

“Canadian Reject”:
Melvin Charney’s Design for the Canadian Pavilion at Expo 70

Emily Bergsma

A Thesis
in
The Department
of
Art History

Presented in Partial Fulfillment of the Requirements
For the Degree of Master of Arts (Art History) at
Concordia University
Montreal, Quebec, Canada

April, 2017

© Emily Bergsma, 2017

Concordia University
School of Graduate Studies

This is to certify that the thesis prepared

By: Emily Bergsma

Entitled: "Canadian Reject": Melvin Charney's Design for the Canadian Pavilion at Expo 70

and submitted in partial fulfillment of the requirements for the degree of

Master of Arts (Art History)

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the final examining committee:

_____ Chair
Dr. Elaine Cheasley Paterson

_____ Examiner
Dr. Kristina Huneault

_____ Examiner
Dr. Johanne Sloan

_____ Supervisor
Dr. Nicola Pezolet

Approved by:

Dr. Kristina Huneault, Graduate Program Director

Dr. Rebecca Taylor Duclos, Dean of Faculty of Fine Arts

Date: _____

Abstract

This thesis is a study of Melvin Charney's competition entry for the Canadian Government Pavilion at Expo 70 in Osaka, Japan. As the competition was held in early 1967, this thesis looks at how Charney's pavilion design for a future Expo was in fact a response to the architectural impact of Expo 67 on his hometown of Montreal. Charney's Expo 70 pavilion design was emblematic of 'megastructure' design – a movement in avant-garde architecture in the 1960s that drew from new technological advancements to create flexible, complex architectural systems. In this thesis, I argue that Charney was drawn to megastructure design because it seemed to present a resolution to contradictory objectives within his architectural practice. Focusing on Charney's practice in the 1960s and drawing from his critical writings on architecture published during this time, this thesis examines how Charney's conception of megastructure design was a celebration of modern technologies and industrial systems that offered a means of preserving vernacular building methods, while also serving as a critique of architectural and political institutions.

Acknowledgements

Firstly, this project would not have been possible without the patience, brilliance and generosity of my advisor Dr. Nicola Pezolet. So much of this thesis is born out of ideas and interests that started during your seminars and your guidance has been instrumental in helping me to refine those ideas over the last few years. Thank you for your sustained enthusiasm for this project, for your insightful and considered advice at every stage, and for being such a positive and consistent source of support.

Thank you to my reader Dr. Johanne Sloan for sharing your expert knowledge and providing thoughtful and constructive feedback. Your recommendations have surely improved the clarity and quality of this thesis.

Thank you to everyone in the Department of Art History – professors, staff and classmates. It has been a privilege to share this time and learn with you.

Thank you to the staff at the CCA library, especially Renata Guttman and Colin MacWhirter, for facilitating countless requests to consult your resources. Thank you for the many helpful conversations and recommendations. Thank you for creating a welcoming and invigorating environment to research and study architecture.

Thank you to Sandra Paikowsky for your brilliant writing advice and for being an inspiration, a mentor and a friend.

Thank you to Nancy Webb and Matthew Palmer for arranging and performing original songs of encouragement. Thank you for making me laugh. To Nancy, thank you for being my careful editor, my closest friend, and my unconditional champion.

Thank you Adam, for your tireless love and encouragement and for enduring this whole process with me from start to finish from the confines of our one-room apartment.

Finally, thank you to my family, who have been supportive to me throughout this process in more ways than I could have imagined. To Geoff, thank you for letting me occupy your dining room for several weeks to write the early drafts. To Alissa, thank you for the many warm, consoling messages and reminders to self-care. To my wonderful parents, George and Nancy, thank you for believing in me and supporting me in every way.

Table of Contents

List of Figures	vi
Introduction	1
Section One: Techno-Utopianism	9
Section Two: Industrial Systems	17
Section Three: Primitivism and Politics	21
Section Four: Anti-Architecture as Institutional Critique	28
Conclusion	34
Figures	36
Bibliography	56

List of Figures

- Figure 1.** Melvin Charney, *Plan, Site Orientation – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2240&etape=1
- Figure 2.** Melvin Charney, *Plan, Exhibition Systems – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2240&etape=1
- Figure 3.** Melvin Charney, *Ground Level – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2240&etape=1
- Figure 4.** Melvin Charney, *Lower Level – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2240&etape=1
- Figure 5.** Melvin Charney, *Upper Level – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2240&etape=1
- Figure 6.** Melvin Charney, *Plan, Exhibition Organization – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Exhibition Systems. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2240&etape=1
- Figure 7.** Melvin Charney, *Elevation, Entrance – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2240&etape=1
- Figure 8.** Melvin Charney, *Section AA – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2240&etape=1
- Figure 9.** Melvin Charney, *Perspective, Entrance – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2240&etape=1
- Figure 10.** Melvin Charney, *Perspective, Model – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2240&etape=1

Figure 11. Construction of Bonaventure Place and Château Champlain. Montreal, Quebec. July 21, 1965. Photographer: Henri Rémillard. B & W negative. Institutional Affairs Fonds (VM94) VM94/A220-5. Rights: City of Montreal, Document management and archives. Source: https://www.collectionscanada.gc.ca/expo/0533020601_e.html

Figure 12. Affleck, Desbarats, Dimakpoulos, Lebensold & Sise, *Man the Producer*, Pavilion at Expo 67. Montreal, Quebec. 1967. Colour photo. Collection of Library and Archives Canada (1970-019). Copyright of Library and Archives Canada. Source: https://www.collectionscanada.gc.ca/expo/0533020209_e.html

Figure 13. Cedric Price, *Fun Palace*, Interior Perspective, 1964. Cedric Price fonds DR1995:0188:518. Collection of the Canadian Centre for Architecture, Montréal. Copyright of the CCA.

Figure 14. Melvin Charney, Grain Elevators, Port of Montreal, Quebec, n.d. Collection of the artist. Source: Louis Martin, ed., *On Architecture: Melvin Charney: A Critical Anthology* (Montreal/Kingston: McGill-Queen's University Press, 2013), 170.

Figure 15. Melvin Charney, view of the principal facade of Marché Bonsecours with grain elevator no. 2 (now demolished) in the background, Montreal, Quebec, 1969. 23.5 x 34.8 cm. Gelatin silver print. Collection of the Canadian Centre for Architecture (PH1987:0622). Copyright Melvin Charney.

Figure 16. Bernard Rudofsky, Dogon architecture, *Architecture without Architects*, 1964. Source: Bernard Rudofsky, *Architecture Without Architects: An Introduction to Non-Pedigreed Architecture*, (New York: Museum of Modern Art; distributed by Doubleday Garden City, 1964): n/p.

Figure 17. Bernard Rudofsky, Italian hill town architecture – Anticoli Corrado in the Sabine Mountains near Rome, *Architecture without Architects*, 1964. Source: Bernard Rudofsky, *Architecture Without Architects: An Introduction to Non-Pedigreed Architecture*, (New York: Museum of Modern Art; distributed by Doubleday Garden City, 1964): n/p.

Figure 18. Dismantled Housing, Montreal, ca. 1975. Photograph: Melvin Charney. Collection of the artist. Source: Louis Martin, ed., *On Architecture: Melvin Charney: A Critical Anthology* (Montreal/Kingston: McGill-Queen's University Press, 2013), 282.

Figure 19. Arthur Erickson and Geoffrey Massey, *Canadian Government Pavilion*, Expo 70, Osaka Japan. Collection of the Erickson Estate. Source: <http://www.arthurerickson.com/cultural-buildings/expo-70-canadian-pavilion-/1/caption>

Figure 20. Arthur Erickson and Geoffrey Massey, *Section, Stage Two – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2228&etape=2

Introduction

In early 1967, Melvin Charney entered an architectural design competition for the Canadian government pavilion at the 1970 Universal Exposition (Expo 70) in Osaka, Japan. His submission – a collaborative project with architect Harry Parnass, and engineers Janos Baracs and Marceau Pageau – was for a “self-erecting exhibition system”: a matrix-like structure, to be built from tower cranes, steel masts, and prefabricated modules that left the mechanics of the building exposed and celebrated.¹ The materials used to build the pavilion were to be the same materials of which it was composed: the shipping containers used for transportation would act as fold-out exhibit enclosures and tower cranes would be left in place as structural beams.² Towers could be adjusted in height, and modules could be added to accommodate the changing needs of exhibitors. The ready-made components were to come together in a flexible, open-form assembly. It was Charney’s intention to offer a stripped-down structure that could simply act as a “‘scaffolding’ for the participation of the people in the light, sound, and movement of an exhibit.”³

Charney’s submission was rejected. It was not even a finalist in the competition. It did, however, generate some buzz within the architectural community. Praise for Charney’s innovative project was published in several architecture magazines, including *Architectural Design*, *Progressive Architecture*, *L'Architettura*, and *Perspecta*.⁴ Critics lamented his rejection, calling it the “more-up-to-the-minute design” as compared to the competition winner – Arthur Erickson and George Massey’s mirror-sheathed pyramid with spinning, umbrella-like canopies.⁵ In these reviews, Charney’s mechanical, grid-like composition consistently drew comparisons to other architectural projects that were part of an emerging avant-garde. Projects like Yona Friedman’s *Ville Spatiale*, Constant Nieuwenhuys’ *New Babylon*, Warren Chalk’s *The Walking City*, Peter Cook’s *Plug-in City*, Cedric Price and Joan Littlewood’s *Fun Palace*, and the Metabolists’

¹ While this project was a collaborative effort between Charney, Parnass, Baracs and Marceau, the
² Melvin Charney, “A Self-Erecting Exhibition System: Project for the Canadian Pavilion, Osaka, Expo 70,” in *On Architecture: Melvin Charney: a critical anthology*, ed. Louis Martin (Montreal/Kingston: McGill-Queen’s University Press, 2013), 194. Originally published under the same title in *Architecture Canada* 46, no. 3 (March 1969): 34–6.

³ Charney, “A Self-Erecting Exhibition System,” 194.

⁴ “Canadian Reject,” *Architectural Design* 37, no. 7 (July 1967): 441; James T. Burns, “A Gallant Try: Canadian National Design Competition for 1970,” *Progressive Architecture* 48/8 (August 1967): 164–165; Bruno Zevi, “Progetto canadese per Osaka '70” *L'Architettura* 13, no. 8 (December 1967): 526-528; Peter C. Papademetriou, “Competition Entry – Canadian Pavilion, Osaka Expo '70”, *Perspecta—The Yale Architectural Journal* 12 (March 1969), 29.

⁵ “Canadian Reject,” 441.

various explorations in Group Form, were all considered emblematic of a movement now commonly known as megastructure. According to architectural critic and historian Reyner Banham, the term megastructure was coined by architect Fumihiko Maki who describes it as “a large frame in which all the functions of a city, or part of a city are housed. It has been made possible by present-day technology. In a sense, it is a man-made feature of the landscape.”⁶ This form of architecture was born out of the technological optimism of the postwar era and typically consisted of prefabricated modules clipped-onto or plugged-into a large, flexible framework to create a complex, highly-technologized environmental system. The relevance of Charney’s Expo 70 project within this architectural milieu was reinforced when he was invited to present his designs among his peers in radical architecture at the International Future Research Conference in Kyoto in 1970.⁷ His significant role within the megastructure movement was then certified in 1976 when his pavilion designs were included in Banham’s classic book on architecture of the era, *Megastructure: Urban Futures of the Recent Past*.⁸

It could be argued that Charney’s Expo 70 project was inspired by the very projects his was compared to – Friedman’s and the like – after seeing them published in a copy of *Archigram* given to him by Reyner Banham at a conference in 1964.⁹ However, Charney did not have to look far for megastructure inspiration – he issued his design for Expo 70 weeks before the opening of Montreal’s own Expo 67. Expo 67 is often considered the apotheosis of postwar techno-utopian ideology – an extravagant, media-explosive, “multi-sensory, total environment poem.”¹⁰ The tenets of megastructure design could be found in several of the Expo 67 pavilions, notably Moshe Safdie’s modular apartment complex *Habitat 67*, Buckminster Fuller’s iconic geodesic dome for the United States pavilion, or any of the Theme Pavilions, particularly the

⁶ Banham quoting Maki, *Megastructure: Urban Futures of the Recent Past* (London: Oxford University Press, 1976), 8.

⁷ Louis Martin, “Biography,” *On Architecture*, 444. Also see, The International Future Research Conference and the Japan Society of Futurology, *Challenges from the future: proceedings of the International Future Research Conference*, Tokyo Kodansha, 1970. Charney’s essay is not published here, though he is listed as a participant, and gives insight to the context within which he was presenting.

⁸ Other notable sources on megastructures from the period include Michel Ragon, *Histoire mondiale de l’architecture et de l’urbanisme modernes, vol. 3: Prospective et futurologie* (Tournai: Castermann, 1971) and Justus Dahinden, *Urban Structures for the Future* (New York: Praeger, 1972).

⁹ Martin, “Biography,” *On Architecture*, 444. See also *The History, Theory and Criticism of Architecture: Papers from the 1964 AIA-ACSA Teacher Seminar*, ed. Marcus Whiffen (Cambridge, Mass.: The MIT Press, 1970).

¹⁰ Donald Theall, “Expo as Total Environment,” in *Reimagining Cinema: Film at Expo 67*, ed. Monika Gagnon and Janine Marchessault (Montreal/Kingston: McGill-Queen’s University Press, 2014), 19.

enormous steel tetrahedron arrangement that was *Man the Producer*.¹¹ While Expo 67 was mostly isolated on Île Sainte-Hélène, megastructure design extended throughout the city. Led by Montreal's expansionist-happy mayor, Jean Drapeau, Montreal experienced an enormous building boom throughout the 1960s with the opening of major expressways, skyscrapers, cultural centres and the metro system. As Banham describes it, "the megastructure vintage of 1967 was classic, rich, and bountiful" and Montreal was its "capital city."¹² In 1967, megastructures were "growing wild" in Charney's backyard.¹³

This proliferation of new development, however, came at a price. For every new infrastructure project initiated in downtown Montreal, there was an older form of architecture being destroyed.¹⁴ Neighbourhoods characterized by the unique style of Montreal's residential walk-ups were being ripped apart to make room for the supposed improvements. Opposition to this widespread development, as well as the growing economic inequality between the city's English and French residents, were among the many catalysts for the political uprising that would become known as Quebec's "Révolution Tranquille" (or Quiet Revolution). The small interest groups advocating for the separation of Quebec from Canada had grown into a full-blown resistance by the second half of the decade, culminating in violent ends with the October Crisis in 1970.

Throughout the 1960s, Charney played a balancing act. While he published essays that relished in the excitement of new technologies, he checked his enthusiasm with a vocal opposition to the destruction of vernacular architecture. In addition, Charney published several essays criticizing the misuse of technology in modern architecture, advocating for a study of industrial vernacular structures, like Montreal's grain elevators, as an example of how technology can be used to create architecture that is preoccupied with "human processes rather than with designed things."¹⁵

¹¹ For more on these, see Banham, "Mega-City Montreal," in *Megastructure: Urban Futures of the Recent Past* (London: Oxford University Press, 1976); Inderbir Singh Riar, "Montréal and the Megastructure, ca 1967," in *Expo 67: Not Just a Souvenir*, ed. Rhona Richman Kenneally and Johanne Sloan (Toronto: University of Toronto Press, 2010), 193-210.

¹² Banham, *Megastructure*, 105.

¹³ Ibid.

¹⁴ On the various popular movements and public policies to preserve Montreal's distinctive architectural heritage during this period, see Martin Drouin, *Le combat du patrimoine à Montréal (1973-2003)* (Québec: Presses de l'Université du Québec, 2005).

¹⁵ Charney, "Grain Elevators Revisited", *On Architecture*, 177.

This thesis explores how Melvin Charney adopted megastructure design as a means of reconciling seemingly opposed affinities for technology, modernization and traditional vernacular architecture in his work of the 1960s. It is my contention that Charney's proposal for the Canadian pavilion at Expo 70 was submitted as a political gesture and a comment on modern architecture, more so than a genuine attempt to win the competition. Although Charney's Expo 70 design emerged from a boom in megastructure architecture in Montreal, I argue that Charney ultimately advocated for the use of new technologies in architecture not simply to modernize, but to try to preserve vernacular traditions and produce a new form of popular architecture that would engage Québécois people as "citizen architects", and in turn, empower them politically.

With his Expo 70 project as the core case study, this thesis focuses on Charney's architectural output of the 1960s almost exclusively – an era of his work that has been less widely explored than his political days of the 1970s and later work as an artist from the 1980s through to his untimely death in 2012. Two historians have done noteworthy research on this period of Charney's life. Réjean Legault published an essay in the Université de Montréal journal *Édition Trames* in 2004 on Charney's essays from the 1960s that has been very informative to my interpretation of these texts.¹⁶ Louis Martin compiled and edited *On Architecture* – a complete anthology of Charney's writings spanning his fifty-year career – published in 2013. Martin also published an essay in 2014 for *Future Interior* on Charney's advocacy for the preservation of the social content of architecture in Quebec, focusing on *Les Maisons de la rue Sherbrooke* (1976) and his seminal essay from 1971 "Pour une définition de l'architecture au Québec," as the primary case studies.¹⁷ My thesis research is deeply indebted to the work of Legault and Martin and takes these critical texts as a point of departure. In these texts, Charney's ideas are mapped out as a clear progression of thought tied intimately to his biography. I have approached this thesis differently. Using Charney's design for Expo 70 as a primary case study, I intend to situate his work within a larger political context and argue for the Expo 70 proposal as a form of institutional critique.

There is often a clean demarcation drawn between Charney's work of the 1960s and his work of the 1970s. In many ways, this division makes sense: the year 1970 could be seen as Charney's

¹⁶ Réjean Legault, "Pour une définition de l'architecture: Melvin Charney et la modernité architecturale dans les années 1960," *Édition Trames* 15 (2004): 25–52.

¹⁷ Louis Martin, "Building Myths, or How to Preserve the Social Content of Architecture," *Future Interior* 11, no. 2 (Winter 2014): 65–75.

gradual transition point from modernist to postmodernist, but also from architect to artist. This transition in Charney's career runs parallel to the common historical narrative of architecture during this period. In this canonical narrative, the 1960s was a decade of renewed modernism, Cold War industrialism and techno-utopianism, whereas the 1970s saw the rise of postmodernism, characterized by environmentalism, the reclamation of tradition and irony, and a renunciation of utopian ideals as universalizing and oppressive. Like many architects at this time, Charney followed the postmodern critics that de-emphasized technology and banished utopia from architectural culture for most of the 1980s and 90s. Because of the sharp criticisms of architectural culture in the 1960s, this period of architecture – for Charney, and for architectural historians at large – has been identified as a time mostly dissociated from political and social issues.

Recent scholarship, however, has been actively reconsidering the value of postwar visionary architecture. As Christina Contandriopoulos stated in a special issue of the *Journal of Architectural Education*, the field of architecture is currently seeing a “return to utopia.”¹⁸ As an inherently varied theme, ‘utopia’ takes on several meanings within the context of architecture. Whether it is politically-motivated (architecture explicitly aligned with an emancipatory political project), socially-concerned (architecture as the embodiment of socially progressive ideas; architecture as a component part of a larger socio-cultural environment), and/or technologically and aesthetically-driven (future-oriented architecture; architecture as visionary design; techno-utopianism; neo-primitivist architecture), a return to utopia necessarily becomes a return to the question of what utopia means, and if or how its meaning could possibly be resolved or refined through explorations in architectural practice.

Contandriopoulos argues that the hype surrounding the new millennium gave birth to a renewed interest in futurism and that since the early 2000s: “utopia has once again resurfaced, repositioning itself as a vital concept within architectural culture.”¹⁹ This resurfacing of utopia can be understood through the work of countless artists and architects aimed at creating a

¹⁸ Christina Contandriopoulos, “Introduction: Architecture and Utopia in the 21st Century,” *Journal of Architectural Education* 67/1 (2013): 3. Contandriopoulos credits the expression to Antoine Picon in a talk he gave in 2008, reprinted in the same issue of the *Journal of Architectural Education* as “Utopia: Architecture and the Quest for Political and Social Relevance.”

¹⁹ Contandriopoulos, “Introduction,” 3. Contandriopoulos also stresses, however, that the post-millennium, post-9/11 model of utopia is often based on the idea of a post-apocalyptic “after” rather than blind techno-optimism based on a clean trajectory of progress (made evident in the excessive use of “post-” in trying to qualify our contemporary moment.)

contemporary utopian moment, space, interaction, experience, or idea.²⁰ However, it has also manifested as an interest in looking back to an era when utopia was left behind.

Contandriopoulos cites a number of exhibitions over the last decade that specifically pointed to “a genuine architectural revival of the radical techno-utopias from the 1950s–1970s.”²¹

Not only is there a renewed interest in avant-garde postwar architectural practices, architectural historians are also re-evaluating the blanket dismissals that drove utopian architecture out of fashion to begin with. In the introduction to *Anxious Modernisms: Experimentation in Postwar Architectural Culture*, a collection of essays published in 2000, editors Sarah Williams Goldhagen and Réjean Legault argue that architectural trends of the 1950s and 1960s had hitherto been considered “only as disparate, fleeting moments of passionate intensity leading to no lasting, significant architectural influence.”²² In opposition to this dismissive discourse on post-war architecture, Goldhagen and Legault brought together a new generation of architectural historians to present projects that would show the diversity and richness of projects birthed from the complex social conditions of postwar existence. In doing so, the contributors to this book re-write the “tidy narrative” that oversimplified architectural practices of this period and offer a new critical framework for thinking about postwar architecture.²³

Similarly, in Felicity Scott’s 2011 book *Architecture or Techno-Utopia*, she compiles a series of case studies from the late 1960s and early 1970s that represent vastly different approaches to techno-utopian architecture. In every chapter, Scott seeks to destabilize the existing narrative by exploring examples of architecture that blur the lines between modernism and postmodernism. In each example, she highlights the “contestatory dimension” – the specific political contexts and agendas from which these projects emerged and aim to influence.²⁴

²⁰ For this, Contandriopoulos points to a series of architectural proposals that range from pig-cities to self-regulated virtual realities, and beyond. While she also mentions Nicolas Bourriaud’s *Relational Aesthetics*, with reference to contemporary utopianism in art, I would also add Claire Bishop, *Artificial Hells: Participatory Art and the Politics of Spectatorship* (London: Verso, 2012). Bishop offers examples of art practices that are more concerned with positive social change than material form, but – like Scott’s *Techno-utopia* – she is also critical of apolitical utopianism.

²¹ Ibid. A good example of this is the 2008 project *Megastructure Re-loaded*, which became an exhibition, conference and publication. See *Megastructure Reloaded: Visionary Architecture and Urban Design of the Sixties Reflected by Contemporary Artists*, ed. Sabrina Van der Ley and Markus Richter (Ostfildern: Hatje Cantz, 2008)

²² Goldhagen and Legault, “Introduction: Critical Themes in Postwar Modernism,” in *Anxious Modernisms: Experimentation in Postwar Architectural Culture*, (Montreal/Cambridge, Mass.: Canadian Centre for Architecture/The MIT Press, 2000), 4.

²³ Goldhagen and Legault, *Anxious Modernisms*, 4.

²⁴ Felicity Scott, *Architecture or Techno-Utopia: Politics After Modernism* (Cambridge, Mass.: The

In keeping with Scott's methodology for re-evaluating this rich moment in architectural history, this thesis presents Melvin Charney's Expo 70 project as a compelling case study of Canadian megastructure architecture. In doing so, I hope to contribute to this emerging body of literature which aims to enrich the history of architectural culture in the 1960s. I argue that while Charney's design exhibits clear influences of the techno-utopianism of Expo 67 in Montreal, his design also carries a "contestatory dimension" tied to the anti-institutional sentiments of the burgeoning Quiet Revolution. I look to Charney's writings on architecture in the 1960s to bolster my argument that he aimed to use technology to preserve vernacular traditions rather than create a universalized notion of a utopian future. As such, I consider Charney's Expo 70 project as an initial step in his quest to reach what he will later refer to as "realizable utopias" – architectural projects that are grounded in the political, social and technological realities of the contemporary moment.²⁵

In each section of this thesis, I look at the many social, political, architectural and ideological factors that concerned Charney at the time he was producing his Expo 70 project. I provide an argument for how megastructure architecture offered a solution to seemingly disparate issues and how different aspects of Charney's megastructure design illustrate an attempt to reconcile each of his discordant interests.

Section one of this thesis focuses on the changes happening in Charney's immediate urban environment and look at megastructure as a form of techno-utopian architecture. Based on the rapid development of infrastructure and the space-age design of Expo 67, Montreal stood as evidence that futuristic architecture was becoming a reality. This section provides an overview of the architectural developments in Montreal in the early 1960s and Charney's initial responses to them. To do so, I look at Charney's published essays that reveal an optimistic perspective on new technologies in architecture. I also demonstrate commonalities between some of the techno-utopian projects discussed in Charney's texts and his Expo 70 project.

Section two considers how Charney's megastructure design was inspired by industrial vernacular architecture. Charney saw megastructures as environmental systems that were representative of human processes. Although he was skeptical of modern architects' ability to

MIT Press, 2007), 248.

²⁵ Charney, "Montreal... More or Less," *On Architecture*, 275. This expression was also popularized by Yona Friedman in *Utopies réalisables* (Paris: Union Générale d'Édition, 1976).

apply technology beyond a futuristic image, Charney believed that megastructures could draw from industrial vernacular architecture as a model for how to implement new technologies in architecture to create “citizen architects.”²⁶ This section discusses similarities between Charney’s critique of formalism in his essay on Montreal’s grain elevators and Reyner Banham’s concluding chapter to *Theory and Design in the First Machine Age*.

Section three casts a wider net to consider some of the broader contextual and theoretical influences on Charney’s work, specifically how primitivist tendencies in architectural culture in the 1950s and 1960s were translated into an interest in megastructure architecture. To do so, I look at the relationship between Charney’s writings on ancient vernacular architecture in the 1960s, Michael Polanyi’s theory of tacit knowledge, and Bernard Rudofsky’s exhibition *Architecture without Architects*. Ultimately, I posit a connection between Charney’s interest in ancient vernacular architecture and the rhetoric of the Quiet Revolution that spurred him to look to megastructure as a means of cultural and political empowerment.

In the final section of this thesis, I formulate an original argument that considers Charney’s Expo 70 project as a form of institutional critique. I argue that Charney embraced megastructure as a form of anti-architecture to simultaneously renounce Canadian nationalism and criticize the federal government and the current state of modern architecture. I do so by comparing Charney’s Expo 70 pavilion to *Memo-Series* – his response to a design competition for the Canadian Air Force memorial just two years later.

²⁶ Charney, “Environmental Conjecture: In the Jungle of the Grand Prediction,” *On Architecture*, 158.

Section One: Techno-Utopianism

Montreal in the late 1960s was a very different city than the one Melvin Charney grew up in. Charney was born in 1935 and raised in the Plateau Mont-Royal and Outremont neighbourhoods. He stayed in Montreal to study architecture at McGill University from 1952–58. At that time, the architecture faculty at McGill, under the direction of John Bland, promoted the study of modern architecture associated with Mies van der Rohe and the International Style. Charney was resistant to the idea of architecture as a style, especially because this approach did not teach him anything about how to understand the architecture he saw around him.²⁷ As Charney describes: “When I came into McGill, Montreal was still a city that was pulling out of the depression. There had not been that much construction and one came into a school where we talked about architecture but it happened somewhere else, somehow. The good architecture was not around here, within the city. It was somewhere else.”²⁸ At odds with this approach to architecture, and somewhat displeased with his education at McGill, Charney left Montreal to enter the MArch program at the Yale School of Architecture in New Haven in 1959.

Around the time that Charney left Montreal, the entire province of Quebec underwent some major changes. Following a recession in the late 1950s, and the election of a new premier in the Quebec Liberal Party’s Jean Lesage in 1961, Quebec’s provincial government began implementing widespread economic, political and cultural reforms. These reforms included the expansion of the education, health, and welfare sectors, the nationalization of hydro-electric services, and a gradual distancing from the Catholic Church as a political actor and provider of social services. As a result, the early 1960s, still referred to as the “Révolution Tranquille”, have been heralded as the beginning of Quebec’s modern era.²⁹ The effects of these reforms were magnified in Montreal, which was the province’s largest economic and cultural hub, and at the time, the largest city in Canada. Based on positive trends in economic growth, city planners anticipated that Montreal’s population of close to 2.5 million would nearly double within 20 years.³⁰ This prediction created a sense of urgency for the city to expand and develop its urban

²⁷ Martin, “Biography,” *On Architecture*, 444.

²⁸ Melvin Charney, interview by Jim Donaldson, June 1999. Accessed 25 January 2017. <https://www.mcgill.ca/architecture/aluminterviews/charney>

²⁹ See, among other things, Claude Couture, *Le mythe de la modernisation du Québec. Des années 1930 à la Révolution tranquille* (Montréal: Éditions du Méridien, 1991); *La révolution tranquille: 40 ans plus tard: Un bilan*, ed. Yves Bélanger, Robert Comeau et Céline Métivier (Montréal: VLB, 2000); Michael Gauvreau, *The Catholic Origins of Quebec's Quiet Revolution, 1931-1970* (Montreal/Kingston: McGill-Queen's University Press, 2005).

³⁰ Roland Cousineau, City Planning Department, “The Postulates of the Plan,” *Métropole: Les*

infrastructure to accommodate the impending influx of residents.

Thus, while Charney was out of the country from 1959–63, Montreal started “thinking big.”³¹ It expanded its transportation systems with the opening of the Metropolitan Boulevard (Montreal’s first expressway) in 1960 and the Champlain Bridge in 1962. The CIL Building (now the Telus Tower) designed by Skidmore, Owings and Merrill; the CIBC Tower by Dickson, Ross, Fish and Barrat; and Place Ville-Marie by I.M. Pei & Partners were all erected in 1962.³² Each of these buildings at the time of their opening were the tallest skyscrapers in downtown Montreal – the CIBC Tower exceeded the CIL building by 11 stories when it opened in June, then Place Ville-Marie topped the CIBC Tower by two stories when it opened just two months later, making it the tallest building in Canada.³³ That same year also came with two important milestones – the start of construction on the Montreal metro system, and the announcement that Montreal would be hosting the 1967 World’s Fair.

When Charney returned to Montreal in 1963, the economy was booming and city was buzzing with excitement for the future – suddenly, the kind of modern architecture that “happened elsewhere” during his studies at McGill was popping up all over the place. Charney began working as a professor at the newly formed École d’architecture at the Université de Montréal, and would open his own design studio shortly thereafter in 1964.³⁴ At the same time, Charney started publishing essays about the changes he saw in the urban environment around him. Though not all of his reviews were favourable, I will discuss a selection of Charney’s essays that reveal a more optimistic perspective toward technology in architecture. I will then analyze the relationship between the ideas and forms that Charney references in his writing with his design for the Canadian pavilion at Expo 70.

Designed by architects Pier Luigi Nervi and Luigi Moretti, Place Victoria – home to Montreal’s Stock Exchange – opened in 1964. Like the new towers before it, Place Victoria would beat out the competition as the tallest skyscraper in Canada and the tallest reinforced concrete tower in the world.³⁵ Charney published a review of this building in an issue of *The Canadian Architect* in

Cahiers d’Urbanisme 3 (October 1965): 28.

³¹ *The 60s: Montreal Thinks Big*, ed. André Lortie (Vancouver: Douglas & McIntyre, 2004).

³² André Lortie, “The 60s: Human Conquest and Urban Tension,” *The 60s*, 23.

³³ The CIBC Tower and Place Ville-Marie were also the largest buildings in all of Canada. Lortie, “The 60s,” *The 60s*, 23.

³⁴ Martin, “Biography,” *On Architecture*, 443.

³⁵ Lortie, “The 60s,” *The 60s*, 23.

1965 criticizing the loss of public space in Square Victoria, but commending the architects for creating a building that lays bare its structural complexity and “makes no aesthetic excuses for itself.”³⁶ Compared to the other high-rises recently built, Charney argued the Place Victoria was superior in design because of its “sense of physical clarity.”³⁷ He took a particular interest in how “the extended base forms plug-in points and links for a possible sequence of towers” suggesting the availability for expansion.³⁸ For Charney, the success of the building is rooted in the way the building elements come together to leave “some doubt to the final destiny of the form.”³⁹

The language that Charney uses in this text and the elements of Place Victoria that he draws attention to echo one of Reyner Banham’s first essays on megastructure architecture published the same year as Charney’s review. In “A Clip-On Architecture,” Banham maps the emergence of megastructure from modular house projects like Alison and Peter Smithson’s *House of the Future* to Archigram’s otherworldly “plug-insville” designs. However, he starts his exploration of “the idea of endlessness” with the example from the Alumni Memorial Hall at the Illinois Institute of Technology by Mies van der Rohe, where Mies left the steel structure at the corners of the building exposed, suggesting the possibility of endless extension.⁴⁰ Similar to this example, Charney recognizes how the exteriorization of the structural beams in Place Victoria implies that the structure has the potential to extend infinitely.⁴¹ This approach, however, is more an aestheticization of extendability than an implementation of “clip-on” technologies. Ultimately, Charney will look to the work of more radical architects – like the Smithsons, Price and others – to find examples that go beyond a formal representation of technological design.

In May 1966, Charney published an essay in the *Journal of the Royal Architectural Institute of Canada* featuring a project with his students at Université de Montréal exploring the use of plastics as a building material.⁴² In this text, Charney takes issue with the use of plastic a substitute for traditional materials and applauds situations where the unique properties of plastic have informed new configurations and construction methods. This includes everything from

³⁶ Charney, “Place Victoria, Montreal,” *On Architecture*, 119.

³⁷ Ibid, 118.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Banham takes this example from Llewellyn-Davies. Banham, “A Clip-on Architecture,” *Design Quarterly* 63 (1965): 6.

⁴¹ Charney may have disagreed with this comparison. He states in an interview: “To me, Mies was never exposed structure. To me, Mies was illustrated structure.” Melvin Charney interviewed by Jim Donaldson, June 1999. Accessed 25 January 2017.

<https://www.mcgill.ca/architecture/aluminterviews/charney>

⁴² Charney, “Environmental Chemistry – Plastics in Architecture” *On Architecture*, 152-160.

mobile homes and “micro-enclosures” like telephone booths and bus shelters, to temporary vinyl shelters in Vietnam and advances in aerospace engineering.⁴³ For Charney, plastic is not just a new material: it is a solution to flexibility and prefabrication, and is another means of “extending man’s environment into hitherto uninhabitable parts of the earth and extraterrestrial space.”⁴⁴ Here, Charney expresses his interest in how the integration of new technologies and building materials, like plastic, will pioneer new ways of living.

Charney’s space-age fantasies reach their peak in his editorial statement of a special issue of *Parallel* published in March 1967 titled “Notes on a Traveller’s Guide to the Plastic Inevitable.” As the guest editor, he writes a kind of techno-utopian love letter to a future form of megalopolis called “Urbland.”⁴⁵ Urbland is not an architectural style, but “an operative model that seeks to anticipate where we will live.”⁴⁶ In Charney’s vision of the future, “the new landscape is a totally designed, contrived, man-made environment” – a vast network of transportation and communication systems where architecture is “only a small part of the total happening.”⁴⁷ The role of architecture in the city will be obscured, as will the role of architects. In Urbland, “citizens will become architects and actively participate in the making of the kind of place in which they live.”⁴⁸ This new environment will embody “a post-totalitarian spirit where distinctions are re-defined” and “utopias are no longer imaginary.”⁴⁹ Charney finds evidence for his futuristic theories in Montreal’s new massive city centres like Place Ville-Marie “where everything takes place” and its connection to the underground circulation systems turn it into “a virtual town in itself.”⁵⁰ This text also makes reference to British architect Cedric Price and Joan Littlewood’s cybernetic theatre project *Fun Palace*, as well as Price’s *Potteries Thinkbelt* – a centre for higher education within a series of untenanted ceramic factories connected by railways with the cars themselves serving as learning spaces. Charney likely took note of this project because of his own interest in alternative designs in schools. He collaborated with the newly formed Ministry of Education on new school designs in the mid-1960s. He also published a number of articles hypothesizing how increased participation in architecture might improve education, suggesting how new materials can be used to create complex, flexible learning environments

⁴³ Charney, “Environmental Chemistry – Plastics in Architecture,” *On Architecture*, 134-135.

⁴⁴ *Ibid*, 135.

⁴⁵ Charney, “Notes on a Guide for Travellers to the Plastic Inevitable,” *On Architecture*, 137–142.

⁴⁶ Charney, “Notes on a Guide,” 137.

⁴⁷ *Ibid*, 137-139.

⁴⁸ *Ibid*, 141-2.

⁴⁹ *Ibid*, 138,141.

⁵⁰ *Ibid*, 139.

that give teachers and students to the ability to constantly re-organize their environment.⁵¹ Interestingly, one of Charney's collaborators on the Expo 70 project, Harry Parnass, also produced a megastructure-influenced design for an education system that, like Price's *Thinkbelt*, would make use of the existing metro system and empty commercial spaces to transform the traditional campus into an urban network.⁵² Thus, Parnass and Charney were clearly aligned on the importance of integrating architecture into the function of the city and making use of resources that could be appropriated for other purposes – principles that come to the fore in the Expo 70 project.

Far from the ultimate realization of the seamlessly interactive networks of Urbland, Charney's proposal for Expo 70 is closer to a very rudimentary prototype of the kind of techno-utopian architecture he was writing about. However, there are a few elements in his Expo 70 project that clearly exhibit similar characteristics. Charney selected materials that were trendy in megastructural design. The large exterior framework of lattice steel trusses and towers that are applied in Charney's project are unmistakably referencing those of Price's *Fun Palace*, and are also aesthetically reminiscent of the steelwork in *Man the Producer* and the exposed tubular aluminum structures of the Pavilion of the Kingdom of the Netherlands. Stressed-skin plywood panels used to create the enclosures of his Expo 70 pavilion were common among other projects with prefabricated elements, notably Alison and Peter Smithson's *House of the Future*. Charney's design features a travelator (moving sidewalk) at the entrance of the building, as well as through the centre diorama – an iconic element of futuristic design that can again be found all over the *Fun Palace*, as well as several Archigram drawings and inside Buckminster Fuller's dome for the US pavilion at Expo 67. It also included a café/restaurant space, which was featured in many other pavilions at Expo 67 as a way to foster social interactions and intercultural exchanges.⁵³

The presenter's text included in the competition submission gives significant insight into how Charney intended the structure to function. The flexibility of the building is presented as a key

⁵¹ See Charney, "Experimental Strategies: Notes for Environmental Design," *On Architecture*, 203-216; Charney, "Review of *New Schools for New Towns*," *On Architecture*, 217-220; Charney, "Learning Environments: Planning beyond Flexibility" *On Architecture*, 179-187; Charney, "An Environment for Education," *On Architecture*, 161-168.

⁵² For a good overview of this project, see Inderbir Singh Riar, "Montréal and the Megastructure, ca 1967," *Expo 67: Not Just a Souvenir*, 193-210.

⁵³ See Rhona Richman Kenneally, "'The Greatest Dining Extravaganza in Canada's History': Food, Nationalism and Authenticity at Expo 67," *Expo 67: Not Just a Souvenir*, 27-46.

feature of the design. Much like the structures in Charney's vision of *Urbland*, his design for Expo 70 consists of a base structure that allows various components to be added or removed as needed: "The additive module can accommodate area changes and the booms can be used to vary the heights. The main grid carries all the trunk lines for mechanical and electrical services; these have direct access to all areas and can serve any type of arrangement."⁵⁴ This degree of openness would allow the pavilion to be adjusted by exhibition designers, artists and administrators.

Among the drawings Charney submitted to the competition was a presentation panel that detailed how the participants could move through the space at their discretion, choosing their own pace and level of engagement. The competition did not call for this to be included in the first round of submissions and there is no evidence to suggest that the other proposals included documents that showed any consideration for how their designed space would provide multiple options for user engagement with the space. Charney describes his intention in the presenter's text: "The system of circulation controls direction of movement and distinguishes between the circuits of a fast trip through a series of observation platforms; a medium length visit that affords an overview of the exhibits from extended platforms; and a slow detailed visit. If a particular exhibit is found interesting, the visitor can change from one kind of trip to another."⁵⁵ With this layout, it would have also been easier for participants to return to the main hub and recirculate at will or exit, rather than be set to one prescribed route. The openness of this circulation plan calls to mind Banham's description of *Man the Producer* – one of the theme pavilions at Expo 67 engineered by another of Charney's collaborators, Janos Baracs – which details how its open plan lent itself to spontaneous activity:

All in all it was an improvised learning machine for *homo ludens*, an environmental experience which set the Theme Pavilions apart from all the others at Expo. However sophisticated, however apparently aware of the 'media revolution' they were, the other great showpiece pavilions – the "Labyrinth", the national pavilions of the United States and Czechoslovakia, even of Cuba – all processed the visitor as the more or less passive consumer of a prescribed linear experience without conspicuous alternative routes. In "Man the Producer" there were nothing but alternative routes, to be selected at conscious will or simply at random – the Situationists' psycho-geographical drift. This

⁵⁴ Canadian Competitions Catalogue, "Competitor: Melvin Charney: Pavillon du gouvernement canadien pour l'Exposition universelle d'Osaka 1970/Canadian Government Pavilion Japan World Exposition Osaka 1970," Accessed March 4, 2017.

http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1

⁵⁵ Ibid.

was achieved, of course, through massive redundancies of space-usage beyond what any of the other pavilions could permit themselves, but such redundancies, it often appears, may be of the essence of megastructure. The freedoms demanded by Constant, the control and choice of Archigram, the ability to ‘inflate an extra capsule... for the arrival of Grandma,’ in Denise Scott-Brown’s neat phrase, all require space to spare.⁵⁶

It is also worth noting that Kenzo Tange was supposed to join the Canadian members of the jury committee for the Expo 70 pavilion competition, but had to withdraw his participation at the last minute.⁵⁷ Kenzo Tange was the chief designer of the Expo 70 masterplan, and, while not an official member, Tange was also affiliated with the founding of the Metabolist movement in Japan – a group of architects working in the 1960s that related megastructure design to the growth of biological organisms. If one can assume Charney was aware that Tange was the chief designer and would be involved in the jury process, it is possible that, in part, Charney chose a megastructure design for this project because it would speak to current trends in Japanese architecture and would likely fit in with Tange’s techno-utopian vision for the exhibition. Charney was right – Tange’s design for Expo 70 exhibited several megastructure designs and fully embraced an optimistic view of the future uses of technology.

In Japan, prefabricated and standardized building elements, like the ones Charney uses in his Expo 70 design, were considered the ideal solution to rebuilding cities devastated by the atomic bomb. Hyunjung Cho notes that, on a symbolic level, techno-utopian architecture “functioned as a psychological antidote to the traumatic experiences of the recent past,” allowing the Japanese to reposition technology as a source of hope rather than fear.⁵⁸ In Cho’s dissertation, she explains how the techno-utopian architecture of Expo 70 by Tange, Arata Isozaki, and other Japanese architects were meant to communicate that the Japanese were ready to move on from the war and into the future, along with the rest of the world.⁵⁹ Thus, one can only imagine that Charney was playing into the Japanese context and that his technology-forward design would have piqued Tange’s interest. If Tange had participated in jurying the competition as planned, the fate of Charney’s project may have been different.

⁵⁶ Banham, *Megastructure*, 116.

⁵⁷ Canadian Department of Trade and Commerce, *Jury report: Architectural Competition for the Canadian Government Pavilion at the Japan World Exposition, Osaka, 1970* (Ottawa: R. Duchamel, Queen’s Printer and Controller of Stationery, 1967), n/p.

⁵⁸ Hyunjung Cho, “Competing Futures: War Narratives in Postwar Japanese Architecture, 1945-1970,” PhD diss., University of Southern California, 2011, 9.

⁵⁹ Cho, “Competing Futures,” 9.

In an essay published in the anthology *On Architecture*, architect and educator George Baird addresses what he sees as a contradiction in Charney's interest in institutionalized urban systems (like Place Victoria) versus avant-garde architecture (like Price's *Fun Palace*), and how his Expo 70 project seems to be exemplary of this contradiction:

Here, he can be seen to be significantly invested in the kind of utopian hope for technology that typified the approaches of Friedman and Archigram at the same time that he was proposing a design for a phenomenon as institutionalized as an international world's fair! To be sure, we have to regard the participation in the competition for the pavilion for the world's fair, like his earlier admiration for the recently created urban megastructures in downtown Montreal... as an individual manifestation of the excitement many Montrealers felt about the dramatic urban transformation that was taking place in the city.⁶⁰

While this section has shown that Charney's design for Expo 70 was clearly influenced by megastructure designs of all kinds, in the next section I argue against Baird's statement to suggest that Charney's decision to use a megastructure for his Expo 70 project was not only a manifestation of techno-utopian excitement, but tied to his interests and concerns with vernacular architectural structures. Indeed, it is my contention that Charney saw industrial vernacular systems, like Montreal's grain elevators, as a model for how new technologies could be used to move beyond a formalistic representation of technology and create environmental systems that engage with communities and people.

⁶⁰ George Baird, "From Liberation Technology to Critical Figuration," *On Architecture*, 10.

Section Two: Industrial Systems

Despite Charney's inclination toward new technologies in architecture, he was critical of how these technologies were being used, cautioning architects against adopting technology as a futuristic style. For Charney, modern architects of the past generation represented technological advancements on a strictly superficial level – the icons of the International Style were merely images of modernism where the integration of new technologies was only skin-deep. To shed light on how this criticism of modern architecture informed Charney's appreciation of megastructure, I first look at Reyner Banham's critique of symbolic functionalism voiced in the concluding pages of his classic book *Theory and Design in the First Machine Age*. I then present how Charney expanded upon Banham's criticism of modernist monumentality in his essays "Grain Elevators Revisited" and "Environmental Conjecture: In the Jungle of the Grand Prediction" arguing that an interest with technology must be met with a concern for human needs.

In 1960, Banham published *Theory and Design in the First Machine Age*, a book that maps the historical trajectory of the modern movement in architecture and design from 1900 to the beginning of WWII. In his conclusion to this historical overview, he digresses into a meditation on the idea of "functionalism." According to Banham, by the middle of the 1930s, "functionalism" served as an umbrella term to describe the modernist architecture of the 1920s. However, Banham argues "it is doubtful if the ideas implicit in Functionalism [...] were ever significantly present in the minds of any of the influential architects of this period."⁶¹ Banham suggests that the appeal of "functionalism" was rooted in the economic crises of the period. It was easier to sell architecture and design on the premise of rationality and effectiveness over style and symbolism. While "functionalism" may have been an effective brand for modernism, Banham argues that early modernist architecture was rich with symbolism of the "machine age." Thus, Banham suggests that the application of "functionalist" technologies in modern architecture were only embraced as a symbol of modernity rather than a solution to the prevailing issues of modern society.⁶² Therefore, the claim to functionalism in the architecture of the modern "masters" is fraudulent: "In the upshot, a historian must find that they produced a Machine Age architecture only in the sense that its monuments were built in a Machine Age, and expressed an attitude to machinery – in the sense that one might stand on French soil and

⁶¹ Banham, *Theory and Design in the First Machine Age*. 2nd ed. (Cambridge, Mass.: The MIT Press, 1980), 320.

⁶² This idea is largely borrowed from Buckminster Fuller, whom Banham references in *Theory and Design*, 325-326.

discuss French politics, and still be speaking English.”⁶³ Finally, Banham warns architects against adopting new technologies on a strictly symbolic level in the future:

The architect who proposes to run with technology knows now that he will be in fast company, and that, in order to keep up, he may have to emulate the Futurists and discard his whole cultural load, including the professional garments by which he is recognised as an architect. If, on the other hand, he decides not to do this, he may find that a technological culture had decided to go on without him. It is a choice that the masters of the Twenties failed to observe until they had made it by accident, but it is the kind of accident that architecture may not survive a second time - we may believe that the architects of the First Machine Age were wrong, but we in the Second Machine Age have no reason yet to be superior about them.⁶⁴

Charney extends Banham’s criticism of the symbolic use of technology in his essay “Grain Elevators Revisited” published in 1967 in *Architectural Design*. In this essay, Charney argues that modernist architects in the 1920s misunderstood the value of industrial technology for architecture. Built at the turn of the century, grain elevators were famously referenced in Le Corbusier’s *Vers une Architecture* in 1923, and again, in Bruno Taut’s *Modern Architecture* in 1929, where they were declared a precursor of the modernist canon.⁶⁵ According to Charney, grain elevators were easily taken up as a modernist image because they were seemingly rich in modernist symbolism: “they could be seen as architectural compositions of large, formal elements with dimensions that physically echoed the heroic possibilities envisioned for the future... the hard-edge geometric simplicity of the grain elevators was the antithesis of art nouveau; the basic geometric forms related to the cubist vision of faceted planes of light.”⁶⁶

However, Charney notes that grain elevators “were never studied as functional organisms... [they] were upheld, if at all, as geometric compositions.”⁶⁷ He believed that grain elevators were valuable as a model of an architectural system rather than an architectural image. Grain elevators, unlike the modernist architecture of the 1920s, were truly functionalist in that they were built to provide a specific service. As grain production expanded, elevators were built to process the grain in constant flow, responding to the larger system of grain storage and distribution that it served. For Charney, grain elevators provide an important lesson to architects

⁶³ Banham, *Theory and Design*, 329.

⁶⁴ *Ibid.*, 329–330.

⁶⁵ Le Corbusier, *Vers une architecture* (Paris: Crès, 1923); Bruno Taut, *Modern Architecture* (London: The Studio, 1929).

⁶⁶ Charney, “Grain Elevators Revisited,” *On Architecture*, 172.

⁶⁷ *Ibid.*, 174.

in that they illustrate how technology can be used to facilitate a process. As Charney states, “it is this process we must study if we believe that architecture is an involvement with human processes rather than with designed things.”⁶⁸ Charney emphasizes his difference in approach from that of Le Corbusier by including his own images of Montreal’s grain elevators, pictured – as they truly are – immersed in the context of the city, as opposed to the de-contextualized and misidentified illustrations in *Vers Une Architecture*.⁶⁹

It is not insignificant that Charney published this essay in a special issue of *Architectural Design* that was dedicated to Expo 67 – and that he chose to write about grain elevators rather than any of the exhibition pavilions. In doing so, he intentionally turns the focus of the reader back to the existing industrial vernacular in Montreal and away from the new mega-monuments of the Expo. In the first section of this thesis, I detailed how Charney was influenced by the excitement surrounding Expo 67 in Montreal, however, his study of grain elevators suggests that he did not espouse techno-utopian ideology wholeheartedly. Charney was not interested in technology for technology’s sake – he saw it as a means to better involve architecture with the processes of contemporary human life.

In order to apply the functional organization of grain elevators on a human scale, Charney believed that architecture needed to avoid monumentality and predictability and be open to input from the people it was meant to serve. These ideas come through most effectively in his essay “Environmental Conjecture: In the Jungle of the Grand Prediction” first published in *Landscape* in 1967.⁷⁰ “Environmental Conjecture” is a more subdued, pointed version of “Notes on a Travellers Guide” – he balances his optimism with an awareness of the paranoia that was simultaneously brought about by the emergence of new technologies. Charney classifies the co-existence of optimism and anxiety as an issue of prediction: what will the future look like and how do we plan for it? For Charney, the problem of prediction is addressed in megastructure design because it refuses to solve it: “These models suggest probable patterns with probability itself acting as a variable. This built-in hesitation is indeed the saving grace of most of this

⁶⁸ Ibid, 177.

⁶⁹ Ibid, 172. Charney also criticizes Le Corbusier’s illustrations in “Experimental Strategies: Notes for Environmental Design,” *On Architecture*, 207, where the illustration is also re-published.

⁷⁰ The original version published in *Landscape* was an abridged version. The expanded version later published in *Planning for Diversity and Choice*, and republished in *On Architecture*, is the one that I am referencing here. See Melvin Charney, “For Design,” *Landscape* 16, no. 3 (1967): 21-24; Melvin Charney, “Environmental Conjecture: In the Jungle of the Grand Prediction,” *Planning for Diversity and Choice: Possible Futures and Their Relation to the Man-Made Environment*, ed. Stanford Anderson (Cambridge, Mass.: The MIT Press, 1969), 311–27.

experimental work.”⁷¹ At the end of this essay, Charney states that if there is one thing to take away from the work of megastructuralists, “it is their involvement with a physical organization that acknowledges human action and a new scale of individualization.”⁷² He believed that the value of megastructure design lay in the capacity for participation, for inhabitants to act as designers of their own “microenvironments.”⁷³

With megastructure design, Charney was concerned with creating architecture that encouraged participants to reconstruct their environment according to their needs – a role he refers to as “citizen-architects.”⁷⁴ Deploying megastructure architecture as a means of emancipating or liberating the user was a common theme among architects working with experimental technologies, however, in the following section I will suggest that Montreal’s political climate would have made a form of architecture that empowered its subjects particularly appealing at the time Charney was designing his Expo 70 project.

⁷¹ Charney, “Environmental Conjecture,” *On Architecture*, 156.

⁷² *Ibid.*, 157.

⁷³ *Ibid.*

⁷⁴ *Ibid.*, 158.

Section Three: Primitivism and Politics

In 1960, Charney received a scholarship from the Canada Council for the Arts to study ancient architecture in Mediterranean cities. He was seeking an alternative to what he saw as a rigid and superficial modernism that permeated the architectural culture at that time. Influenced by Louis I. Kahn, his professor and mentor at Yale, Charney believed the antidote for monumental modernism was found in the “essence” of architecture – principles of architecture that belong to no specific architect or style but to the domain of architecture as a whole.⁷⁵ Kahn believed it could be found in the vernacular constructions of ancient Indigenous cultures, which prompted Charney to travel abroad to study them. Between 1961 and 1965, Charney published a series of essays reflecting his first-hand experience with foreign forms of architecture, including the ancient cityscapes of Istanbul, the cavernous rock-cut houses in Göreme (in the Cappadocian region of Turkey) and the trulli in Apulia, Italy.⁷⁶ His reverence for these vernacular structures is clear as he aims to elevate them within the canon, lamenting the fact that history tended to pay greatest attention to “the few buildings that belonged to the powerful and wealthy to the exclusion of all other kinds.”⁷⁷ The following section focuses on Charney’s writings on “primitive” forms of architecture as they relate to his concern with using new technologies to create a novel form of vernacular architecture. Moreover, I suggest a relationship between Charney’s championing of vernacular architecture and the “transnational language of dissent” circulating within Montreal’s political sphere.

As Charney attempted to look beyond modern architecture for inspiration and understanding, his romantic interpretations unfortunately tended to use the same primitivizing language as his modernist predecessors, such as Le Corbusier, who idealized similar structures for their simplicity and supposed functional purity.⁷⁸ Anthropological studies into “anonymous,” “non-pedigreed,” “primitive,” architecture were becoming more frequent again in the late 1950s and

⁷⁵ Louis Martin provides a very thorough overview of Kahn’s ideology and its influence on Charney’s interest in vernacular architecture, with particular emphasis on his final remarks at the CIAM conference in Otterlo in 1959, which I have paraphrased here. See Louis Martin, “Beginnings,” *On Architecture*, 53-60.

⁷⁶ Charney “A Journal to Istanbul,” *Journal of the Royal Institute of Canada* 39, no. 6 (June 1962): 60–65; “Troglai: Rock Cut Architecture” *Landscape* 12, no. 3 (1963): 6–12; “Architecture without Architects: The Trulli of Apulia,” *Landscape* 15, no. 1 (1965): 32–3; “Architectures sans architectes: les trulli de l’Apulie,” *Vie des art* 38 (1965): 54–7.

⁷⁷ Charney, “Architecture without Architects,” *On Architecture*, 108.

⁷⁸ On Le Corbusier’s interest in the vernacular, see: Francesco Passanti, “The Vernacular, Modernism, and Le Corbusier,” *Journal of the Society of Architectural Historian* 56, no. 4 (Dec., 1997): 438-451. For a more general discussion of primitivism in architecture, see: Michelangelo Sabatino, “The Primitive in Modern Architecture and Urbanism,” *The Journal of Architecture* 13, no. 4 (2008): 355-364.

early 60s, evidenced by the publication of Sibyl Moholy-Nagy's book *Native Genius in Anonymous Architecture* from 1957, Team 10 member Aldo van Eyck's essay "The Architecture of the Dogon" published in 1961 and, most famously, Bernard Rudofsky's controversial *Architecture without Architects* – a photographic exhibition at the Museum of Modern Art in New York that opened in late 1964.⁷⁹

The exhibition consisted of a series of photographic images taken or collected by Rudofsky, documenting vernacular forms of architecture from all over the world. The intention of the exhibition was to "break down our narrow concepts of the art of building by introducing the unfamiliar world of non-pedigreed architecture," and in turn, serving as a polemical attack on monumentality and commercialization in modern architecture.⁸⁰ Rudofsky's exhibition had a profound impact on architectural culture and caught the attention of his peers, including Charney. It spoke to many of the themes that interested architects experimenting with megastructure design: free-form, non-hierarchical, anti-modernist. Reyner Banham points out that an interest in vernacular architecture and megastructure tended to go hand in hand:

A tide of interest in vernacular architectures, culminating in Bernard Rudofsky's *Architecture without Architects*, had also produced an interest in 'group form' - the repetition and agglomeration of seemingly standardized folk-building elements into settlements of conspicuously clear plan or striking silhouettes, epitomized by the unavoidable image of Italian hill towns cited by Maki and practically everyone else in that period.⁸¹

Thus, many architects saw these structures – in the same way Charney also saw the grain elevators – as environmental systems, and, in turn, historical precedents for the ideology of megastructure design.

For Charney, ancient vernacular architecture illustrated the fact that people were perfectly capable of finding effective ways to manipulate their environments according to their own needs. Architecture did not need to be something that was taught and monitored through institutions and corporate firms – it was a skill that all people possessed innately. This idea was affirmed by the philosophy of Michael Polanyi on personal knowledge, to which Charney was introduced in

⁷⁹ Sibyl Moholy-Nagy, *Native Genius in Anonymous Architecture* (New York: Horizon Press, 1957); Aldo van Eyck, "The Architecture of the Dogon," *Forum* 115, no. 3 (September 1961): 116-121; Bernard Rudofsky, *Architecture Without Architects: An Introduction to Non-Pedigreed Architecture*, (New York: Museum of Modern Art; distributed by Doubleday Garden City, 1964)

⁸⁰ Rudofsky, *Architecture Without Architects*, n/p.

⁸¹ Banham, *Megastructure*, 9.

the mid-1960s. Polanyi's theory of a "tacit dimension" of knowledge is based on the simple idea that there is an implicit form of knowledge that can be developed through experience that cannot be explicitly explained or accounted for: in Polanyi's words, "we can know more than we can tell".⁸² In his book *The Tacit Dimension* (1967), Polanyi positions tacit knowledge as a critique of and remedy to the parochial definition of knowledge in modern science. According to Polanyi, the primary aspiration of modern science was "to establish a strictly detached, objective knowledge" and, as a result, anything that fell short of the ideal of objectivity was considered imperfect and disregarded.⁸³ Polanyi believed that this ideology was out-dated and damaging, positing that "tacit thought forms an indispensable part of all knowledge" and to discount its relevance to the study of knowledge "would turn out to be fundamentally misleading and possibly a source of devastating fallacies."⁸⁴

There are obvious parallels between Polanyi's attack on the hierarchy of objectivity and Charney's critiques of modern architecture. Polanyi champions a personal, innate knowledge in opposition to an objective, modern science. Charney, as reviewed in section two, sought to elevate recognition for the technological complexity of vernacular buildings over the superficial formalism of modernist design. Charney also feared that unless people were given a means "to participate in the place making of [their] microenvironments" that this innate practice would be lost.⁸⁵ In one of his essays on ancient vernacular architecture, Charney expresses his pessimistic view of their longevity in a future of increasingly commercialized architecture: "Vernacular traditions represent for the most part pre-technological methods that have persisted until now despite industrialization and it is inevitable that they will be replaced by the products of a central design office."⁸⁶ Charney brings this perspective home in his aptly titled essay "The Old Montreal No One Wants to Preserve" from 1964. Here, he expresses concern regarding the removal of vernacular architecture in his city, stating: "the city as it was known is being dismantled." In the midst of change, Charney points to nineteenth-century vernacular architecture as a cultural cornerstone, romantically describing the row houses of Montreal in a similar vein as the ancient vernacular abroad: "our buildings – thin skinned, anonymous, endless – affirm our lives."⁸⁷

⁸² Michael Polanyi, *The Tacit Dimension* (Garden City, NY: Anchor Books and Doubleday & Co. Inc., 1967), 4.

⁸³ Polanyi, *Tacit Dimension*, 4

⁸⁴ *Ibid.*, 20.

⁸⁵ Charney, "Environmental Conjecture," *On Architecture*, 157.

⁸⁶ Charney, "Architecture without Architects: The Trulli of Apulia," *On Architecture*, 109.

⁸⁷ Charney, "The Old Montreal No One Wants to Preserve," *On Architecture*, 93.

It is clear in these early texts that Charney has succumbed to the idea that a technological invasion of architecture was unavoidable and that the only way to preserve these vernacular traditions was to use technology itself. Through his studies of vernacular architecture abroad, combined with the philosophy of Michael Polanyi on the tacit dimension of knowledge, Charney was led to believe that people possessed an innate knowledge of architecture that could only survive by way of new technologies. As Louis Martin notes, Charney saw a solution in megastructure because he believed that “the mass production of prefabricated industrial elements would enable people to build and modify the physical environment according to their needs.”⁸⁸ Thus, Charney advocated for the use of new technologies in architecture, as exemplified in his Expo 70 project, not simply to modernize, but to try to preserve vernacular traditions, encourage building based on tacit knowledge and in turn, produce a new form of popular architecture.

I would further Martin’s argument, and state that the impetus to empower the citizens of Quebec to use technology to reclaim their traditions and individuality, and assert themselves as actors within their environment is directly tied to the politics of the Quiet Revolution. As previously noted, the Quiet Revolution was a period of significant cultural change, rapid modernization, and secularization that unfolded over the course of the 1960s. These changes were coupled with fierce political activism as the citizens of Quebec began pushing for political independence from Canada. Therefore, in Montreal, there was a heightened urgency for people to self-determine their future and to truly take control of their environment – physically, politically, and culturally.

While a full overview of this complex socio-political moment in Quebec history is beyond the scope of this thesis, it is important to draw a parallel between some of the rhetoric adopted by political activists in Montreal and the primitivism reflected in Charney’s early writings. In Sean Mills’ book, *The Empire Within*, he outlines the controversial history of how Montreal activists borrowed liberally from emerging post-colonial theory to “imagine Quebec as a colony and Montreal as a colonial city.”⁸⁹ As Montrealers became more politicized, they aligned themselves with the left-wing independence movements happening in North Africa and Latin America and civil rights movements taking place in the United States. Frantz Fanon’s *Les damnés de la Terre* – a landmark text in postcolonial literature published in 1961, detailing the psychological trauma

⁸⁸ Martin, “Beyond Architecture,” *On Architecture*, 127.

⁸⁹ Sean Mills, *The Empire Within: Postcolonial Thought and Political Activism in Sixties Montreal* (Montreal/Kingston: McGill-Queen’s University Press, 2010), 4.

experienced by those subjected to colonization – was frequently cited by leading political voices in Montreal as a narrative that spoke to the Québécois experience.⁹⁰ According to Mills, Fanon’s book transposed the specific reality of colonization into “a general theory of the colonial condition, one that appealed to liberation movements around the world.” In order to make Fanon’s theory applicable to them, the French-Canadian people of Quebec underwent the deeply troubling process of imagining themselves as enslaved people of colour and branding themselves the “white niggers of America.”⁹¹

The influence of this postcolonial discourse on Charney’s perception of Québécois architecture is most evident in his essays from the early 1970s, where he quotes Frantz Fanon explicitly and unreservedly calls for the separation of Quebec from Canada as a means of political liberation.⁹² While Charney becomes more overtly political in the 1970s, I would argue that Charney’s adoption of this rhetoric in his later advocacy work stems from his interest in primitivism in the early 1960s. In the same way that Montrealers borrowed from postcolonial discourse to position themselves within the political milieu of the colonized, Charney positioned Québécois architecture within the realm of “primitive” architecture as a means of lending validity and political clout to his argument for its cultural value.

For Québécois – the descendants of European settlers who colonized Indigenous populations upon their settlement in North America and who held several privileges not available to other minorities – to claim to be “colonized” themselves speaks directly to the problematic issue of primitivism: appropriated images and imagined mythologies about “other” cultures, no matter how favourable, gloss over difficult political histories and complex realities.⁹³ Nonetheless, at a base level, Québécois activists and colonized peoples shared a common principle – they

⁹⁰ See Frantz Fanon, *Les damnés de la terre* (Paris: Maspéro, 1961).

⁹¹ While cultural identity and language politics were central to the cause, it is important to note that Charney was Anglophone (though fluent in French) and Jewish, and his adherence to Quebec independence was based on an inclusive vision of Québécois society, rather than an ethnocentric one. This expression comes from the title of the book by a leader of the Front de Libération du Québec, Pierre Vallières, *Nègres blancs d’Amérique: Autobiographie précoce d’un “terroriste” québécois* (Ottawa: Les Éditions Parti Pris, 1974). See Mills, *The Empire Within*, 75-84.

⁹² See Charney, “Towards a Definition of Architecture in Quebec,” *On Architecture*, 246–264; “Low-Income Housing into the 70s with Sewer Pipes and Subsidized Speculation,” *On Architecture*, 265–275; “Housing in Canada: A Dead-End Choice,” *On Architecture*, 265–275. Charney refers to Fanon in “Towards a Definition,” *On Architecture* 260.

⁹³ Charney appears to further promote this mythologizing by actively overlooking the existence of Indigenous peoples in North America when he claims the architecture of Montreal’s row-houses represent “the first truly indigenous construction to emerge out of the experience of this continent.” Charney, “Housing in Canada,” *On Architecture*, 283.

demanded “to become the active subjects rather than passive objects of history.”⁹⁴ The appeal of megastructure design – which aimed to activate the role of citizens within their environment – makes perfect sense within the context of these politics. It struck a balance between honouring vernacular traditions and moving into the future. As Sean Mills explains,

In the 1960s, people the world over were asserting their right to be active creators of the world in which they lived. This struggle was not conceived of as an attempt to go back to a previous age of glory before colonization or to turn back the forces of modernity. Rather, activists and intellectuals worked to construct a *counter*-modernity, an alternative society in which citizens would be able to control the forces that shape their lives.⁹⁵

Mills is referring to the reconstruction of the socio-political structures of society, however, these aspirations were mirrored in the field of architecture. The question of how social objectives could be progressed through manipulations to the physical structure of society was on the minds of architects all over the world. For Charney in the 1960s, megastructure architecture offered a means of creating the kind of “counter-modernity” that Mills describes – one where vernacular traditions and new technologies were complementary in creating a politically empowered architectural practice.

In Felicity Scott’s essay on Rudofsky’s *Architecture without Architects*, she presents the idea that Rudofsky’s images were not meant to be presented as literal alternatives to modern architecture, but rather, to serve as an allegory: “Rudofsky’s images were not offered as living examples of a better way of life, but pointed beyond their manifest content to the condition of modern architecture”⁹⁶ Thus, Rudofsky’s exhibition moves beyond a simple championing of vernacular architecture, as it is meant to comment on ideological shifts in architecture on a larger scale within the modern movement. Parable and allegory are devices found in Charney’s later work but not often associated with his practice in the 1960s.⁹⁷ Building on the political contexts outlined in this section, I would argue that, like Rudofsky, Charney is using megastructure as an allegory. While commenting on the changes that need to occur within architecture, he also points to the ideological shifts that are needed within the Canadian political system – a respect for the vernacular (the working class of Quebec) and the agency of the user

⁹⁴ Mills, *The Empire Within*, 57.

⁹⁵ Mills, *The Empire Within*, 58.

⁹⁶ Scott, “Bernard Rudofsky,” 220.

⁹⁷ See Charney, *Parables and Other Allegories: The Work of Melvin Charney 1975-1990* (Montréal: Canadian Centre for Architecture; Cambridge, Mass.: The MIT Press, 1991).

(the political empowerment of the Québécois). In the next section, I argue that Charney's design for the Expo 70 pavilion achieves this dual institutional critique through the renunciation of Canadian nationalism and the reduction of architecture to an open network of human interaction.

Section Four: Anti-Architecture as Institutional Critique

In a way, it is fitting that Charney's Expo 70 project was rejected and never built. The "visionary" architecture of the 1960s mostly existed as drawings – in magazines, in classrooms, and in architects' collective imagination. There are exceptions of course: as already mentioned, the pavilions of Expo 67 and Expo 70 were redolent with megastructural design, but very few of those pavilions still stand today. This period of technological growth undoubtedly influenced the organization of the urban landscapes around the world, as shown with the example of Montreal in section one. However, many of the projects that are considered central to the history of the movement remained on the page. Some were always meant to be that way – like the robotic cityscapes produced by Archigram. On the other hand, Cedric Price sincerely lobbied for ten years for the *Fun Palace* to be built, to no avail. Part of Price's theory on megastructure design was that it was meant to be short-term – he believed architects could only plan for a maximum of ten years into the future, and after that, any design would be redundant.⁹⁸

Price would turn out to be more right than he likely realized. By the end of the decade, megastructures had shifted swiftly out of fashion. As a result of political uprisings – like the Quiet Revolution in Quebec, the events of May 1968 in France, protests against the Vietnam War all across the US and Canada, as well as civil rights and women's liberation movements – and the emergence of postmodern criticism, megastructure architecture was "deserted by the avant-garde" and written off as an oppressive corporate strategy, "a conventional method for maximizing the returns of urban redevelopment."⁹⁹ Combined with a growing pessimism towards the liberatory potential of technology, in addition to a deep skepticism regarding its supposed objectivity, megastructures – built and imagined – would be left, according to Banham, "isolated in the architectural wilderness like dinosaurs surviving, not from any past epoch, but from a fossil future that was not meant to be."¹⁰⁰ Ultimately, at a time when people were driven to take action, megastructures didn't offer realizable solutions for changing their social, political or architectural environments for the better: megastructures weren't utopias, only *images* of utopian experiments.

Thus, it may be most appropriate to look at this larger practice, including Charney's Expo 70

⁹⁸ See Stanley Mathews, "The Fun Palace as Virtual Architecture: Cedric Price and the Practices of Indeterminacy," *Journal of Architectural Education* (2006): 39-48.

⁹⁹ Banham, *Megastructure*, 10.

¹⁰⁰ Banman, *Megastructure*, 10.

project, as *conceptual* architecture. Unrealized, these designs exist only as ideas about the social, political and cultural roles of architecture communicated through images and plans. As a form of conceptual architecture, I believe there is a natural connection between Charney's approach to his design for Expo 70 and the critical approaches emerging within conceptual art during the same era. Lucy Lippard defines conceptual art as artistic production wherein "the idea is paramount and the material form is secondary, lightweight, ephemeral, cheap, unpretentious and/or 'dematerialized.'"¹⁰¹ Often, conceptual "anti-art" acted as a form of institutional critique – in that its content was deeply critical of political institutions, but more so, conceptual art acted as a means of resisting the institutionally defined meaning of art and the commodification of art objects in the art market. Art historian Albert Alberro argues that ultimately, institutional critique was a means of "confronting the institution of art with the claim that it was not sufficiently committed to, let alone realizing or fulfilling, the pursuit of publicness that had brought it into being."¹⁰²

Charney saw megastructural architecture as a means of shifting the focus in architectural culture away from style, towards the needs of the public it was meant to serve. In this section, I argue that Charney employed megastructure design in his Expo 70 project as a form of "anti-architecture" that could act as an institutional critique, directed at both the Canadian government and the institution of modern architecture. To illustrate this argument, I compare Charney's project to the others in the Expo 70 pavilion design competition. I will also look at another of Charney's projects – one that he submitted to another design competition organized by the federal government, just two years later.

There were many common themes and features among the top-listed proposals to the competition for the Canadian pavilion at Expo 70. Many of the proposed designs included bold sculptural components. For example, the pavilion proposed by finalists Marcel Gagné & Leonard Warshaw comprised a cluster of aluminum pipes, positioned vertically, cut at various heights and angles, and arranged in a honeycomb pattern, that would filter natural light into the exhibition spaces underneath.¹⁰³ A design by Affleck, Desbarats, Dimakpoulos, Lebensold & Sise featured a series of aluminum masts in three square groups that stood tall above layered,

¹⁰¹ Lucy Lippard, *Six Years: The Dematerialization of the Art Object from 1966-1972* (Berkeley: University of California Press, 1997), vii.

¹⁰² Alexander Alberro, "Institutions, Critique, and Institutional Critique," *Institutional Critique: An Anthology of Artists' Writings*, ed. Alexander Alberro and Blake Stimson (Cambridge, Mass.: The MIT Press, 2009), 3.

¹⁰³ Canadian Department of Trade and Commerce, *Jury Report*, n/p.

underground terraces where the exhibitions would be housed.¹⁰⁴ The volume created by these sculptural elements were strictly for visual effect – they were not used to create an inhabitable exhibition space. Similar sculptural elements are found in other entries including the large angular canopies in the designs by David McLaren Kehoe or an igloo-inspired pavilion with spherical, cavernous spaces by David A. de Belle.¹⁰⁵ On the other hand, many of the proposed designs were Brutalist concrete structures akin to present-day civic buildings and suburban shopping malls. This approach is best exemplified in the design by finalist John Gallop, whose design depicts an arrangement of blocky building units with slanted roofs.¹⁰⁶

While many of the pavilion proposals were beautiful and inventive, they often conceptualized architecture as a formal design image, rather than a system of human processes.¹⁰⁷ Many of the proposals were also based upon tropes of Canadian nationalism: enormous Canadian flags, the use of raw lumber, and the blatant and unchecked appropriation of Indigenous iconography – modern reconfigurations of teepee-type structures and totem poles as entrance signage.¹⁰⁸ Perhaps the most recycled trope of Canadian identity is the notion of Canada as a vast, natural, unpopulated landscape.¹⁰⁹ This idea is clearly reiterated in Erickson and Massey’s winning design. Their submission proposed a pavilion of “a mountainous scale” with four individual structures arranged in a pyramid shape around a central garden.¹¹⁰ The garden area is sheltered by a canopy of five massive multi-coloured, umbrella-like “spinners.” The pavilion’s exterior was designed with slanted, mirror-sheathed walls, that, in the architect’s own words, would serve to “[reduce] the mass of the pyramid to a reflection of the sky. This illusion evoking sky or hill, solid or void, could be the highlights of the arctic ice, the mass of mountains, vast prairie sky or the glitter of Canadian waters.”¹¹¹

Conversely, Charney’s design for the Expo 70 pavilion is void of any nationalistic spirit. The

¹⁰⁴ Ibid.

¹⁰⁵ Ibid.

¹⁰⁶ Ibid.

¹⁰⁷ One exception may be the proposal submitted by Roger d’Astous, whose project carries some megastructural qualities similar to Charney’s with its cable-suspended roof and exposed steel structural masts. See, *ibid.*

¹⁰⁸ For examples, see submissions by Craig and Kohler, Alexander O. H. Munzel, David K. Linden, Charles T. Paine in Canadian Department of Trade and Commerce, *Jury Report*, n/p.

¹⁰⁹ On the use of such symbols of national identity in Canadian architecture, see Elsa Lam, “Wilderness Nation: The Myth of Nature in Canadian Architecture,” *Journal of the Society for the Study of Architecture in Canada* 33, no. 2 (2008): 11-20.

¹¹⁰ Erickson and Massey, as quoted in *Jury Report*, n/p.

¹¹¹ Ibid.

images of Charney's designs do not show any Canadian flags; no clear symbolic references to mountains or rivers. In fact, Charney states explicitly that the design belongs to "a non-architecture future," and that the materials he uses in this design hold "no intrinsic significance beyond utility."¹¹² For Charney, the pavilion is meant to facilitate the exhibition, and nothing more. As a stripped-down structure, it simply acts as "a scaffolding for the participation of the people in the light, movement and sound of an exhibit."¹¹³

Charney's vision for the Canadian pavilion was distinctly urban. He establishes the setting of the building, not only within the Expo grounds, but also within the culture of the city of Osaka, a city rebuilt after World War II, which was described as "an industrialized, urbanized region [...] recognized to be a megalopolis – the emerging form of urban settlement in our contemporary world."¹¹⁴ Charney saw technology as the common language between two cultures, thus he aimed to translate "Canadianness" into something modern, desirable and constantly evolving.

The most direct reference to Canadian identity included in his proposal was to "the 11 masts [that] carry the heraldry of the 11 territories of Canada."¹¹⁵ However in 1967, Canada had ten provinces and two territories – making 12. It is possible that I am misinterpreting his definition of "territories" or that this was a sincere miscalculation on his part, but I would argue that the missing territory is Quebec, and this subtle omission is indicative of Charney's political affiliations, as discussed in section three. In researching this project, I have often questioned whether Charney's proposal was submitted in earnest or as a subversive poke at the Canadian government.¹¹⁶ By reducing the Expo 70 pavilion to a scant frame, Charney not only rejects monumentality formally, but also symbolically: he resists aggrandizing the political body the pavilion represents.

¹¹² Charney, "Self-Erecting Exhibition System," *On Architecture*, 194.

¹¹³ *Ibid.*, 195.

¹¹⁴ "Competitor: Melvin Charney: Pavillon du gouvernement canadien pour l'Exposition universelle d'Osaka 1970 / Canadian Government Pavilion Japan World Exposition Osaka 1970," Canadian Competitions Catalogue, Accessed March 4, 2017.

http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1

¹¹⁵ *Ibid.*

¹¹⁶ There is another interesting comparison that could be made here: Charney's design for the Canadian Tribute to Human Rights completed in Ottawa in 1990. Unlike the Expo 70 pavilion and Memo-Series, this project was built: currently standing in front of Ottawa City Hall, close to Parliament Hill. The massive structure, built of concrete and stone archways, seems to contradict Charney's opposition to monumental architecture, however, could also be read as another subtle jab at the omnipotence of government. As one astute blogger points out: "The monument is effective in an unintentional way... its brutal, dehumanizing and totalitarian appearance is [...] a visual metaphor for the greatest worldwide threat to human rights – authoritarian governments." Accessed June 27 2015
<http://diogenesborealis.blogspot.ca/2010/07/hideous-public-art-ottawa-edition.html>

Had Charney's Expo 70 design been built, the enormous and materially-rich building would not have been a form of "dematerialized" architecture per se, however, the reductive and mechanical simplicity of the proposed pavilion suggests a shift in the conceptual direction: it used simple, cheap, readily available industrial materials as a means of creating a structure that could be easily dismantled and repurposed. Charney furthers this trajectory in his response to another competition two years after his Expo 70 project – one to design a memorial museum to the Canadian Air Force in 1969. For this competition, he submitted a project called *Memo-series*, proposing the further dematerialization of architecture into "artifacts" and so-called "memos."¹¹⁷ Charney wrote about this project in an essay titled "On the Liberation of Architecture," published in *Artforum* in 1971. In this text, he expresses his frustration with the competition's limited definition of architectural form. He charges the current architectural culture with "refusing to acknowledge that architecture is reflected in the meaning of a 'building' as found in the use we make of our artefacts."¹¹⁸ To challenge this definition of architecture, Charney proposed a network of "memos" rather than a traditional built structure. These memos – also referred to as "micro-memorials" – take on many forms: from flight route maps, showing how the memorials could make use of existing flight networks to be connected across the country, to videotapes on the history of military aviation that would be distributed rather than screened in a fixed space. He also proposed a series of installations that would be situated across the country. These memos propose highly controversial content, which blur the lines between simulation and real wartime experience. In the description for "Memo 4: On the Simulated Experience as Actual Experience," Charney explains the exhibit as such:

The experience of Lindbergh's flight is recreated by being closed in behind a vibrating engine for 33 ½ hours, looking out at a passing ocean through a periscope. The experience of bombing in a Junker over Guernica, in a B-29 over Hiroshima, or in a B-52 over Laos, includes *close up zoom views of the victims, sounds of their cries, and a free napalm burn on the palm as a souvenir of the "Souvenir" for each visitor.*¹¹⁹

Similarly, in his description for "Memo 9: On a Topology of In-place History" Charney proposes a memo to show the "morphology of destruction" – a type of architecture "in reverse" created by the ruins of war left behind after Air Force attacks.¹²⁰ This memo of ruins would include "a list of

¹¹⁷ Martin also refers to *Memo-Series* as "an almost totally dematerialized architecture" in "Other Monuments" *On Architecture*, 224. This project was later exhibited at the Harvard Graduate School of Design in 1977 and at the Musée d'art contemporain de Montréal in 1979.

¹¹⁸ Charney, "On the Liberation of Architecture: *Memo-Series* on an Air Force Memorial," *On Architecture*, 236.

¹¹⁹ My emphasis. Charney, "On the Liberation of Architecture," *On Architecture*, 241.

¹²⁰ *Ibid.*, 240.

casualties, personal histories, families and friends, as well as the sounds of destruction, and *remains of the bodies left in place in order to personalize the experience.*"¹²¹

Rather than assume Charney is truly proposing the exhibition of corpses or the burning of visitors with napalm, I would argue that it is far more likely that he is using this proposal – like his proposal for the Expo 70 pavilion – to criticize the Canadian government and the current state of modern architecture by drawing parallels between what he sees as two equally oppressive institutions. In the case of *Memo-series*, Charney is challenging the Canadian government's glorification of war.¹²² With the Expo 70 pavilion, he is renouncing Canadian nationalism and emphasizing the primary role of architecture as a means of facilitating an engaged, embodied experience. In both of these projects, Charney prioritizes experience and process over design and seeks to use participation as a form of construction. In doing so, he elevates the role of the participant above the role of the architect and redefines architecture as nothing more than a network of human interactions, symbolizing freedom from architectural and political oppression.

¹²¹ My emphasis. Ibid.

¹²² It is possible that Charney's *Memo-Series* was influenced by Greg Curnoe's *Homage to the R-34* that was installed at Montreal's airport in Dorval for a brief period in 1968 before being dismantled for its controversial content. The mural included the depiction of figures in an airship, one being dismembered by a plane's propeller. It also included text referring to the Vietnam War and was considered anti-American. For more on this project, see Judith Rodger, *Greg Curnoe: Life & Work* (Toronto: Art Canada Institute/Institut de l'art canadien, 2016).

Conclusion

Moving into the 1970s, Charney followed suit with postmodern critics and gave up on the liberatory potential of technology in architecture. Once the “plastic inevitable” was revealed to be less so, hypothesizing about how technology could change the future of architecture seemed both futile and redundant. Instead, Charney published ground-breaking essays like “Towards a Definition of Architecture in Quebec” that championed vernacular architecture from all over the province. He also became involved in politics in a more tangible way by working with the Canadian Mortgage and Housing Corporation to produce nationwide reports on the state of low-income housing.¹²³ Furthermore, the exhibition *Montreal Plus ou Moins*, held in 1972 at the Montreal Museum of Fine Arts, allowed Charney to put forth an institutional critique of the role of museums and to criticize various social issues going on in Montreal. As Charney became more overtly political, architecture continued to dematerialize in his work. With projects like *Un dictionnaire* (1973), Charney moved away from the built form and began a lifelong study of the architectural *image* and its representation and meaning in the public sphere.¹²⁴

Interestingly, some of the themes of Charney’s megastructure days crop up again in his infamous exhibition, *Corridart*. In 1976 he was commissioned to curate part of the cultural programming for the Summer Olympics in Montreal. The exhibition, comprised of a series of installations positioned along nearly six kilometres of Sherbrooke Street in downtown Montreal, was critical of how city administration was re-shaping the urban environment. In response to the antagonistic nature of the exhibition, the city destroyed it, dismantling and discarding many of the installations in one night, just a few days before the Olympics began. Charney’s own installation was a constructed architectural facade mirroring the building next to it, situated in an open site where a building had been previously torn down, using scaffolding as a basic structure. Scaffolding was the common design thread throughout the exhibition used to display installations and hang signage. Architecture as “scaffolding” – a simple construction of prefabricated industrial materials – used to recreate vernacular architecture, as an underhanded critique of government intervention is, I would argue, an approach he originally exercised in his design for the Canadian pavilion at Expo 70.

¹²³ See Central Mortgage and Housing Corporation, *The Adequacy and Production of Low-Income Housing: A Report Prepared by Melvin Charney, in Collaboration with Serge Carreau and Colin Davidson for the Task Force on Low-Income Housing* (Ottawa: s.n., 1971).

¹²⁴ For more on *Un dictionnaire* and other projects by Charney about the architectural image, see Charney, “Other Monuments: Four Works, 1970-1976,” *On Architecture*, 291-304.

That same year, Reyner Banham published *Megastructure: Urban Futures of the Recent Past*, in which he essentially puts the nail in the coffin on megastructure ideology. Although they were now “dinosaurs of the modern movement,” Banham argued that megastructures had “enjoyed [a period] of dominance because [they] offered to make sense of an architecturally incomprehensible condition in the world’s cities, to resolve the conflicts between design and spontaneity, the large and the small, the permanent and the transient.”¹²⁵ In this thesis, I have demonstrated how Melvin Charney’s conception of megastructure, as exemplified in his design for Expo 70, took on different identities: a response to techno-utopianism, a lesson learned from industrial systems, a form of neo-vernacular architecture, a political tool, and a means of institutional critique. For Charney, megastructural forms allowed not only for a flexible space, but a flexible ideology that could reconcile the disparate complexities of the political and architectural cultures of sixties Montreal.

¹²⁵ Banham, *Megastructure*, 10.

Figures

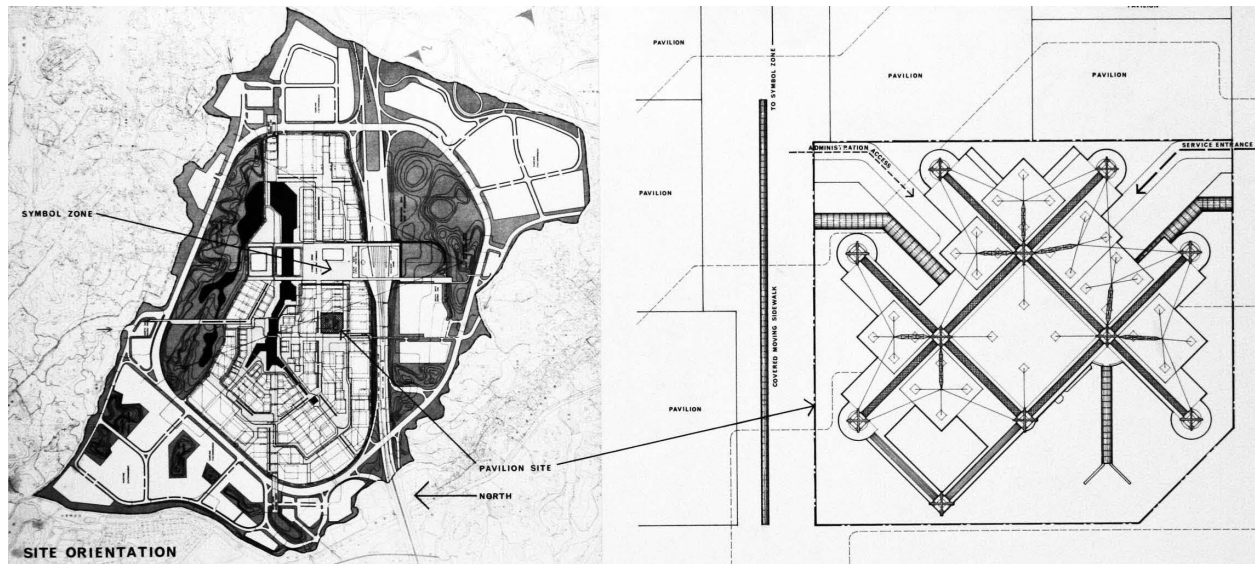


Figure 1. Melvin Charney, *Plan, Site Orientation – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1

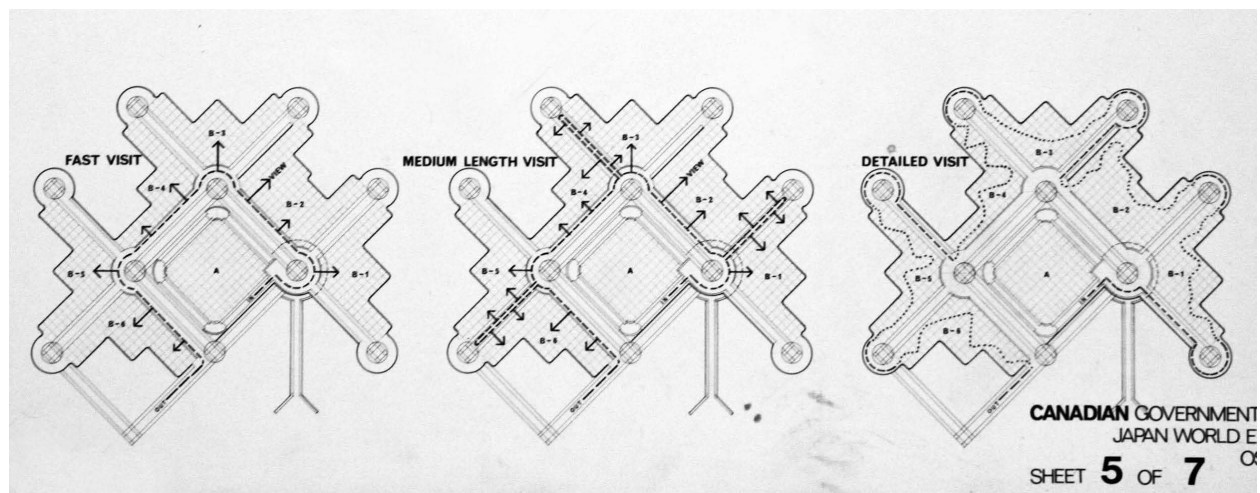


Figure 2. Melvin Charney, *Plan, Exhibition Systems – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1

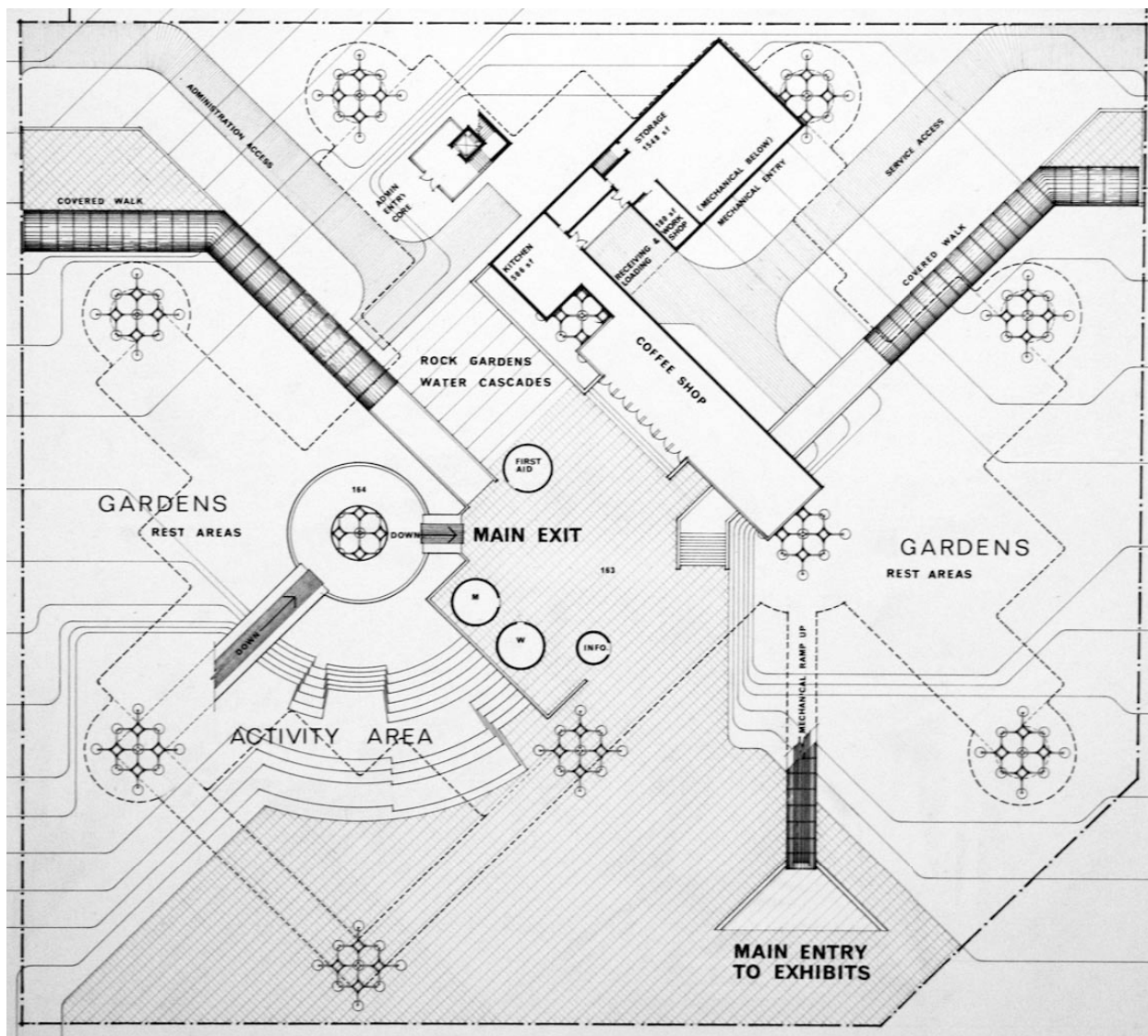


Figure 3. Melvin Charney, *Ground Level – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1

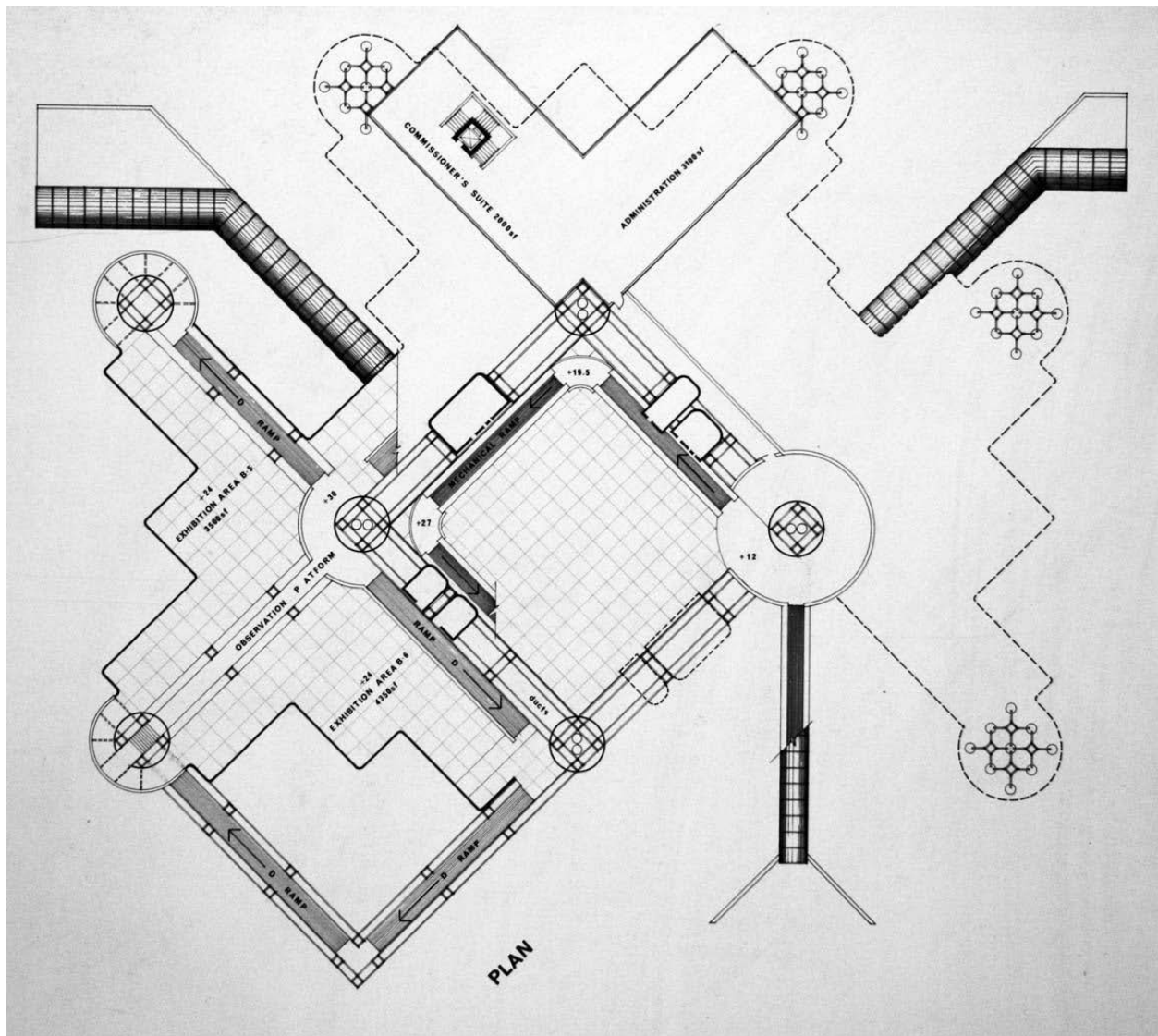


Figure 4. Melvin Charney, *Lower Level – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1

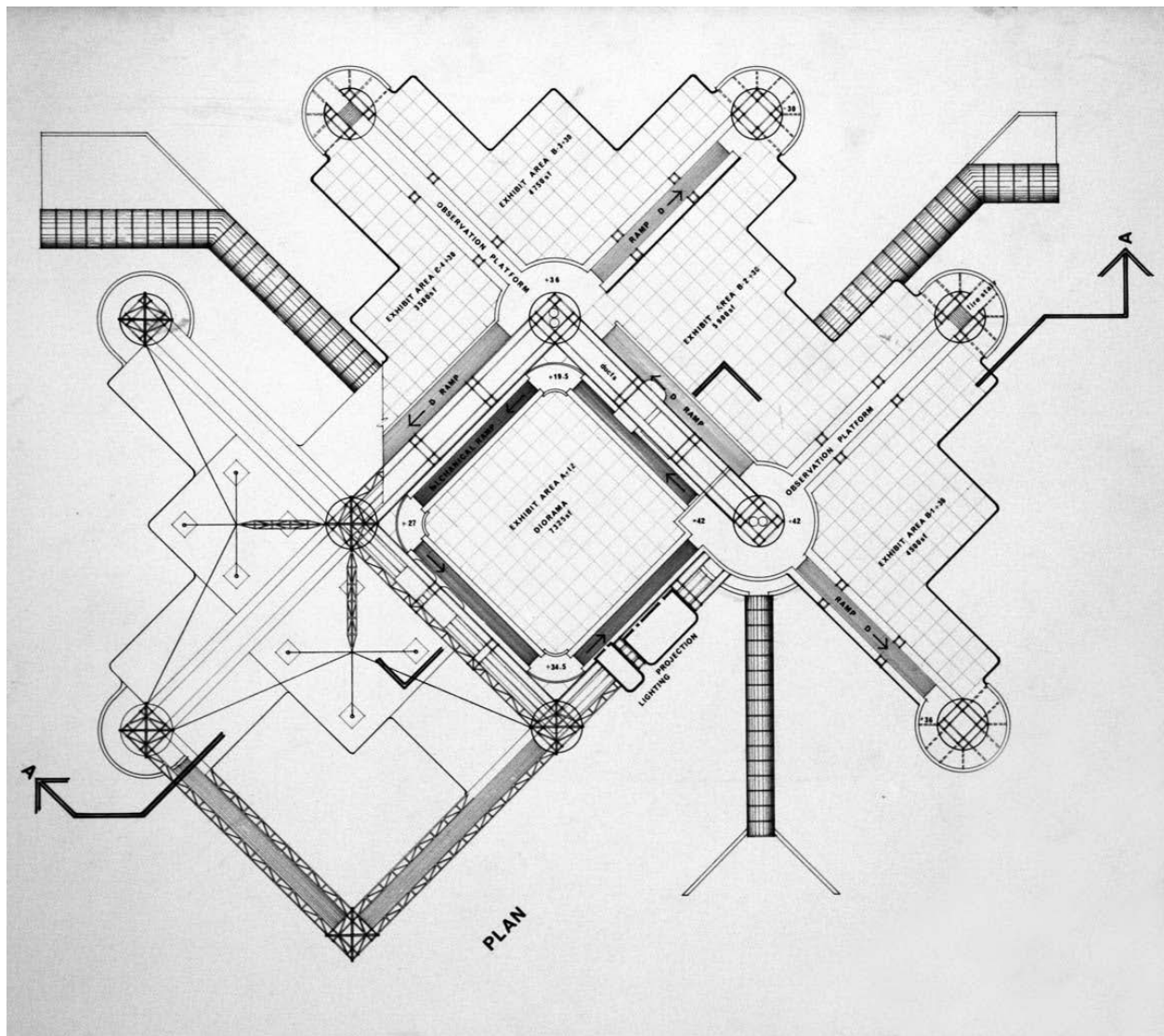


Figure 5. Melvin Charney, *Upper Level – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1

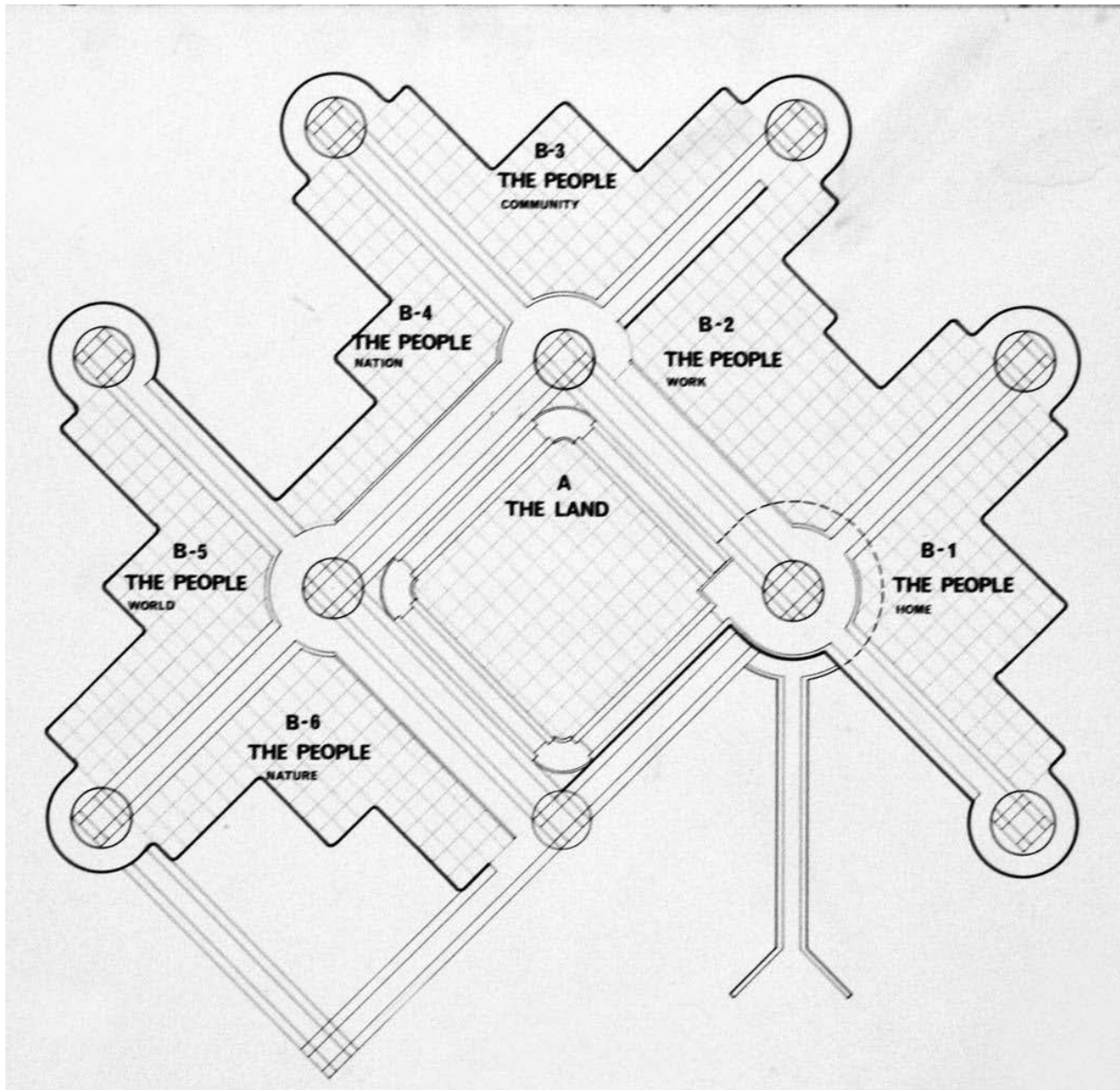


Figure 6. Melvin Charney, *Plan, Exhibition Organization – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Exhibition Systems. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1

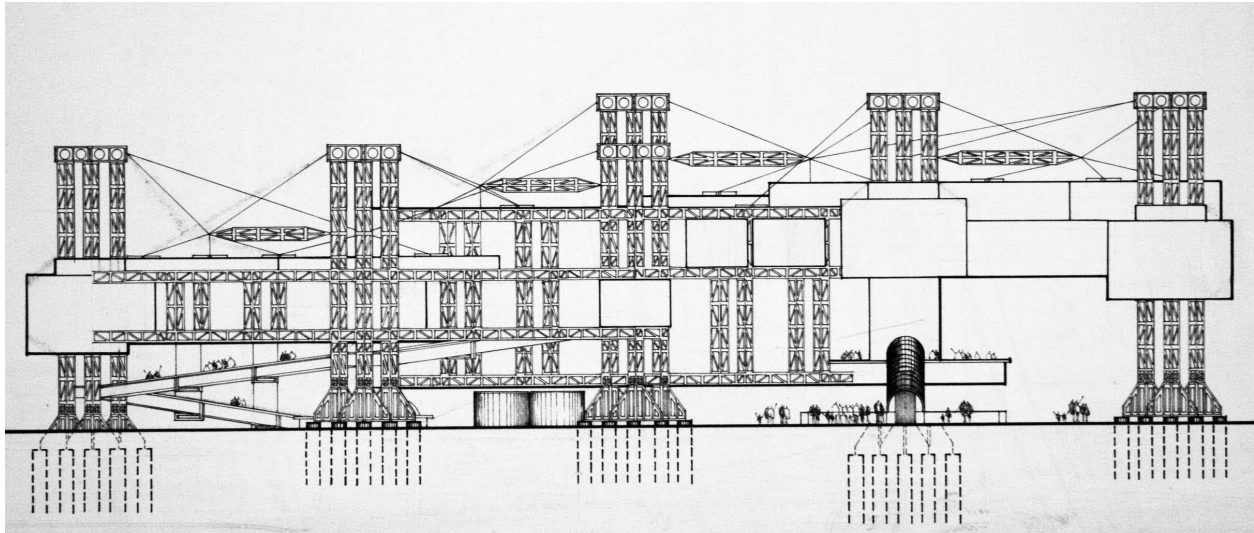


Figure 7. Melvin Charney, *Elevation, Entrance – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1

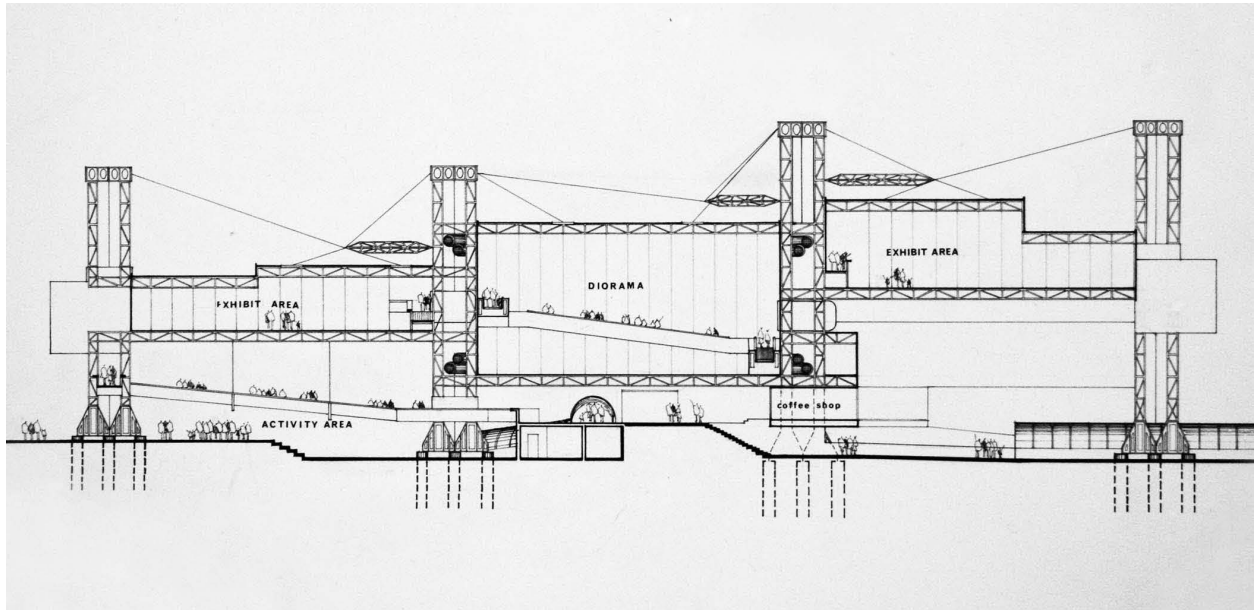


Figure 8. Melvin Charney, *Section AA – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1

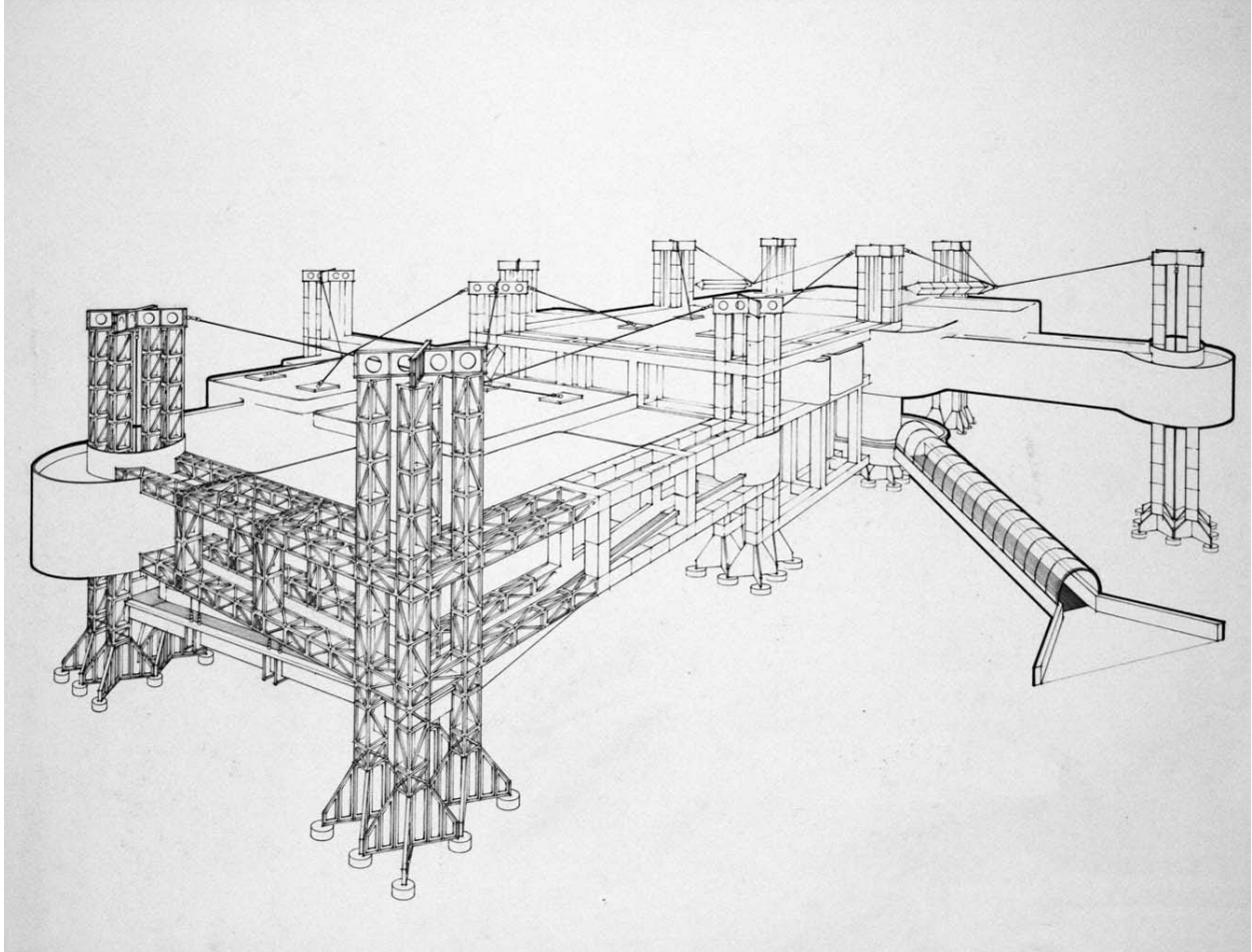


Figure 9. Melvin Charney, *Perspective, Entrance – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1

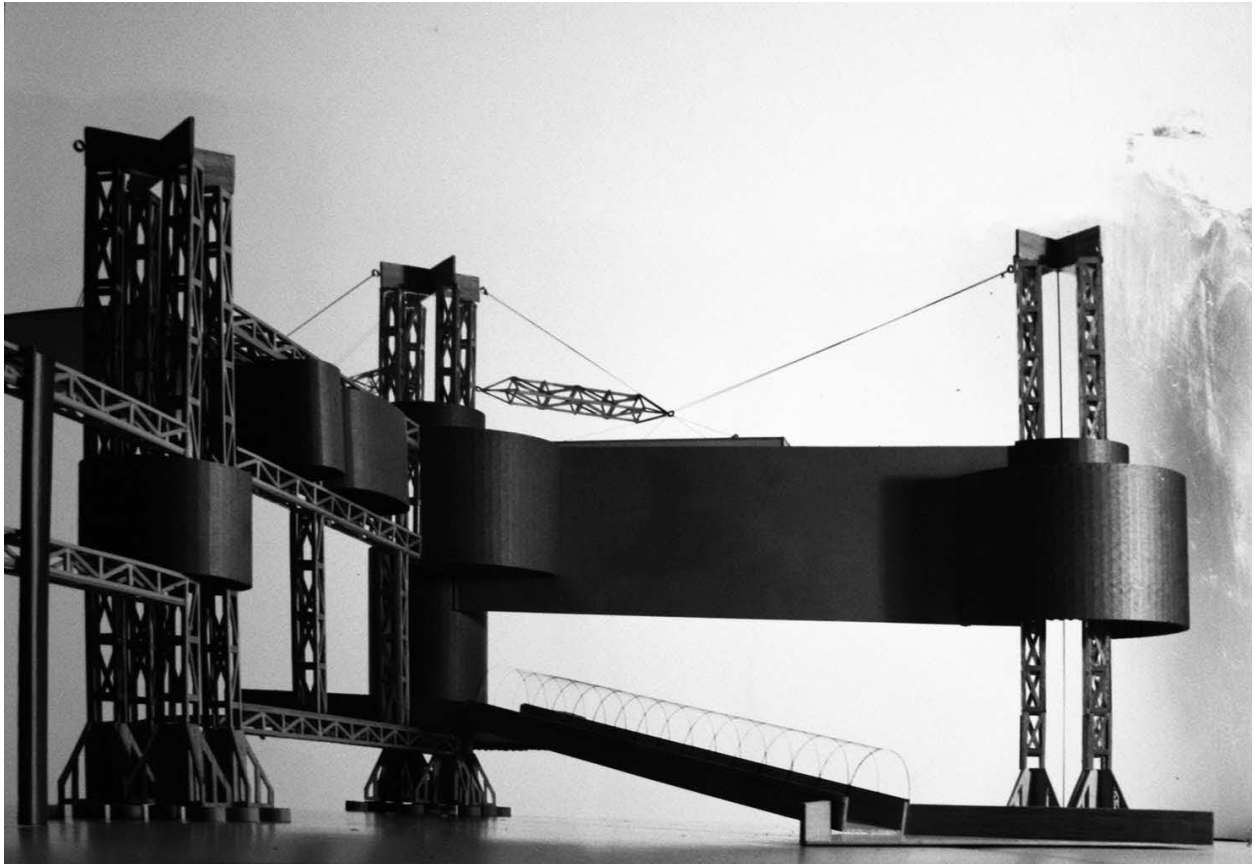


Figure 10. Melvin Charney, *Perspective, Model – Entry for the Canadian Government Pavilion*, 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue. http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2240&etape=1



Figure 11. Construction of Bonaventure Place and Château Champlain. Montreal, Quebec. July 21, 1965. Photographer: Henri Rémillard. B & W negative. Institutional Affairs Fonds (VM94) VM94/A220-5. Rights: City of Montreal. Document management and archives. Source: https://www.collectionscanada.gc.ca/expo/0533020601_e.html



Figure 12. Affleck, Desbarats, Dimakpoulos, Lebensold & Sise, *Man the Producer*, Pavilion at Expo 67. Montreal, Quebec. 1967. Colour photo. Collection of Library and Archives Canada (1970-019). Copyright of Library and Archives Canada.
Source: https://www.collectionscanada.gc.ca/expo/0533020209_e.html

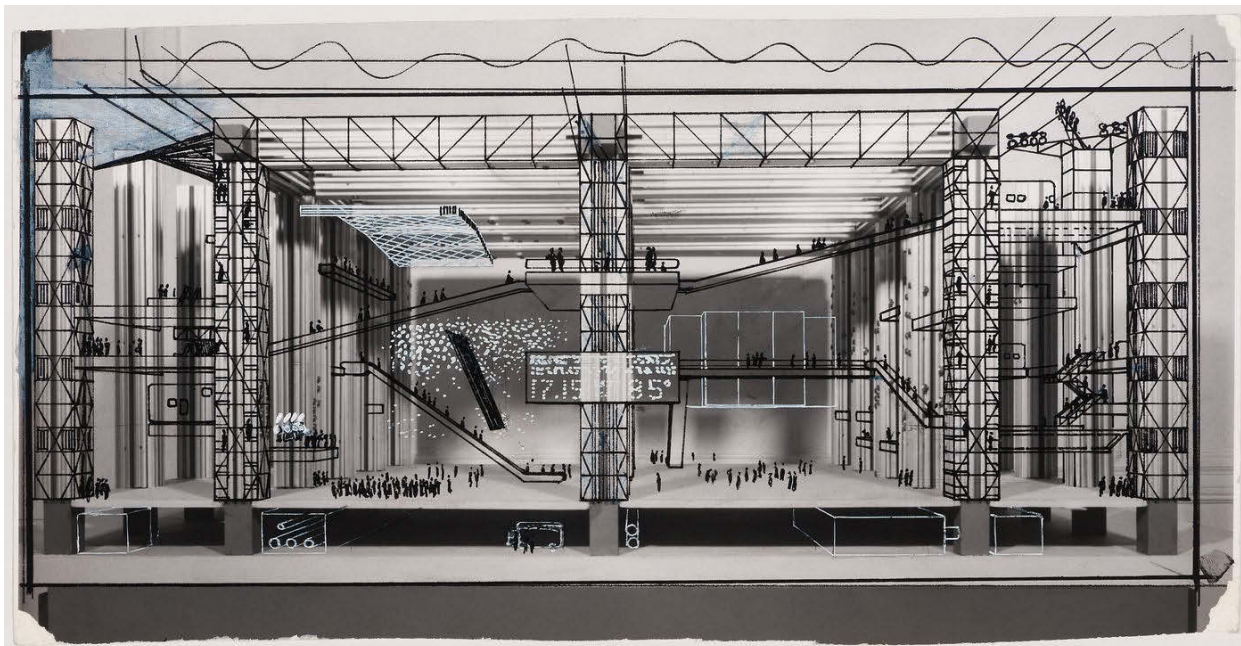


Figure 13. Cedric Price, Fun Palace, Interior Perspective, 1964. Cedric Price fonds DR1995:0188:518. Collection of the Canadian Centre for Architecture, Montréal. Copyright of the CCA.



Figure 14. Melvin Charney, Grain Elevators, Port of Montreal. Collection of the artist. Source: Louis Martin, ed., *On Architecture: Melvin Charney: A Critical Anthology* (Montreal/Kingston: McGill-Queen's University Press, 2013), 170.



Figure 15. Melvin Charney, view of the principal facade of Marché Bonsecours with grain elevator no. 2 (now demolished) in the background, Montreal, Quebec, 1969. 23.5 x 34.8 cm. Gelatin silver print. Collection of the Canadian Centre for Architecture (PH1987:0622).



Figure 16. Bernard Rudofsky, Dogon architecture, *Architecture without Architects*, 1964.
Source: Bernard Rudofsky, *Architecture Without Architects: An Introduction to Non-Pedigreed Architecture*, (New York: Museum of Modern Art; distributed by Doubleday Garden City, 1964): n/p.



Figure 17. Bernard Rudofsky, Italian hill town architecture – Anticoli Corrado in the Sabine Mountains near Rome, *Architecture without Architects*, 1964. Source: Bernard Rudofsky, *Architecture Without Architects: An Introduction to Non-Pedigreed Architecture*, (New York: Museum of Modern Art; distributed by Doubleday Garden City, 1964): n/p.



Figure 18. Dismantled Housing, Montreal, ca. 1975. Photograph: Melvin Charney. Collection of the artist. Source: Louis Martin, ed., *On Architecture: Melvin Charney: A Critical Anthology* (Montreal/Kingston: McGill-Queen's University Press, 2013), 282.



Figure 19. Arthur Erickson and Geoffrey Massey, Canadian Government Pavilion, Expo 70, Osaka Japan. Collection of the Erickson Estate. Source: <http://www.arthurerickson.com/cultural-buildings/expo-70-canadian-pavilion-/1/caption>

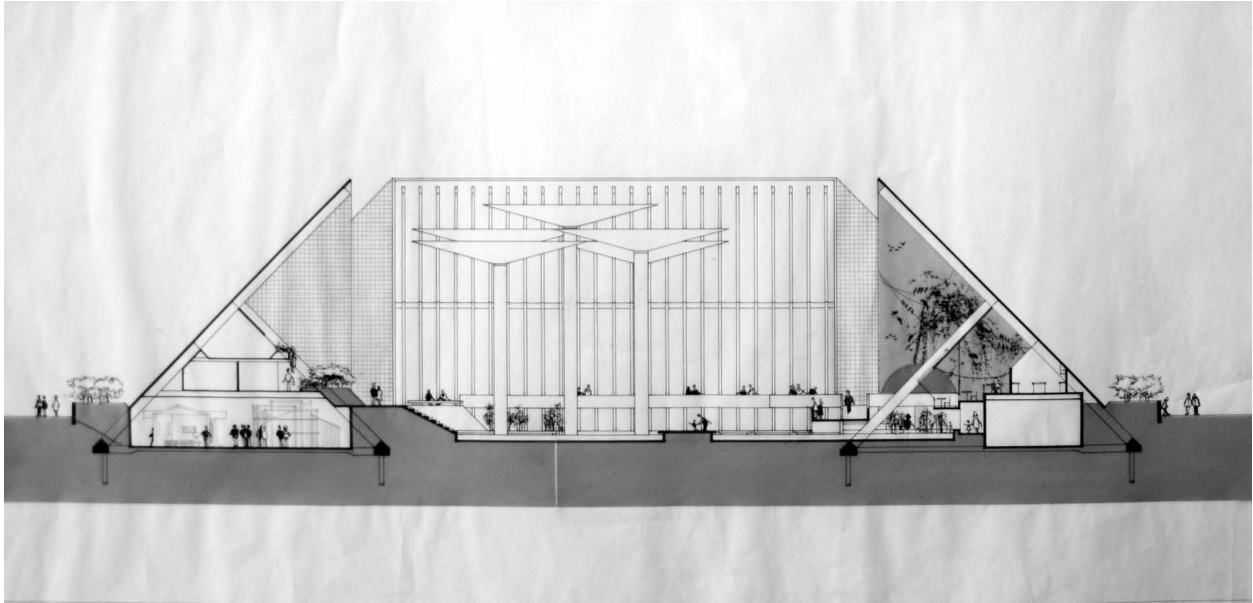


Figure 20. Arthur Erickson and Geoffrey Massey, Section, Stage Two – Entry for the Canadian Government Pavilion 1970 World Exposition in Osaka, Japan, 1967. Source: Canadian Competitions Catalogue.
http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pld=2228&etape=2

Bibliography

Abel, Chris. "The Extended Self: Tacit Knowing and Place-Identity." *Rethinking Aesthetics: The Role of the Body in Design*, ed. Ritu Bhatt. New York/London: Routledge/Taylor & Francis, 2013.

Alberro, Alexander and Blake Stimson, eds. *Institutional Critique: An Anthology of Artists' Writings*. Cambridge, Mass.: The MIT Press, 2009.

Baird, George. "From Liberation Technology to Critical Figuration." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 9-16. Montreal/Kingston: McGill-Queen's University Press, 2013.

Banham, Reyner. "A Clip-on Architecture." *Design Quarterly* 63 (1965): 2–30.

—. "Convenient Benches and Handy Hooks: Functional Considerations in the Criticism of the Art of Architecture." *The History, Theory and Criticism of Architecture: Papers from the 1964 AIA-ACSA Teacher Seminar*, ed. Marcus Whiffen, 91-105. Cambridge, Mass.: The MIT Press, 1970.

—. *Megastructure: Urban Futures of the Recent Past*. London: Oxford University Press, 1976.

—. *Theory and Design in the First Machine Age*. 2nd ed. Cambridge, Mass.: The MIT Press, 1980.

Bélanger, Yves, Robert Comeau et Céline Métivier, eds. *La Révolution Tranquille: 40 ans plus tard: Un bilan*. Montréal: VLB, 2000.

Bishop, Claire. *Artificial Hells: Participatory Art and the Politics of Spectatorship*. London: Verso, 2012.

Burns, James T. "A Gallant Try: Canadian National Design Competition for 1970." *Progressive Architecture* 48, no.8 (August 1967): 164–165.

Canadian Competitions Catalogue. "Competitor: Melvin Charney: Pavillon du gouvernement canadien pour l'Exposition universelle d'Osaka 1970/Canadian Government Pavilion Japan World Exposition Osaka 1970." Accessed March 4, 2017.

http://www.ccc.umontreal.ca/fiche_projet.php?lang=en&pId=2240&etape=1

Canadian Department of Trade and Commerce. *Jury report: architectural competition for the Canadian Government pavilion at the Japan World Exposition, Osaka, 1970*. Published by R. Duchamel, Queen's Printer and Controller of Stationery. Ottawa, 1967.

"Canadian Reject" *Architectural Design* 37, no. 7 (July 1967): 441.

Charney, Melvin. "Architecture without Architects: The Trulli of Apulia." *On Architecture: Melvin Charney: a critical anthology*, edited by Louis Martin, 108–115. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published in abridged versions as "Trulli of Southern Italy," *Landscape* 15, no. 1 (1965): 32–3 and "Architectures sans architectes: les trulli de l'Apulie," *Vie des art* 38 (1965): 54–7.

—. "Concrete: A Material, a System, and an Environment." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 188–193. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published under the same title in *Architecture Canada* 45, no. 6 (June 1968): 41–4.

—. "Environmental Chemistry – Plastics in Architecture." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 133–136. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published under the same title in *Journal of Royal Architecture Institute of Canada* 43, no. 5 (May 1966): 105–7; translated and reprinted in *Architecture, Bâtiment, Construction* (June 1996): 39–43.

—. "Environmental Conjecture: In the Jungle of the Grand Prediction." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 152–160. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published in an abridged version as "For Design," *Landscape* 16, no. 3 (1967): 21–4, and later published in full in, *Planning for Diversity and Choice: Possible Futures and Their Relation to the Man-Made Environment*, ed. Stanford Anderson (Cambridge, Mass.: The MIT Press, 1969), 311–27.

—. "Experimental Strategies: Notes for Environmental Design." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 203–216. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published under the same title in *Perspecta 12: The Yale Architectural Journal* (March 1969): 21–9.

—. "An Environment for Education." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 161–168. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published under the same title in *The Canadian Architect* 12, no. 3 (March 1967): 30–3.

—. "Grain Elevators Revisited." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 169–178. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published under the same title in *Architectural Design* 37, no. 7 (July 1967): 328–34.

—. "Housing in Canada: A Dead-End Choice." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 265–275. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published under the same title in *Architectural Design* (April 1976): 201–6.

—. Interview with Jim Donaldson. Montreal, June 1999. Accessed 25 January 2017. <https://www.mcgill.ca/architecture/aluminterviews/charney>

- . “A Journal of Istanbul: Notes on Islamic Architecture.” *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 62–71. Montreal/Kingston: McGill-Queen’s University Press, 2013. Originally published under the same title in *Journal of the Royal Architecture Institute of Canada* 39, no. 6 (June 1962): 60–65.
- . “Learning Environments: Planning beyond Flexibility.” *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 179–187. Montreal/Kingston: McGill-Queen’s University Press, 2013. Originally published under the same title in *Architecture Canada* 45, no. 3 (March 1968): 39–45.
- . “Low-Income Housing into the 70s with Sewer Pipes and Subsidized Speculation.” *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 265–275. Montreal/Kingston: McGill-Queen’s University Press, 2013. Originally published under the same title in *Architectural Design* 43 (January 1972): 7–8.
- . “Montreal... More or Less.” *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 265–275. Montreal/Kingston: McGill-Queen’s University Press, 2013. Originally published as a curatorial statement for the exhibition catalogue *Montreal Plus or Minus* (Montreal: Montreal Museum of Fine Arts, 1972).
- . “Notes on a Guide for Travellers to the Plastic Inevitable.” *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 137–142. Montreal/Kingston: McGill-Queen’s University Press, 2013. Originally published as an editorial statement under the same title in *Parallel* (March 1967): 19–24.
- . “The Old Montreal No One Wants to Preserve.” *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 88–93. Montreal/Kingston: McGill-Queen’s University Press, 2013. Originally published under the same title in *The Montrealer* (December 1964): 20–24.
- . “On the Liberation of Architecture: *Memo Series* on an Air Force Memorial.” *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, ed. Louis Martin, 235–245. Montreal/Kingston: McGill-Queen’s University Press, 2013. Originally published under the same title in *Artforum* 9, no. 9 (May 1971): 34–7.
- . *Parables and Other Allegories: The Work of Melvin Charney 1975-1990*. Montréal: Canadian Centre for Architecture; Cambridge, Mass.: The MIT Press, 1991.
- . “Place Victoria, Montreal.” *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 116–119. Montreal/Kingston: McGill-Queen’s University Press, 2013. Originally published under the same title in *The Canadian Architect* 10, no. 7 (July 1965): 37–54.
- . “The Rear End of the Xerox or How I Learned to Love That Library.” *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, edited by Louis Martin, 120–122.

Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published under the same title in *Architectural Forum* 124, no. 4 (May 1966): 60–1.

—. "Recent Directions in Canadian Architecture." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 143–151. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published under the same title in *Cimaise* (Paris) (July 1967): 30–42.

—. "Review of *New Schools for New Towns*." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 217–220. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published under the same title in *Architectural Forum* (October 1969): 70–1.

—. "A Self-Erecting Exhibition System: Project for the Canadian Pavilion, Osaka, Expo 70." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 194–202. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published under the same title in *Architecture Canada* 46, no. 3 (March 1969): 34–6.

—. "Towards a Definition of Architecture in Quebec." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 246–264. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published in French as "Pour une définition de l'architecture au Québec" in *Architecture et urbanisme au Québec*, ed. Melvin Charney and Marcel Bélanger (Montréal: Les Presses de l'Université de Montréal, 1971), 9–12.

—. "Troglai: Rock-Cut Architecture." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 72–80. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published under the same title in *Landscape* 12, no. 3 (1963): 6–12.

—. "The World of Pop." *On Architecture: Melvin Charney: A Critical Anthology*, ed. Louis Martin, 81–87. Montreal/Kingston: McGill-Queen's University Press, 2013. Originally published in French (translated from original English manuscript by Jacques de Roussan) as "Le monde du pop art," *Vie des arts* 36 (1964): 30–38.

Chevrier, Jean-François. *Melvin Charney: Parcours de la réinvention*. Caen: FRAC Basse-Normandie, 1998.

Cho, Hyunjung. "Competing Futures: War Narratives in Postwar Japanese Architecture, 1945-1970." PhD dissertation, University of Southern California, 2011.

Contandriopoulos, Christina. "Introduction: Architecture and Utopia in the 21st Century." *Journal of Architectural Education* 67, no.1 (2013): 3–6.

Cousineau, Roland, City Planning Department. "The Postulates of the Plan." *Métropole: Les Cahiers d'Urbanisme* 3 (October 1965): 28.

Couture, Claude. *Le mythe de la modernisation du Québec. Des années 1930 à la Révolution tranquille*. Montréal: Éditions du Méridien, 1991.

Dahinden, Justus. *Urban Structures for the Future*. New York: Praeger, 1972.

Deyong, Sarah. "The Rise and Fall of the Megastructure: Memories of the Urban Future." *The Changing of the Avant-Garde: Visionary Architectural Drawings from the Howard Gilman Collection*, ed. Terence Riley, 23-35. New York: Museum of Modern Art, 2002.

Drouin, Martin. *Le combat du patrimoine à Montréal (1973-2003)*. Québec: Presses de l'Université du Québec, 2005.

Friedman, Yona. *Utopies réalisables*. Paris: Union Générale d'Édition, 1976.

Gascoigne, Neil and Tim Thornton. *Tacit Knowledge*. Durham, UK: Acumen, 2013.

Gauvreau, Michael. *The Catholic Origins of Quebec's Quiet Revolution, 1931-1970*. Montreal/Kingston: McGill-Queen's University Press, 2005.

Goldhagen, Sarah Williams and Réjean Legault, eds. *Anxious Modernisms: Experimentation in Postwar Architectural Culture*. Montreal: Canadian Centre for Architecture; Cambridge, Mass.: The MIT Press, 2000.

The International Future Research Conference and the Japan Society of Futurology, *Challenges from the Future: Proceedings of the International Future Research Conference*. Tokyo: Kodansha, 1970.

Lam, Elsa. "Wilderness Nation: The Myth of Nature in Canadian Architecture." *Journal of the Society for the Study of Architecture in Canada* 33, no.2 (2008): 11-20.

Le Corbusier, *Vers une architecture*. Paris: Crès, 1923.

Legault, Réjean. "Pour une définition de l'architecture: Melvin Charney et la modernité architecturale dans les années 1960." *Édition Trames* 15 (2004): 25-52.

Lobsinger, Mary Louise. "Cybernetic Theory and the Architecture of Performance: Cedric Price's Fun Palace." *Anxious Modernisms: Experimentation in Postwar Architectural Culture*, ed. Sarah Williams Goldhagen and Réjean Legault, 119-139. Montreal: Canadian Centre for Architecture; Cambridge, Mass.: The MIT Press, 2000.

Lortie, André. *The 60s: Montréal Thinks Big*. Vancouver: Douglas & McIntyre, 2004.

Lippard, Lucy R. and John Chandler. "The Dematerialization of Art." *Conceptual Art: A Critical Anthology*, edited by Alexander Alberro and Blake Stimson, 46-50. Cambridge, Mass.: The MIT Press, 2000.

Lippard, Lucy R. *Six Years: The Dematerialization of the Art Object from 1966-1972*. Berkeley: University of California Press, 1997.

Marcuse, Herbert. *One-Dimensional Man: Studies in the Ideology in Advanced Industrial Society*. Boston: Beacon Press, 1964.

Martin, Louis. "Building Myths, or How to Preserve the Social Content of Architecture." *Future Interior* 11, no.2 (Winter 2014): 65-75.

—, ed. *On Architecture: Melvin Charney: A Critical Anthology*. Montreal/Kingston: McGill-Queen's University Press, 2013.

Mathews, Stanley. "The Fun Palace as Virtual Architecture: Cedric Price and the Practices of Indeterminacy." *Journal of Architectural Education* 59 (2006): 39-48.

McLuhan, Marshall. *The Gutenberg Galaxy: The Making of Typographic Man*. Toronto: University of Toronto Press, 1962.

—, *Understanding Media*. New York: McGraw-Hill, 1964.

Mills, Sean. *The Empire Within: Postcolonial Thought and Political Activism in Sixties Montreal*. Montreal/Kingston: McGill-Queen's University Press, 2010.

Papademetriou, Peter C. "Competition Entry – Canadian Pavilion, Osaka Expo '70." *Perspecta—The Yale Architectural Journal* 12 (March 1969): 29.

Pezolet, Nicola. "Book Review – On Architecture: Melvin Charney, a Critical Anthology." *Future Anterior* 11, no.1 (Summer 2014): 99-105.

Polanyi, Michael. *The Tacit Dimension*. Garden City, NY: Anchor Books and Doubleday & Co. Inc., 1967.

Ragon, Michel. *Histoire mondiale de l'architecture et de l'urbanisme modernes, vol. 3: Prospective et futurologie*. Tournai: Castermann, 1971.

Riar, Inderbir Singh. "Montréal and the megastructure, ca 1967." *Expo 67: Not Just a Souvenir*, ed. Rhona Richman Kenneally and Johanne Sloan, 193-210. Toronto: University of Toronto Press, 2010.

—. “Expo 67, or the Architecture of Late Modernity.” PhD dissertation, Columbia University, 2014.

Rudofsky, Bernard. *Architecture Without Architects: An Introduction to Non-Pedigreed Architecture*. New York: Museum of Modern Art; distributed by Doubleday Garden City, 1964.

Richman Kenneally, Rhona and Johanne Sloan, eds. *Expo 67: Not Just a Souvenir*. Toronto: University of Toronto Press, 2010.

Scott, Felicity. “Bernard Rudofsky: Allegories of Nomadism and Dwelling.” *Anxious Modernisms: Experimentation in Postwar Architectural Culture*, ed. Sarah Williams Goldhagen and Réjean Legault, 215–237. Montreal: Canadian Centre for Architecture; Cambridge, Mass.: The MIT Press, 2000.

—. *Architecture or Techno-Utopia: Politics After Modernism*. Cambridge, Mass.: The MIT Press, 2007.

Taut, Bruno. *Modern Architecture*. London: The Studio, 1929.

Theall, Donald. “Expo as Total Environment.” *Reimagining Cinema: Film at Expo 67*, eds. Monika Gagnon and Janine Marchessault, 17-24. Montreal/Kingston: McGill-Queen’s University Press, 2014.

Vallières, Pierre. *Nègres blancs d’Amérique: Autobiographie précoce d’un “terroriste” québécois*. Ottawa: Les Éditions Parti Pris, 1974.

Van der Ley, Sabrina and Markus Richter, eds. *Megastructure Reloaded: Visionary Architecture and Urban Design of the Sixties Reflected by Contemporary Artists*. Ostfildern: Hatje Cantz, 2008.

Wendelken, Cherie. “Putting Metabolism Back in Place: The Making of a Radically Decontextualized Architecture in Japan.” *Anxious Modernisms: Experimentation in Postwar Architectural Culture*, ed. Sarah Williams Goldhagen and Réjean Legault, 279–299. Montreal: Canadian Centre for Architecture; Cambridge, Mass.: The MIT Press, 2000.

Zevi, Bruno. “Progetto canadese per Osaka '70” *L’Architettura* 13, no. 8 (December 1967): 526-528.