wait in a straight line for hours."[24] It was arguably this stark contrast that between pavilion space and queue space that enhanced the negative emotions associated with waiting in line.

[23] Revisitez Expo '67.
[24] Abrams, telephone interview.

Albeit not for the same reasons, this negative perception of line-ups at Expo 67 was echoed by many visitors, the media, and even the Expo administration. *Time Magazine* pointed out that "famished fairgoers waited more than an hour for chicken Chateau Chillon….helpless in the face of the human avalanche."[25] The Expo officials expressed their own concern by dispatching clowns, the Expo Band, and other entertainment acts to distract those waiting in line in the hope of avoiding complaints and a negative reputation.[26] The opinion that the chronic line-ups at Expo 67 were one of the fair's major flaws was widespread.

Returning to Dixon's "USA Queues 1," it is easy to identify those in the photograph who shared this view. One man in a red collared-shirt stands hunched over, arms crossed, with a look of frustration and boredom on his face. Nearby is another man who appears unhappy as he blankly stares off into the distance. A third man, also in a red shirt, sternly looks ahead and seems disengaged, even angry. (Fig. 1) Judging by their expressions, the queue comes across as an uncomfortable space that was to be resented. Upon closer inspection of the photograph however, one can spot certain moments in the crowd that suggest exactly the opposite idea: it was in fact an enjoyable social environment. For example, a man in a striped shirt casually talks to another man across a fence. To the right of them, several people face each other, including a group of women who are mid-conversation. At the far left of the photograph, a couple of teenagers relax on the fence and balance themselves against a tree, gazing down at the people in front of them. The photograph ultimately depicts the queue as an atmosphere in which social

[25] "Expo 67: Chaos Around the Corner?" *Time*, 10.
[26] Baker, "Expo and the Future City," 152.

interactions flourished, and strangers enjoyed themselves together. It can be argued that the structure and functioning of the line-ups was the catalyst for this.

The structure of the queues created a perfect forum for socializing, as the resulting crowding patterns forced people into close proximity of each other for long periods of time. The post-and-rope stanchion system described earlier, which was used at the majority of Expo pavilions, often led to a crowding phenomenon known as the bottleneck effect. Video footage of the British pavilion on a busy day shows this occurrence quite clearly: hundreds of fairgoers queue up to enter the pavilion however the narrow lane between the stanchions can only accommodate so many. The remaining people who cannot fit within this defined “line space" accumulate into a large mass at its rear.[27] Because the pavilion could only take in a limited number of people, the line moved very slowly and the bottleneck lasted for hours. It can be argued that this condition was extremely conducive to social interaction, since it created an atmosphere of public gathering. Waiting to enter the pavilion most likely became an enjoyable event in itself; with so many people jammed together into these open spaces, the sheer density alone would force people into encounters with one another. An image of the Labyrinth pavilion from Dixon’s slide collection depicts this idea and the scale at which the bottleneck effect occurred. The queue emerges from the Labyrinth in a linear, organized fashion, but spills into a large open space where it becomes a massive gathering of people. (Fig. 8) From a distance, one can see how a simple line-up has transformed itself into a public and social event.

The snaking queue structure outside the Bell Canada pavilion arguably generated an environment ideal for social interactions between fairgoers as well. Video footage puts the

[27] Revisitez Expo ’67.

viewer right in the queue as it winds up and down, back and forth around a series of metal guardrails. Several conditions can be observed here which spark encounters between the people waiting in line. Because of the multi-directional winding circulation, individuals pass each other repeatedly throughout the line-up and when doing so are face-to-face.[28] It can be argued that this developed a familiarity between the members of the queue, and warmed them up to each other. The organization of the line also provides opportunity for socializing during the stagnant waiting periods. Because it is segmented into adjacent sections rather than a single linear form, during these moments people are in an arrangement where interaction seems natural.[29] The film attests to this, demonstrating the queue as a hot-bed for socializing. Everywhere in line people are seen talking to one another, many of whom have completely turned their backs to their destination while they chat. A group of three men casually conversing depict just how relaxed the environment is: one leans against a phone booth, the other against the pavilion wall, while the third sits on the ground. Finally, two men can be spotted having a conversation from opposite sides of a guardrail, perhaps suggesting they are strangers to each other.[30] These moments serve to demonstrate the strong social nature of the queues, and how their structure transformed them into major public spaces at Expo 67.

The significance of this social environment created in the queues cannot be underestimated within the grand scheme of the fair, as it complemented the ideas behind "Man and His World". Expo's theme was taken from Antoine de Saint-Exupéry's novel "Terre des Hommes," in which he discussed "the sense of human dignity which pervades the

[28] Revisitez Expo '67.
[29] Ibid.
[30] Ibid.

relationship between men."[31] This notion of a mutual respect between human beings was expressed extensively at Expo. For one, the official symbol of the fair, designed by Julien Hebert, was inspired by the oldest known symbol for man showing him "linked in brotherhood and friendship, and encircling the earth."[32](Fig. 9) Furthermore, the *Design Intent* discussed how the theme pavilion, "Man in the Community", was meant to emphasize the importance of being part of a community of men.[33] All of these ideas were echoed in atmosphere created in the queues at Expo 67. Renna Bassal, who attended the fair at 20 years of age, recalls that "there was such an air of camaraderie at Expo, everyone got along so beautifully. It was such a friendly time that it was fun just standing in line and talking to people, meeting people from all over the world."[34] The manner in which people socialized in the queues, and even complete strangers were brought into contact with each other strengthened the ideas of friendship, respect and community promoted by the fair. The queue truly evolved into a platform where people of any class, culture or race could meet on common ground.

In conclusion, the problem of overcrowding that plagued Expo 67 was crucial to the social phenomenon that developed in the queues. Line-ups played a significant role in enhancing the humanistic element of the fair by providing active social spaces for its visitors. The simple and generic line structures, faced with unanticipated numbers of fairgoers led to crowding patterns that were conducive to social interaction. The failure of Expo's planners to design accommodating queue spaces in fact catalyzed the necessary circumstances to create this environment. The conclusion can therefore be made that the minimal planning of a space

[31] Canadian Corporation, *Master plan design intent*, 3.
[32] Lydia Ferrabee, "The Shape of Expo '67," *Design*, January 1967, 26.
[33] Canadian Corporation, *Master plan design intent*, 3.
[34] Renna Bassal, telephone interview, March 7, 2011.

can make it that much more enjoyable. Considering that many people look back on the queues at Expo as some of their fondest memories of the fair, this idea still resonates more than 40 years later, reminding us that sometimes unexpected outcomes aren't all that bad.

Appendix

Figure 2: Ile Sainte Helene Partial Site Plan - Strategic Placement of U.S Pavilion

Source: Expo ’67 Plan souvenir, http://www.robert-lavigne.com/Photogram/Images/a-0401-Expo67-Plan/IMG-Plan-2000/PlanExpo67-132-2000-Ile-Ste-Helene.jpg

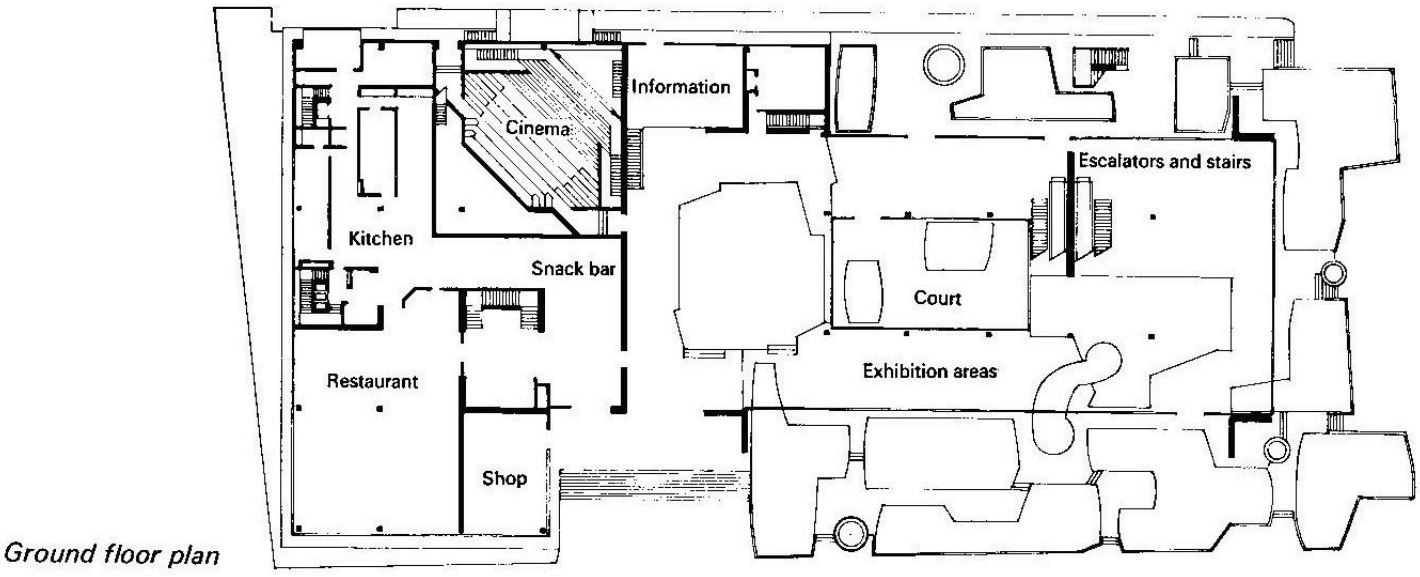

Figure 3: Czechoslovakia Pavilion, Ground Floor Plan

Source : Kalin, I. 1969. *Expo '67: survey of building materials, systems and techniques used at the Universal and International Exhibition of 1967, Montreal, Canada*. Ottawa: [Queen's Printer].

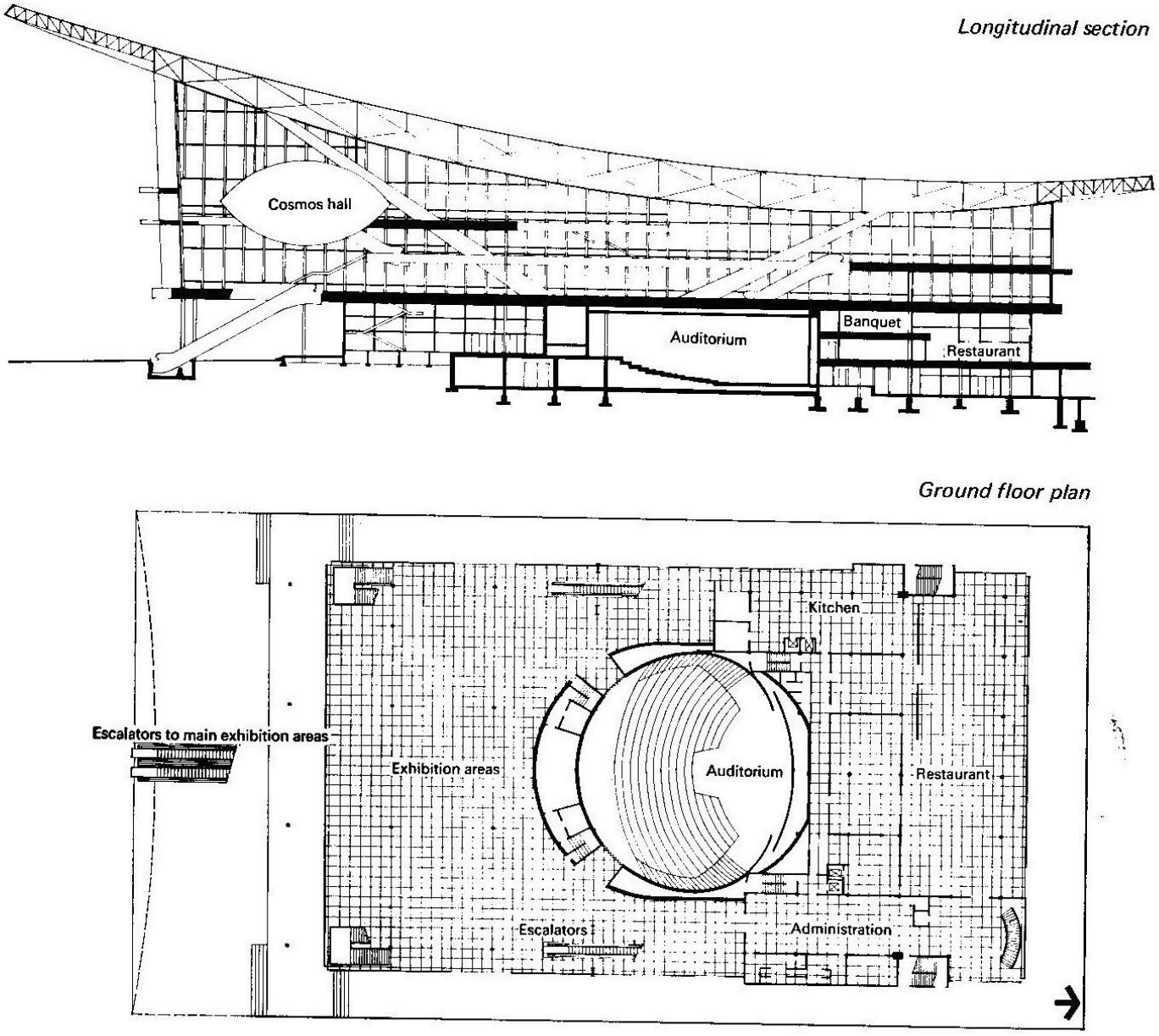

Figure 4: U.S.S.R. Pavilion, Longitudinal Section & Ground Floor Plan

Source : Kalin, I. 1969. *Expo '67: survey of building materials, systems and techniques used at the Universal and International Exhibition of 1967, Montreal, Canada*. Ottawa: [Queen's Printer]. t

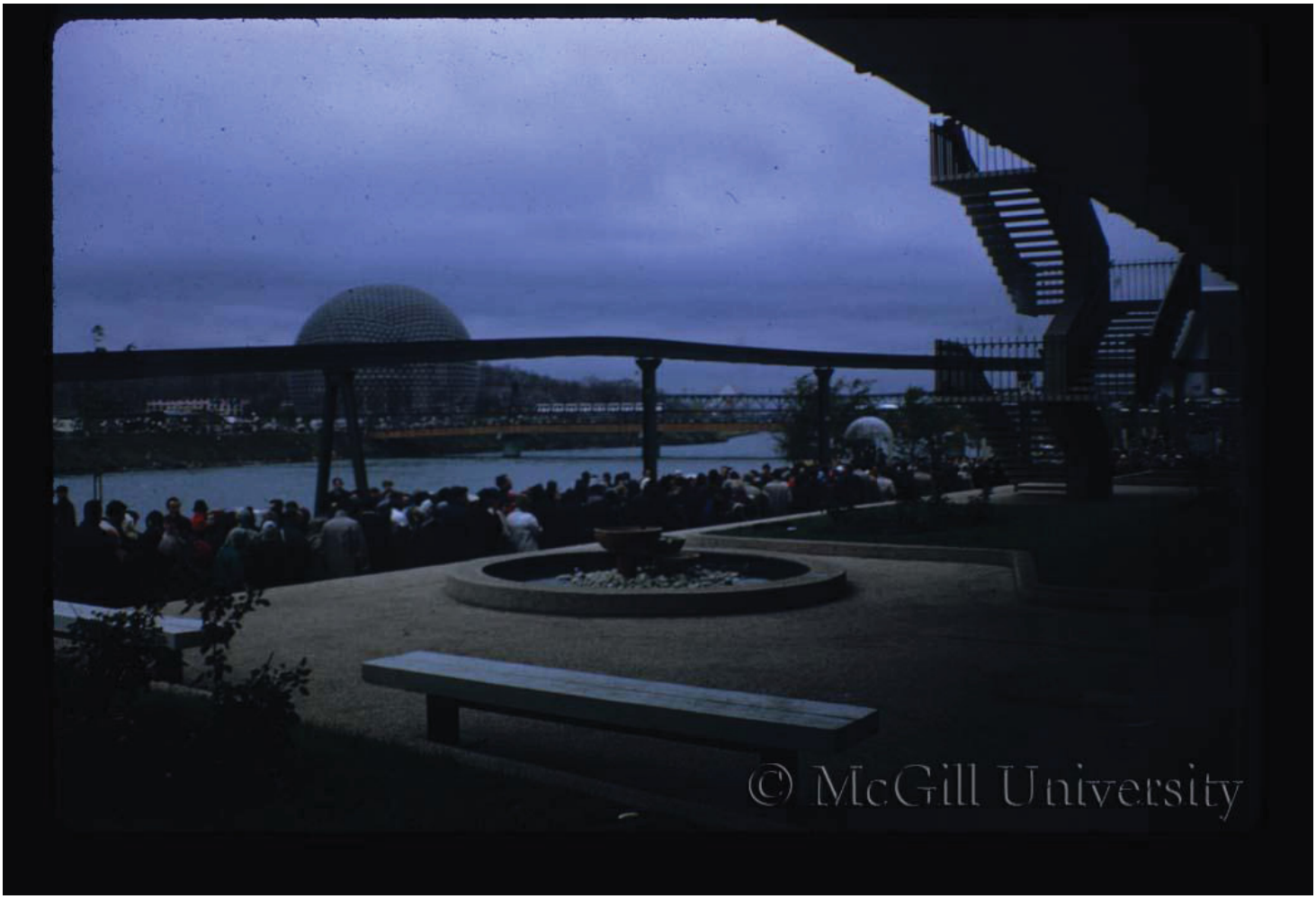

Figure 5: Czechoslovakia Queue

Source: Dixon Expo '67 Slide Collection Web site, http://digital.library.mcgill.ca/expo-67/search/slideDetails.php?id=81

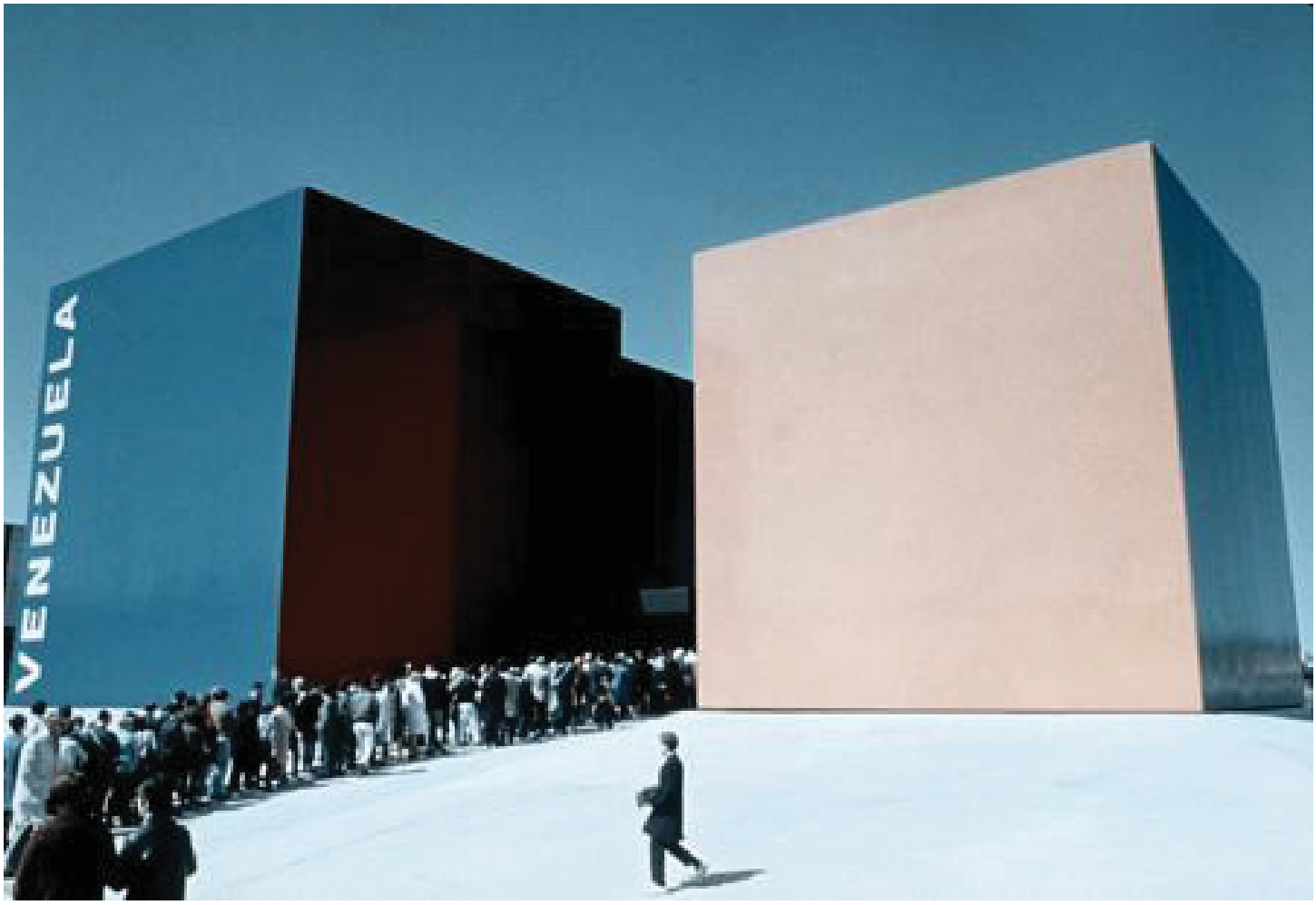

Figure 7: Venezuela Pavilion Queue

Source: DC Hillier Expo '67 Photo Gallery, http://www.dchillier.com/new_expo/EXPO_GALLERIES/gallery8/pages/9-5%20-%20Venezuela.htm

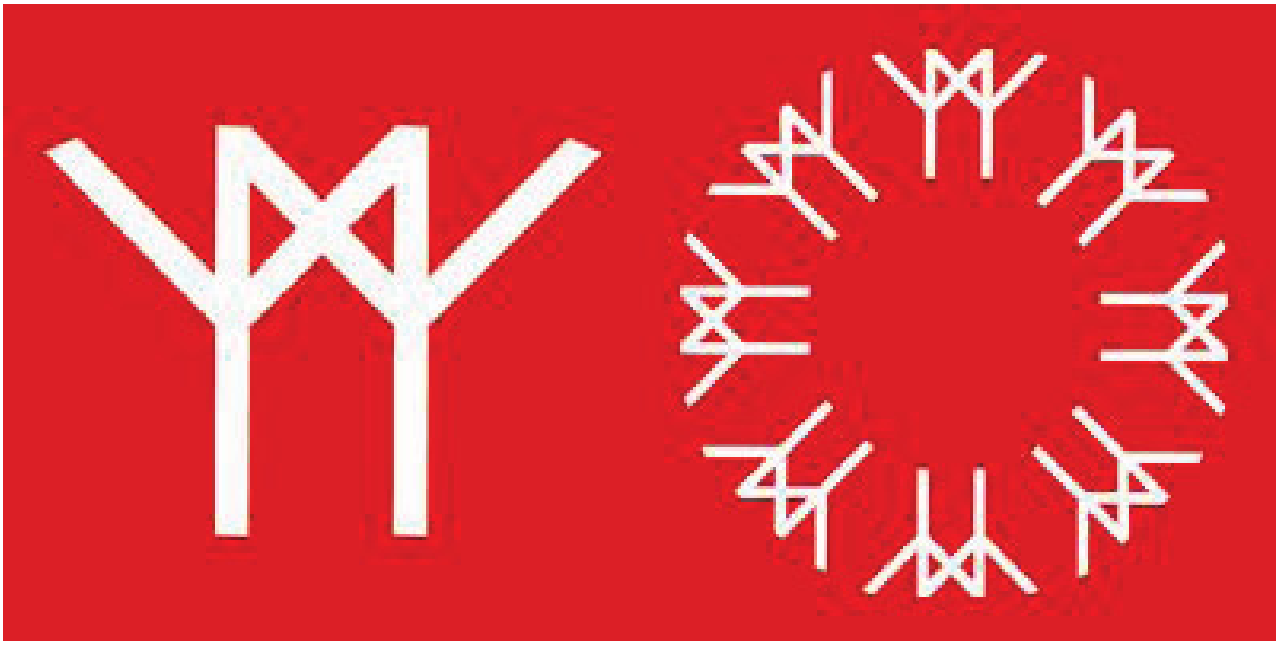

Figure 9: Expo 67 Official Symbol

Source: Expo Lounge Web Site, http://expolounge.blogspot.com/2008/06/about-expo-symbol.html

Figure 8: Labyrinth Queue - Bottleneck Effect

Source: Dixon Expo '67 Slide Collection Web site - http://digital.library.mcgill.ca/expo-67/search/slideDetails.php?id=241

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Sam Abrams, telephone interview, March 15, 2011.

Renna Bassal, telephone interview, March 7, 2011.

Acknowledgements:

A special thanks to Sam Abrams, Renna Bassal, Dr. Tom Kohn and Larry Long for their insightful interviews, Ed Rudick for lending me his wonderful Expo 67 DVD, Professor Annmarie Adams for her helpful comments, and finally Ms. Jennifer Garland, without whose research help I would still be lost in library storage.

Figure 6: Bell Canada Pavilion Queue

Source: Dixon Expo ‘67 Slide Collection Web site - http://digital.library.mcgill.ca/expo-67/search/slideDetails.php?id=334