Makerspace to Maker City: A Magical Realist's Guide to Urban
Redevelopment

by

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ABSTRACT

Inevitably, all cities change. In Ottawa, the dominant development model has been responsible for the replacement of small buildings with much larger ones (notably the condominium tower) which homogenizes the more diverse and finer grained historic fabric of neighborhoods. In this process, continuity, memory, traditions, habits, familiarities, and indeed, the city that dwellers are able to creatively participate in and “make” their own, disappears. With a different approach to new development in old neighborhoods, the “maker city” can emerge. This thesis examines the literary tradition of magical realism and the recent maker movement as models to inform a new strategy for urban redevelopment, one that strives to preserve traces of the city’s incremental growth, while opening up a more versatile and participatory urban realm. Working from magical realism’s objective and precise study of existing conditions opens possibilities for a marvelous city of making.

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CHAPTER 1: URBAN REDEVELOPMENT IN OLD OTTAWA SOUTH

INTRODUCTION

This thesis investigates a different approach to urban change. Inevitably, all cities change as built fabric ages, and economic and demographic landscapes evolve. In general, the dominant development model has been one that follows a developer's logic that envisions maximum profit potentials based on land value. This is responsible for two defining events in contemporary urban change in cities like Ottawa: adjustments to the zoning bylaw (usually, permissions to build higher than the bylaw allows), and relatedly, the replacement of small buildings with much larger ones.

In recent years, Ottawa, like most Canadian cities, has been shaped by the arrival of the condominium tower. This profit-driven development form pushes city zoning and height limits in order maximize unit yields and related monetary profits. In many Ottawa neighborhoods such as in Westboro and the Glebe (with the controversial Lansdowne development), the urban fabric has been radically redefined by building replacements. The new homogenous building form, consisting of commercial space topped by multiple floors of condominium dwellings, often replaces an existing diverse and fine-grained built fabric. Large-scale developments alter the memory, traditions, and habits of urban dwellers by disrupting their ability to creatively modify and meaningfully inhabit the city. With a different approach to new development in mature neighborhoods, a "maker city" can emerge.

At the core of this thesis, the literary tradition of magical realism and the "maker movement" (a cultural movement which explores intersections between traditional craft and digital technologies) interact to form a "maker urbanism." "Maker urbanism" uses spaces of making as focal points in the regeneration of urban environments, and as elements that serve to expand and stitch together the existing city fabric. The proposed site for this re-imagining is Old Ottawa South, notably the portion along Bank Street (an important North-South Boundary in Ottawa) that extends between the Rideau Canal and the Rideau River and is bounded by two bridges. Old Ottawa South has a strong sense of identity, and a highly involved community of residents. Following the recent developments across the Bank Street bridge at Lansdowne Park, a number of commercial properties in Old Ottawa South have been sold off and are awaiting new development. Redevelopment is a certainty in Old Ottawa South, but it is also an opportunity to challenge the imposition of large-scale condominiums, and to discontinue the scale set

by Lansdowne Park.¹ Currently, the fabric in Old Ottawa South typically ranges from one to three storeys, with a few four and five storey buildings.² What if, instead of approaching the site as built fabric to be replaced, it is approached in terms of its opportunities? How can existing buildings, their adjacencies, proximities, gaps, and orientations, as well as sun paths, patterns of habitation, and character, be taken advantage of fully? How can development preserve traces of the city's incremental growth, and open up a more versatile and participatory urban realm?

¹ The movement to redevelop Lansdowne Park began in 2007. The project was a public-private partnership with the Ottawa Sports and Entertainment Group, and construction began in 2012 and is now complete. The redevelopment of this public land -- a fair and exhibition grounds since 1868 -- galvanized public debate and emotional public response in Ottawa. While the project preserved important heritage buildings (the Aberdeen Pavilion, of 1898 and the Horticulture Building of 1914), and the new "park" has many successful features, its big-box commercial realm fails to create a fine-grain and diverse pedestrian experience. The new park functions better for large sporting events than for everyday local life. See Matthew Pearson, "The New Lansdowne: Not a Crown Jewel but better than a Lump of Asphalt," *Ottawa Citizen*, January 15, 2016, accessed June 19, 2016.

² Commonwealth Historic Resources Management Limited, "Lansdowne Park Heritage Brief," (Ottawa: City of Ottawa, 2010), May 24, 2016, <http://ottawa.ca/cs/groups/content/@webottawa/documents/pdf/mdaw/mdu2/~edisp/cono51205.pdf>.

OLD OTTAWA SOUTH: THE NEIGHBOURHOOD

Bank Street is a unique street in Ottawa, stretching from the south shore of the Ottawa River, all the way to the city's southern limits. Bank Street is also Ottawa's major north-south axis, dividing the city's east and west sides. This defining street transects through all major boundaries between urban and suburban conditions within the city, from high-rise to suburb to village to agricultural land, and stretches for forty kilometers. The name of Bank Street originated from its physical starting point, which is the bank of the Ottawa River. In contrast with other roads in Ottawa, it was given a pragmatic name, and was part of the original city plan surveyed out in 1826.³ More casual and utilitarian in nature, the artery was more accepting of new buildings than the rest of the City and the more formal neighborhoods closer to Parliament Hill.⁴

Three kilometers south of the Ottawa River shore, Bank Street passes through the neighborhood of Old Ottawa South. Originally developed as the newest streetcar suburb of Ottawa after 1872, Old Ottawa South is now the only neighborhood in Ottawa where no high-rise condominium towers have been built.⁵ Many major landmarks of the area, such as the Mayfair Theatre, date from the early 1930s. Other historically significant buildings along this stretch of Bank Street include the Bank Street Bridge, Southminster United Church, Hopewell Avenue Public School, and Trinity Anglican Church. The neighborhood is still well maintained and used, despite its advancing age, and despite the growing number of empty buildings. Old Ottawa South is primarily a residential neighborhood composed of detached houses. Bank Street is the neighborhood's commercial artery, and is lined by restaurants and specialty boutiques, including antique or home decoration shops.⁶

The 1956 Fire Insurance maps of the neighborhood reveal how the uses of the neighborhood have changed over time: in the past, the neighborhood was composed largely of gasoline stations and auto garages, some light industrial functions, small shops, and various cleaning and repair service shops. The neighborhood uses have diversified in the last sixty years, and many of the auto garages and stations have been replaced; however, historic lot development patterns persist, including the small single-storey building with street-side or rear yard surface parking. Before considering strategies of

³ Ron Corbett, "Bank Street: Ottawa's Best Known Street," *Toronto Sun*, July 11, 2010, Accessed May 24, 2016, <http://www.torontosun.com/news/ottawa/2010/07/11/14676826.html>.

⁴ Ibid.

⁵ Peter Wells, *Your Essential Guide to Old Ottawa South* (Ottawa: Ottawa South Community Association, 1999).

⁶ David Bouse, "Neighbourhood History Essay," Old Ottawa South Community Association, Accessed May 24, 2016, <http://www.oldottawasouth.ca/oos/history-project#settlement>.

redevelopment, a precise inventory of all buildings present along this section of Bank Street is required. The buildings range from one to five storeys, the majority being two storey buildings. Lots on the site can be divided into five general types:

(Type 1) historically important stand-alone buildings or structures,

(Type 2) socially and architecturally successful buildings or blocks,

(Type 3) sound, but uninteresting, recent buildings with untapped potential or requiring updates,

(Type 4) absent buildings, including unused buildings or buildings in poor condition (which result in blocks with “missing teeth”) and

(Type 5) stand-alone buildings sitting on large, and otherwise unbuilt, lots.

Maker City proposes five new developments based on the above lot types (presented in Chapter 5) that are intended to act as prototypes for future developments. These prototypes embody the spirit of “maker culture,” and will house various new and existing programs, while acting as mediators between old and new fabric. As the neighbourhood develops over time, the “makers” and residents will further adapt these prototypes to other lots on the site. In the future, new prototypes will emerge as the neighbourhood continues to change. Maker city architecture is informed by magical realism, a literary and artistic genre which recognizes the multiplicity of human experience and portrays an expansive creative realm as part of daily life.

Figure 1: Map of Ottawa

Figure 2: Historic map of Old Ottawa South in 1956

Figure 3: Map of Old Ottawa South

Old Ottawa South Inventory:
1. Bank Street Bridge
2. Southminster United Church
3. Sunnyside Public Library
4. Thai Kitchen Restaurant + Boomerang Children's Clothing
5. Roy Barber Auto Services
6. Barley Mow Pub
7. The Mud Oven, Jabbary Salon, Panago Pizza, Wag Petshop, Black Squirrel Books, House of Targ
8. Mayfair Theatre
9. Chipwagon
10. Shoppers Drug Mart
11. Taylor's Wine Bar, Hair Republic Salon, Anne Belanger Massage Therapy, Garden of Light Gift Shop, Ken Dood's Gallery, Stella Luna Cafe, Wine Rack, The Cyclery
12. Dollar Store, Sunnyside Barber, Vietnamese Kitchen
13. Vacant former Ottawa Music School
14. Hopewell School
15. Vacant former video store/spa
16. 3 Little Monkeys Children's Store, Janine Adamyk Bridal, Clothes Secret Consignment, Life of Pie, Lambert Antiques, Starbucks
17. Scotia Bank
18. Vacant Former Bank, Giant Bicycles
19. Majestic Laundry
20. Quickie
21. Georgetown Pub, Alteriors, Ottawa Antique Market, Belmont Restaurant, Campagnale Homes, Fluid Salon
22. Global Pet Foods, Ten Thousand Villages Shop, Bridgehead Coffee
23. Flower Shop, Trillium Bakery, Atlantis Beauty Spa, Campagnale Homes, Curves, Bank Street Dentist
24. Patty's Pub
25. Family Auto Repair
26. Atlantica Jewellery, Malak Pastries, Driving School, Lazard Creditors, Sky Express Travel, Papa Pizza, Havana Cafe, Beauty Supply, Starz Salon, Planet of Sound Shop
27. Vacant, Delusions of Grandeur Furniture
28A. Trinity Anglican Church
28B. Trinity Church Annex
29. Subway
30. Yardley's Antiques
31. Hilary's Cleaners
32. Bond Decor
33. Cedar Market
34. Douvris Martial Arts
35. Tim Horton's
36. Dairy Queen
37. Jiffy Lube
38. Namaste Indian Restaurant
39. Billings Bridge
40. CA Paradis Cooking, Paddle board rental

N

Legend of Existing Fabric Types:

Type 1: Historically important stand-alone buildings or structures:
Small built and landscape interventions for connective purposes (to new and existing)

Type 2: Socially & Architecturally successful buildings or blocks
Small scale modifications allowing spillover or expansion

Type 3: Sound, but uninteresting, recent buildings with untapped potential or requiring updates
Large or small selective, creative demolitions and additions

Type 4: Blocks with "missing teeth" *
Demolish and replace with larger new built form, following a 4-storey main street typology

Type 5: Stand-alone buildings with large lots
Demolish & replace with green space & public makerspaces

Legend of New Fabric Types:

Public open space

New building footprints

Intervention site

*Note that there are no examples of outstanding buildings sitting on otherwise unbuilt blocks

The map illustrates the urban fabric of Old Ottawa South, bounded by the Ottawa River to the north and east, and the Rideau Canal to the west. Key streets shown include Colonel By Dr., Echo Dr., Aylmer Ave, Sunnyside Ave, Euclid Ave, Hopewell Ave, Belmont Ave, Glen Ave, Grove Ave, Ossington Ave, Cameron Ave, Chelsey St, and Riverdale Ave. Buildings are color-coded according to their fabric type: Type 1 (green), Type 2 (brown), Type 3 (orange), Type 4 (red), and Type 5 (pink). New fabric types are shown in light green (public open space) and grey (new building footprints). Intervention sites are marked with dashed circles. Specific intervention sites are labeled on the right: Maker Park (Figure 15), Maker Micro-Emporium at the Mayfair Theatre (Figure 11), Makerspace Hub (Figure 14), Maker Dwelling (Figure 13), and Maker Haven at the Trinity Anglican Church (Figure 12). The map also shows the locations of various landmarks and businesses listed in the inventory, such as the Sunnyside Public Library, Mayfair Theatre, and various restaurants and shops.

Figure 4.1: Old Ottawa South neighborhood classifications

Site Type & Intervention	Characteristics	Examples									
<p>Existing lot type 1: Historically important stand-alone buildings or structures</p> <p>Proposal: Small built and landscape interventions for connective purposes (to new and existing)</p>	<ul style="list-style-type: none">- Buildings or structures which serve a public or institutional function- Have architecturally unique or important features.- May have Heritage designation by the City of Ottawa	1. Bank Street Bridge: built in 1912, restored in 1993.		2. Southminster United Church: built in 1932		3. Sunnyside Public Library: Built 1951, renovated 2010		8. Mayfair Theatre: Built 1932
<p>Existing lot type 2: Socially & Architecturally successful buildings or blocks</p> <p>Proposal: Small scale modifications allowing spillover or expansion</p>	<ul style="list-style-type: none">- Buildings or blocks which have a fine-grain and diverse appearance- Contain socially successful businesses which provide a unique service to the community- Includes many of the newer structures on the site, but also some older structures which have been well preserved.	10. Shoppers Drug Mart		11. Taylor's Wine Bar, Hair Republic Salon, Anne Belanger Massage Therapy, Garden of Light Gift Shop, Ken Dood's Gallery, Stella Luna Cafe, Wine Rack, The Cyclery			16. 3 Little Monkeys Children's Store, Janine Adamyk Bridal, Clothes Secret Consignment, Life of Pie, Lambert Antiques, Starbucks
<p>Existing lot type 3: Sound buildings with untapped potential or requiring updates</p> <p>Proposal: Large or small selective, creative demolitions and additions</p>	<ul style="list-style-type: none">- Buildings or blocks which lack fine-grain and diverse appearance or are in deteriorating appearance.- Contain socially successful businesses which require spatial upgrades- Includes both newer and older structures which are structurally sound and able to receive new additions.	7. The Mud Oven, Jabbany Salon, Panago Pizza, Wag Petshop, Black Squirrel Books, House of Targ		9. Chipwagon	12. Dollar Store, Sunnyside Barber, Vietnamese Kitchen	18. Vacant Former Bank, Giant Bicycles	19. Majestic Laundry	21. Georgetown Pub, Alteriors, Ottawa Antique Market, Belmont Restaurant, Campagnale Homes, Fluid Salon
<p>Existing lot type 4: Blocks with "missing teeth" including unused buildings or buildings in poor condition</p> <p>Proposal: Demolish and replace with larger new built form, following a 4-storey main street typology</p>	<ul style="list-style-type: none">- Buildings which are vacant or abandoned and have large surface parking sites- Buildings that are in poor condition and cannot easily receive modifications- May contain successful businesses which could be relocated into the new architecture- Sites located at central corners or edges of the site	4. Thai Kitchen Restaurant + Boomerang Children's Clothing		6. Barley Mow Pub		13. Vacant former Ottawa Music School		15. Vacant former video store/spa		17. Scotia Bank	31. Hilary's Cleaners
<p>Existing lot type 5: Stand-alone buildings sitting on large, and otherwise unbuilt, lots</p> <p>Proposal: Demolish and replace with public green space and public amenities such as makerspaces</p>	<ul style="list-style-type: none">- Contain businesses which are not essential to the character of the neighbourhood.- Have large sites which are unbuilt and serve as surface parking lots and good solar exposure- Are located in the centre of the site	5. Roy Barber Auto Services		20. Quickie		25. Family Auto Repair

Figure 4.2: Old Ottawa South neighborhood classifications continued

CHAPTER 2: MAGICAL REALISM

MAGICAL REALISM: FRANZ ROH AND NEW OBJECTIVITY

The term Magical Realism is broad and complex.⁷ German art critic and collage artist Franz Roh first used the term *Magischer Realismus* in reference to post-expressionist painting in 1925.⁸ Magical realism or New Objectivity sought a return to reality, after expressionism's foray into fantasy (other worldly or imagined phenomenon), and emphasized the potential of reality to be re-created through art.

Describing Magical realism, Roh wrote that "mystery does not descend to the represented world, but rather hides and palpitates behind it."⁹ In his writing, Roh describes Post-Expressionism as a mechanism to look at the "dynamic between magic and real, between material and meaning:" Magical realism endorses the real, but recognizes a hidden creative realm which exists just beyond the real.¹⁰ Transposed to urbanism, Magical realism can reveal a new paradigm that celebrates the existence of the creative city within the real city. This idea will be developed further on. Roh continues to write:

Post- Expressionism offers us the miracle of existence in its imperturbable duration: the unending miracle of eternally mobile and vibrating molecules. Out of that flux, the constant appearance and disappearance of material, permanent objects somehow appear: in short, the marvel by which a variable commotion crystallizes into a clear set of constants. This miracle of an apparent persistence and duration in the midst of a demoniacal flux; of universal dissolution: this is what Post-Expressionism admires and highlights.¹¹

Roh's fascination with the inner spirit or magic of objects could only be revealed through an objective lens, and a close study of "real" objects, rather than the imposition of fantastical elements. In addition, the creative process, through which everyday objects appeared from a cloud of matter, is central to his portrayals. New objectivity is the "discovery of a totally new world," a close examination of surroundings and objects which creates a new outlook and perception.¹² In the twentieth century, the

⁷ Maggie Ann Bowers, *Magic(al) Realism*, (London: Routledge, 2004), 1.

⁸ Lois Parkinson Zamora and Wendy B. Faris, "Introduction: Daiquiri Birds and Flaubertian Parrot(ie)s," in *Magical Realism, History, Theory, Community*, edited by Lois Parkinson Zamora and Wendy B. Faris (Durham NC: Duke University Press, 1995), 7.

⁹ Davos Frauenkirch, March 1925, quoted in Franz Roh, "Magic Realism: Post-Expressionism," in *Magical Realism, History, Theory, Community*, edited by Lois Parkinson Zamora and Wendy B. Faris, (Durham NC: Duke University Press, 1995), 16.

¹⁰ Franz Roh, "Magic Realism: Post-Expressionism," 25.

¹¹ Ibid.

¹² Grethe Jurgens, "Rezepte zum erspriesslichen Besuch einer Kunstausstellung" in *ziger Jahre: Mainfeste und Dokumente deutscher Kunstler*, (Cologne: DuMont Duchverlag, 1979), 144-45 quoted in Irene Guenther, "Magic Realism, New Objectivity, and the Arts during the Weimar Republic," in *Magical Realism: Theory, History, Community*, ed. Lois Parkinson Zamora and Wendy B. Faris, 36.

concept of Magical realism played an active part in the field of architecture, but under another name: *Neue Sachlichkeit*, or New Objectivity. In this thesis, which seeks a model of urban redevelopment more rooted in the real, existing fabric, the strategy of transforming the real through objective observation is promising.

As discussed by Kenneth Frampton in his *Critical History of Modern Architecture*, New Objectivity became important in the history of European Architecture, from the period between 1923-1933, a period defined by an architecture with a socialist agenda.¹³ The concept of New Objectivity reflected a revolution in thought and feeling, and a re-organization of industrial society.¹⁴ Aesthetically, the architecture was minimal and simple, dominated by steel framing, concrete, and glass. Central to the movement's origins was the Bauhaus school, founded by Walter Gropius in 1919.¹⁵ The architecture of the Bauhaus's buildings at Dessau symbolized an equality and unification of the arts, and the adjoining residences directly linked making to living.¹⁶ Also influential in this period was the Deutscher Werkbund, a professional association interested in how Arts and Crafts influenced society and that advocated for technology as central to social change.¹⁷ The New Objectivity chapter of modern architecture concerned itself with social and technological change, and in this sense, the current period, with the omnipresence of digital technology, recalls it.

Figure 5: Franz Roh, *Feindliche Compagnons berühren sich im Maschinen Keller* (Fellow Enemies Are Removed from the Basement Machine) from *Metamorphosen des Herrn Miracoloss*, Engraved collage, 12.5cm x 20 cm, Reproduced from *Tenerife Espacio de las Artes exhibition Franz Roh el collage años 30's*, <https://www.scribd.com/doc/94909573/Franz-Roh-El-collage-anos-30>.

¹³ Kenneth Frampton, *Modern Architecture: A Critical History* (London: Thames and Hudson, 1980), 130.

¹⁴ Ibid., 130.

¹⁵ Gillian Naylor, *The Bauhaus* (London, Studio Vista Limited, 1968), 127-140.

¹⁶ Ibid., 127-140, and Kenneth Frampton, *Modern Architecture: A Critical History*, 138.

¹⁷ Kenneth Frampton, *Modern Architecture: A Critical History*, 109-115.

MAGICAL REALISM AND LITERATURE

The term magical realism is generally defined by its association with Latin American literature, especially with the work of Gabriel García Márquez.¹⁸ Works of magical realism portray a plurality of worlds and dissolutions of reality.¹⁹ They explore cultural systems that “privilege mystery over empiricism, empathy over technology, tradition over innovation... [and describe the] ... collective practices that bind communities together,” and often questions social, political, and cultural hierarchies.²⁰

In the realm of literature, magical realism reveals the “metaphorical...perception that modern technology is viewed as a form of magic...by members of a traditionally magic culture[s]” as well as members of more “rational” cultures.²¹ Modern science and technology are abstracted, that is, they are often explained metaphorically in magical or metaphorical terms. For instance, in the novel by Gabriel García Márquez, *One Hundred Years of Solitude* (one of the defining works of the magical realism genre) the alchemical lab operated by the Buendía family is the central point through which new technology and change are introduced to the village. Within the novel, new scientific discoveries are explained in terms of magic, because that is how they are perceived by the characters, not because they are “magic” *per se*.²² Acts of making are at the forefront of magical realism’s portrayal of collective practices that bind communities together.

Magic, Science, Technology, and Literature is the title of the proceedings of a symposium held at the University of Stuttgart in 2005, and discusses the relationship between these four entities in a contemporary context. The symposium emphasized the idea that technology has reached its “magic phase”- where instant communication and flight are part of everyday reality.²³ As technology advances it allows for new possibilities that were, not too long ago, classified as acts of magic.

¹⁸ Maggie Ann Bowers, *Magic(al) Realism*, 4.

¹⁹ Lois Parkinson Zamora and Wendy B. Faris, “Introduction: Daiquiri Birds and Flaubertian Parrot(ie)s,” 5.

²⁰ *Ibid.*, 3.

²¹ Mildorf, Jarmila, Hans Ulrich Seeber, and Martin Windisch, “Magic, Science, Technology, and Literature: A Dynamic Relationship,” In *Magic, Science, Technology, and Literature*, Edited by Jarmila Mildorf, Hans Ulrich Seeber, and Martin Windisch. (Berlin: Lit Verlag, 2006), 9.

²² Gabriel García Márquez, *One Hundred Years of Solitude* (London: Pan Books, 1978), 1-9.

²³ Jarmila Mildorf, Hans Ulrich Seeber, and Martin Windisch, “Magic, Science, Technology, and Literature: A Dynamic Relationship,” 10.

MAGICAL REALISM: ITALO CALVINO'S INVISIBLE CITIES

Invisible Cities, by Italo Calvino, is a work that can be classified within the genre of magical realism. It creates a fictional narrative between two characters, the explorer Marco Polo and the ruler Kublai Khan, and recounts stories of fifty-five different cities from Marco Polo's perspective. The novel intersperses dialogue between the two characters between every grouping of poetic descriptions of cities. Calvino's work describes cities through a magical realist lens; it can be inferred from the dialogue that perhaps all the stories represent the same city, seen from different perspectives.²⁴ In the city that Calvino describes, multiple realities exist at once both in the physical world and in the world of dreams and memories, experiences that are "invisible" to some but visible to others. Calvino's eleven themes serve as chapter headings for the book and are as follows: cities and memory, cities and desire, cities and signs, thin cities, trading cities, cities and eyes, cities and names, cities and the dead, cities and the sky, continuous cities, and hidden cities. The categories used by Calvino provide an intriguing framework for alternative urban development approach as representative experiential notions. As a first exercise in magical realist urbanism, Calvino's themes were playfully translated into "maker" themes. Listed in the same order as Calvino's the "maker" themes are: making stories, making gardens, making public, making frames, making things, making light, making sound, making time, making space, making paths, and making illusions. These themes will inspire programs and qualities of space which will be layered into the existing built fabric of Old Ottawa South.

²⁴ Italo Calvino, *Invisible Cities* (New York: Harcourt Brace Jovanovich, 1974), 78- 82.

Figure 6.1: Magical realism themes

Calvino's Invisible Cities Themes

- Cities and memory
- Cities and desire
- Cities and signs
- Thin cities
- Trading cities
- Cities and eyes
- Cities and names
- Cities and the dead
- Cities and the sky
- Continuous cities
- Hidden cities

Cities and Memory -- Making Stories

Cities and Desire -- Making Gardens

Cities and Signs -- Making Public

Thin Cities -- Making Frames

Trading Cities -- Making Things

Figure 6.2: Magical realism themes continued

Cities and Eyes -- Making Light

Cities and Names -- Making Sound

Cities and the Dead -- Making Time

Cities and the Sky -- Making Space

Continuous Cities -- Making Paths

Hidden Cities -- Making Illusions

MAGICAL REALISM, MAKING, AND URBANISM

This thesis makes a link between magical realism, the “maker movement,” and urbanism: it proposes to stitch existing urban fabric with unexpected and extraordinary spaces of making. Magical realism has the ability “to explor[e]... and transgress... boundaries, whether the boundaries are ontological, political, geographical, or generic,” and provide a reminder that these boundaries can be challenged.²⁵

Similarly, as will be explored in Chapter 3, the maker movement questions systems of production and patterns of living. Such a critical outlook provides a framework for the proposed Maker City program, which intermingles spaces of making with housing and places of work and commerce. Urbanism that celebrates making, a primary collective human experience, has tremendous potential to create communities within the city.

Magical realism provides a counter-framework for change that resists the dominant developer ideology which primarily provides spaces of consumption. Magical realist urbanism celebrates spaces of making as extraordinary spaces, because they have the capacity to anchor dwellers to the cityscape.

Magic was a common theme in pre-modern architecture, especially associated with the freemason’s ability to manipulate lines and geometry. This magic was in fact a craft-knowledge, a knowledge form related to making.²⁶ Additionally, the era of New Objectivity suggests the power of an architecture rooted in objective study. In the proposition presented here for a redevelopment of Old Ottawa South, decisions and types of interventions follow an objective and functional model. Noting parallels with New Objectivity, the following chapter examines the emergence of creative cities and “maker culture.”

In the spirit of Roh’s own collages (see figure 5), initial conceptions of the project were explored through a collage technique (see figures 7.1-7.2 and Appendix B). The collages were built on line drawings elevations of the existing streetscape, and propose the meeting of ordinary building with extraordinary objects of making and living. The initial collage exploration was done with magazine clippings, and then the collages were modified digitally to generate the five interventions.

²⁵ Lois Parkinson Zamora and Wendy B. Faris, “Introduction: Daiquiri Birds and Flaubertian Parrot(ie)s,” 5.

²⁶ George L. Hersey, *Pythagorean Palaces: Magic and Architecture in the Italian Renaissance*, (Ithaca: Cornell University Press, 1976).

Figure 7.1: Generative magical realism collages

MAKER PARK: EAST SIDE OF BANK BETWEEN ECHO DRIVE AND SUNNYSIDE AVENUE

MICRO-EMPORIUM AT THE MAYFAIR THEATRE: WEST SIDE OF BANK BETWEEN EUCLID AVENUE AND SUNNYSIDE AVENUE

MAKERSPACE HUB: EAST SIDE OF BANK BETWEEN SUNNYSIDE AVENUE AND BELMONT AVENUE

MAKER DWELLING: WEST SIDE OF BANK BETWEEN CAMERON AVENUE AND OSSINGTON AVENUE

MAKER HAVEN AT THE TRINITY ANGLICAN CHURCH: WEST SIDE OF BANK BETWEEN CHELSEY STREET AND CAMERON AVENUE

CHAPTER 3: MAKERSPACE TO MAKER CITY

MAKERSPACE: DEFINITION AND HISTORY

A makerspace is community workshop that serves as an environment for knowledge exchange and entrepreneurial experimentation through making, or in more general terms, a space “that has been designed to allow users to create, build, and learn new technologies.”²⁷ The users of makerspaces range from cutting-edge innovators to hobbyists. One of the creators of TechShop, a large chain of American makerspaces, Mark Hatch, has outlined principles for a makerspace manifesto: “make, share, give, learn, tool up, play, participate, support, and change.” The manifesto proposes that making is fundamental to being human, and that it creates unique opportunities that are essential to our well-being.²⁸ Makerspaces can alter power structures, by making technology that is expensive and difficult to obtain available to everyone.

Makerspaces, although a new phenomenon in contemporary society, are a culmination of a long history of making. Will Holman, in his article “Makerspace: Towards a New Civic Infrastructure” provides the history of makerspaces. In the twentieth century, research labs began to emerge in North America and Europe that recognized the benefits of collaborative workspaces.²⁹ However, these labs were private ventures, and were not accessible to the public. A public interest in making began to emerge in the 1940s, with the first do it yourself craftsmen workshop in San Francisco, which provided a variety of tools to members.³⁰ In London during the 1980s recession, Labour politicians established the Greater London Enterprise Board, which created five public workshops with wood and metal working tools.³¹ These workshops, aimed to provide access and education to unemployed manufacturing workers, and are arguably the ancestor of the modern makerspace.³² In the 1990s, Germany became home to the first hackerspaces, which are makerspaces centered on computer programming. In the United States in 2001, makerspaces began opening up.³³

²⁷ Caitlin A. Bagley, *Makerspaces: Top Trailblazing Projects* (Chicago: American Library Association, 2014), 1.

²⁸ Mark Hatch, *The Maker Movement Manifesto: Rules for Innovation in the New World of Crafters, Hackers, and Tinkerers* (New York: McGraw Hill, 2013), 1-11.

²⁹ Will Holman, “Makerspace: Towards a New Civic Infrastructure,” *Places Journal*, November 2015, Accessed January 14, 2016, <https://placesjournal.org/article/makerspace-towards-a-new-civic-infrastructure/>.

³⁰ Ibid.

³¹ Ibid.

³² Ibid.

³³ Ibid.

In the last ten years, makerspaces have opened up in many major cities throughout North America. Canada has forty active makerspaces, and in the United States there are three hundred active makerspaces, as inventoried by the hackerspace wiki.³⁴ Canada's makerspaces are mostly club-based and non-for profit models. In the USA, TechShop is a for-profit model that boast numerous locations across the country, and although it has ambitious plans for expansion, its high memberships fees have recently become an obstacle to expanding member bases.³⁵ Another model that has multiple locations in the USA are the FabLabs, which focuses on five core tools, centered on digital fabrication. Although its membership costs are lower, the range of equipment and tools at FabLabs is also more limited.³⁶

There are four basic economic models for makerspaces: institutional (free to user), for-profit (selling classes and memberships), club (dues based with social contract membership), nonprofit (combination of grants public money and user fees).³⁷ Of all these types, nonprofit makerspaces have the most potential for serving a large portion of the population, because club or for-profit models tend to exclude portions of the population that are the most in need of access to technology.³⁸ Successful makerspaces "need to offer the kind of institutional stability that will support meaningful community programming, educational opportunity, and grassroots economic growth."³⁹

The maker movement is meant to stimulate an "interdisciplinary means of personal and community self-reliance," and discourage passive consumption. The true value of the makerspace is that it is a place for learning through critical thought, experimentation and mistake making.⁴⁰ In Canada, spaces such as Hackforge at the Windsor Public Library, and Repair Cafe in Toronto, disagree with the propagation of commercialized "makerfares" and the use of purchased materials rather than re-used ones.⁴¹ At the MakerFaire in Ottawa in Fall 2015, various alternative 3D printers were available, one of which can use any material of appropriate consistency such as caulking or Nutella.⁴² At Windsor's

³⁴ "List of Hacker Spaces," HackerspaceWiki, May 11, 2014, Accessed February 12, 2016, https://wiki.hackerspaces.org/List_of_Hacker_Spaces.

³⁵ Will Holman, "Makerspace: Towards a New Civic Infrastructure."

³⁶ Ibid.

³⁷ Will Holman, "Made in Baltimore: What Kind of Makerspace to Make?," Makezine, January 13, 2016, Accessed February 12, 2016, <http://makezine.com/2016/01/13/made-in-baltimore-what-kind-of-makerspace-to-build/>.

³⁸ Ibid.

³⁹ Will Holman, "Makerspace: Towards a New Civic Infrastructure."

⁴⁰ Laura Pinto, "Putting the Critical (Back) into Makerspaces," CCPA Monitor 22, no. 1 (2015), <https://www.policyalternatives.ca/publications/monitor/putting-critical-back-makerspaces>.

⁴¹ Ibid.

⁴² A Maker Faire took place at Lansdowne Park in the Aberdeen Pavilion in Ottawa in November 2015, the information consists of personal observations.

Hackforge, the 3D printer has been made from an old VCR.⁴³ Makerspaces must thread the boundary between critical making and consumptive production carefully.

Makerspace North is Ottawa's first makerspace, and is located at City Centre in the Hintonburg/Little Italy Area. The makerspace is in its second year of operation, and undergoing many transformations, including the launch of an individual membership program in summer 2016. The makerspace hosts a diverse group of artists and makers running small businesses, as well as the Ottawa Wood Shop and various meet-up groups. The users are mainly people who live within walking distance.⁴⁴ Makerspace North is owned by an Ottawa based individual and operated by three staff members, who are currently working on expanding their public programming and acquiring tools for drop-in capacities. There is a stark contrast between the makerspace's windowless and un-announced exterior (a blank portion of wall on the curved City Centre Building) and its joyful messy interior. Rules of social engagement appear to be different inside the makerspace, as people greet each other in passing, take time to meet and orient strangers, and inter-generational groups find they have much in common.

⁴³ Laura Pinto, "Putting the Critical (Back) into Makerspaces."

⁴⁴ Ashley McConnell. Interview by Madeleine Hebert. Ottawa, January 28, 2016.

Figure 8: Makerspace precedent study

HELIOS MAKERSPACE
MONTREAL, QC

NEIGHBOURHOOD TYPE:
URBAN: RESIDENTIAL

NEIGHBOURHOOD HEIGHT:
LOW-MID RISE

STREET PRESENCE:
MINIMAL

SITE ACCESS:

FACILITY AREA:
150 SQ. M

VANCOUVER COMMUNITY LAB
VANCOUVER, BC

NEIGHBOURHOOD TYPE:
URBAN: LIGHT INDUSTRIAL/RESIDENTIAL

NEIGHBOURHOOD HEIGHT:
LOW-MID RISE

STREET PRESENCE:
MODERATE

SITE ACCESS:

FACILITY AREA:
180 SQ. M

NORTH FORGE TECHNOLOGY EXCHANGE
WINNIPEG, MB

NEIGHBOURHOOD TYPE:
URBAN: COMMERCIAL

NEIGHBOURHOOD HEIGHT:
MID-HIGH RISE

STREET PRESENCE:
MODERATE

SITE ACCESS:

FACILITY AREA:
1,100 SQ. M

MAKING TYPES		MEMBER RESPONSIBILITY
WORK SPACE TYPES		PUBLIC ACCESS	✓
NUMBER OF MEMBERS	30	MEMBER ACCESS	24/7
MONTHLY MEMBERSHIP	\$75-\$100	STAFF	✓
		CLASSES	X

MAKING TYPES		MEMBER RESPONSIBILITY
WORK SPACE TYPES		PUBLIC ACCESS	✓
NUMBER OF MEMBERS	30	MEMBER ACCESS	24/7
MONTHLY MEMBERSHIP	\$50-\$100	STAFF	X
		CLASSES	X

MAKING TYPES		MEMBER RESPONSIBILITY
WORK SPACE TYPES		PUBLIC ACCESS	✓
NUMBER OF MEMBERS	35	MEMBER ACCESS	24/7
MONTHLY MEMBERSHIP	\$110-\$130	STAFF	✓
		CLASSES	✓

MAKERSPACES: THE MAKER MOVEMENT REVOLUTION

In his book *Makers: The New Industrial Revolution*, Chris Anderson notes that manufacturing paradigms are shifting to local workshop production driven by the web and digital distribution. Combined with open source information sharing, workshops that provide a mixture of traditional and digital fabrication techniques have the potential to create local economies, and new awareness of consumption. It would be a mistake however, to think of makerspaces as places whose main purpose is to benefit the economy. Although few examples exist of innovative products that have made their creators millions, the true power of makerspaces is its value for the general public. Already, certain makerspaces are testing out their capacity to take on a “more expansive economic, educational, and cultural role.”⁴⁵ A program in Detroit, named Incite Focus, has created an educational institution with FabLabs, is focused on creating a local community based and sustainable economy. Graduates from the program are working on CNC routed homes, electric vehicles, and drones, combining ancient technologies with new ones.⁴⁶ Another institution, Made Right Here, based in Detroit, has been founded on a government grant and operates like a makerspace trade school. The institution has begun to partner with high schools and apprenticeship unions to provide education.⁴⁷

In order for a true democracy of makers, makerspaces must be funded as public institutions.⁴⁸ The designation of a “maker district,” such as the one proposed in this thesis, would allow makerspaces to become integrated into the daily life of the city. Although they would require public funding to get started, they would gain their own momentum over time and could become self-sufficient.

⁴⁵ Will Holman, “Makerspace: Towards a New Civic Infrastructure.”

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid.

MAKERSPACE ARCHITECTURE

A growing segment of the public is interested in the maker movement. Makerspaces, however, are still normally self-contained and isolated from the rest of the city, and do not modify the urban fabric significantly.

In the spirit of the makerspace itself, the architecture of the makerspace is able to adapt and be integrated into established neighborhoods. Makerspaces come in a variety of forms, but generally they re-use existing buildings such as small industrial buildings, office and commercial spaces, or spaces in public libraries. Slipping inside existing utilitarian buildings, many makerspaces have non-descript facades. They seem to hide complexity and energy behind a face that is indistinguishable from the rest of the streetscape. ADX in Portland was the most designed exterior facade- having large garage doors, signs announcing the space, and a way finding system that extends from interior to exterior. The wayfinding system, employing colours and street art, provides an economical method of distinguishing and inviting people into the makerspace.⁴⁹

Within the bounds of the makerspace, everyone is a maker. As such, the makerspace facade poses a particularly interesting question acting both as a boundary between the ordinary and the magical, and between commercial and non-commercial realms. The act of walking into a makerspace from the commercial street creates a departure from a consumerist existence into the democratic realm of creative action.

On the Bank Street streetscape, in this proposition for a new urban strategy, each facade is a facilitator that allows for the existence of a plurality of worlds. Each building facade plays with the dissolution of reality by creating a doorway into a unique experience made possible only by the act of making, an architectural space that does not exist until makers have entered it.⁵⁰

Architecturally, maker buildings have to accommodate “making activities.” A list of architectural elements that support making includes: extended spaces of entry, such as large covered outdoor intermediate spaces or loading bays; generous circulation elements, such as large freight elevators or stairways which are accessible directly from the street and are at the forefront of the layout, ramps or at grade entryways for ease of access; well-conceived doorways, such as large garage doors, sliding

⁴⁹ ADX Portland, “ADX,” ADX Art Design Portland, Accessed May 24, 2016, <http://adxportland.com/>.

⁵⁰ Lois Parkinson Zamora, and Wendy B. Faris, “Introduction: Daiquiri Birds and Flaubertian Parrot(ie)s,” 5.

door, or pivot doors which allow for easy access; access to water and power; spaces designed for ease of access to large sinks; outdoor water supplies, as well as ease of access to power for digital technology; access to storage, designed designated storage areas which are easily accessible near spaces of making and places of entry; and inspirational creative spaces for contemplation or collaborative working, which are designed with a playful language and prioritize natural light.

Figure 9: ADX makerspace spatial analysis

MAKER CITY: A NEW PLACE FOR DWELLING

As Mark Richardson, Susie Elliott, and Brad Haylock explain in their article “This Home is a Factory: Implications of the Maker Movement on Urban Environments,” the “maker movement” has roots in the Arts and Crafts movement, and follows the changing relationship between designer and producer.⁵¹ The invention of micro scale 2D and 3D printers, laser cutters, CNC machines, and vinyl cutter has allowed any small space (both residential and public) to become “sites of production.”⁵² Factories no longer need to exist outside the city fabric, but can be spread out through the urban environment, leading to a resurgence of local production and equitable access to technology. This shift has been labeled as post-Fordist, where “rhizomatic network of globally dispersed individuals” replace the factory assembly line.⁵³ The maker economy is fluid, adaptive, and organic, and this defines new maker environments.⁵⁴

The *Institute for the Future* is a non-profit think tank located in California which has published material on the notion of “maker cities.” The Institute’s core belief is that the maker movement will make cities open and rhizomatic. As technology becomes more accessible it will play a catalyzing role in the social and physical development of “maker cities.” In addition, tools of making will become more available and accessible to everyone. Makerspaces, speculates the Institute, will spill out into the urban environment, injecting openness and new qualities into the city’s housing, public, and commercial spaces.⁵⁵

A network of discrete makerspace insertions into an otherwise conventional fabric of retail-office-residential spaces operates a fundamental shift of urban settlement form. Indeed, the latter sets up a shift from the centralized shopping mall towards smaller associations and studios, and marks a shift

⁵¹ Mark Richardson, Susie Elliott, and Brad Haylock, “This Home is a Factory: Implications of the Maker Movement on Urban Environments,” *Craft + Design Enquiry* 5 (2013): 141. And Allen J. Scott, “Creative Cities: Conceptual Issues and Policy Questions,” *Journal of Urban Affairs* 28, no. 1 (2006): 1.

⁵² Mark Richardson, Susie Elliott, and Brad Haylock, “This Home is a Factory: Implications of the Maker Movement on Urban Environments,” 141.

⁵³ Mark Richardson, Susie Elliott, and Brad Haylock, “This Home is a Factory: Implications of the Maker Movement on Urban Environments,” 144.

⁵⁴ Allen J. Scott, “Creative Cities: Conceptual Issues and Policy Questions,” 7.

⁵⁵ Institute for the Future, “How the Maker Mindset & Technology Are Reinventing Urban Life,” PDF, Palo Alto: Institute for the Future, Fall 2015, <http://www.iftf.org/our-work/people-technology/technology-horizons/open-cities/>.

away from passive consumption.⁵⁶ Domestic and manufacturing spaces are blended, and shops become spaces where consumers can design a custom item rather than having to pick something off a shelf.⁵⁷ Hollywood and Silicon Valley are two examples of new, maker neighborhoods, with their specialized elite production of movies and software.⁵⁸ However, these areas privilege the “creative class”, as defined by Richard Florida, a class of “professional, managerial, technical, and cultural workers, and are gentrified as a result.⁵⁹ Despite being “maker districts,” they contradict maker culture. Cities today have “unprecedented creative capabilities, but they are also places where striking social, cultural, and economic inequalities prevail, and there can be no truly final achievement of the creative city where these stubborn problems remain.”⁶⁰

Theorists of the maker movement envision that new values will emerge in the architecture of “maker cities” since creativity must be developed along with “a wider concern for conviviality and camaraderie.”⁶¹ Further, the “maker city” will stimulate “virtual collaboration, open-source knowledge sharing, material reuse and...more durable artifacts.”⁶² Creativity cannot be written into a community development, but strategies of urban design in which maker culture to flourish are worthy of consideration.

The “maker movements” mode of “meta-design” relies on incompleteness of the product to create prototypes; this notion can also be applied to the city. Many contemporary developments in Canada are over-planned, and leave little room for occupants to modify and take ownership of their environment. Economic and making activity is essential to city development, and the city must allow for a “range of human behaviors and values.”⁶³ The “maker economy” provides a potential to grow the urban community, and the potential for the creation of complete neighborhoods where all human needs are fulfilled.⁶⁴

⁵⁶ Dale Dougherty, “Making Detroit: Changing the story,” Make: Blog, July 22, 2012, <http://blog.makezine.com/making-detroit>, quoted in Mark Richardson, Susie Elliott, and Brad Haylock, “This Home is a Factory: Implications of the Maker Movement on Urban Environments,” 147.

⁵⁷ Mark Richardson, Susie Elliott, and Brad Haylock, “This Home is a Factory: Implications of the Maker Movement on Urban Environments,” 147.

⁵⁸ Allen J. Scott, “Creative Cities: Conceptual Issues and Policy Questions,” 3.

⁵⁹ Richard L. Florida, *The Rise of the Creative Class* (New York: Basic Books, 2012) quoted in Allen J. Scott, “Creative Cities: Conceptual Issues and Policy Questions,” 1.

⁶⁰ Allen J. Scott, “Creative Cities: Conceptual Issues and Policy Questions,” 15.

⁶¹ Allen J. Scott, “Creative Cities: Conceptual Issues and Policy Questions,” 15.

⁶² Mark Richardson, Susie Elliott, and Brad Haylock, “This Home is a Factory: Implications of the Maker Movement on Urban Environments,” 150.

⁶³ *Ibid.*, 145.

⁶⁴ Mark Richardson, Susie Elliott, and Brad Haylock, “This Home is a Factory: Implications of the Maker Movement on Urban Environments,” 150.

CHAPTER 4: A GUIDE TO MAKER CITY

OLD OTTAWA SOUTH: MAKER CITY PROPOSITION

Maker City proposes the gradual introduction of spaces of making along with new spaces for living, working, and consuming, into the established neighbourhood of Old Ottawa South. This strategy of urban redevelopment aims to protect the neighborhood's social diversity and to foster continuity with the past. Following an approach inspired by magical realism and Italo Calvino's *Invisible Cities*, the adapted maker themes developed in Chapter 2 will be introduced into selected incisions, or interventions, into the built fabric along a stretch of Bank Street. These are intended to be prototypical of other, future developments in the neighbourhood. Each intervention deals objectively and carefully with the existing context, whether it is a historically designated building or a derelict unoccupied one (see figure 10). The interventions constitute a sample of the five characteristic building classifications presented in Chapter 1 (see Figure 3 and Figure 4).

Maker City is a proposal that is intended to evolve over time. The new structures establish a dialogue with the old, but they are intended to remain structurally independent. As the existing structures age further, some of them will need replacement or modifications, and by maintaining independence the cycle of incremental development is able to continue.

The interventions explore the tectonics of maker culture by using a mixture of new digital technology and traditional built technology. New maker technologies include laser cutting, CNC milling, 3D printing, and various new resins and plastics. New digital fabrication technology allows for the creation of unique architectural materials and components that can be quickly outputted from a digital model.

The following pages present five interventions named: Maker Micro-Emporium at the Mayfair Theatre, Maker Haven at the Trinity Church Annex, Maker Dwelling, Makerspace Hub, and Maker Park.

Figure 10: Objective decision making diagram

MAKER MICRO-EMPORIUM AT THE MAYFAIR THEATRE

Maker Micro-Emporium at the Mayfair Theatre is an intervention between Euclid Avenue and Sunnyside Avenue nestled between a historically important building, the Mayfair Theatre (Type 1), and the newest building on the site which houses a Shoppers Drug Mart (Type 2). The opening of a Cineplex at the Lansdowne Park has posed a new threat to the Mayfair Theatre, making it essential that the Mayfair secures its role as repertory movie house in Ottawa, and its identity as an essential member of the Old Ottawa South community. On the same block, besides the Shoppers Drug Mart, are a small barber shop and pub which are annexed to the Mayfair Theatre. These micro business represent some of the smallest spaces in Old Ottawa South, while the Shoppers represents one of the largest. Nine feet separate the Mayfair and the Shoppers.

The historic cinema, which opened in 1932, is a masonry brick building in the Spanish Revival Style.⁶⁵ The Cinema had state of the art equipment and showed a double bill of *Metropolis* and *Blue Danube* on opening night.⁶⁶ The Shoppers Drug Mart building is a recent construction (2013) which replaced a parking lot and some single storey homes. Currently, the ground floor houses a pharmacy and retail area, but the upper level is empty. The building is clad in brick and metal, and perforated with large windows.

The new intervention addresses the nine-foot gap between the Mayfair Theatre and the Shoppers. The new Maker Micro-Emporium insertion, mostly of glass and lit from the inside, is intended to be a flexible space that could be used as an alternative entrance into the Mayfair Theatre, house a gallery, a micro-shop with digital manufacturing capacities, or serve as an overflow space for the Mayfair's concession café. A ramp rises to meet the level of the Mayfair's auditorium, and provides a needed accessible entrance to the Mayfair.

The facade of Maker Micro-Emporium is flush to the facade of the Mayfair theatre, but expands outwards onto the sidewalk with operable windows and a pivot door. A digital ceramic printed glass facade follows the lines set by the adjacent buildings. The intervention is a sliver of light and activity that acts as a beacon for the cinema, and presents a new identity for the Mayfair theatre as an icon of Old Ottawa South.

⁶⁵ Mohammad Al-Asad, "Mayfair Theatre," Ottawa South History Project, September 3, 2008, Accessed May 24, 2016, <http://www.olderottawasouth.ca/oshp-heritage-properties/mayfair-theatre>.

⁶⁶ Mrs. Roy McGregor Watt, *Ottawa's Heritage of Theatre 1837-1955* (Ottawa: Historical Society of Ottawa, 1982), 206.

Figure 11.1: A Guide to Maker Micro-Emporium at the Mayfair Theatre

A GUIDE TO MAKER MICRO-EMPORIUM AT THE MAYFAIR THEATRE

A GAP, NINE FEET IN WIDTH. TWO BRICK BUILDINGS, ONE FROM THE ORIGINS OF OLD OTTAWA SOUTH, THE OTHER BORN AT THE START OF A NEW ERA OF DEVELOPMENT. A THEATRE, STATE OF THE ART IN 1932, SHOWING A DOUBLE BILL VIEWING OF THE BLUE DANUBE AND METROPOLIS. A SECOND FLOOR LEFT VACANT, FILLED WITH LIGHT; AN OPPORTUNITY FOR MAKERS. CONNECTIVE TISSUE. A TIME CAPSULE, A COLLECTION OF MEMORIES, STORED IN A COLOURFUL LANTERN ANNOUNING THAT THE MAYFAIR IS HERE TO STAY.

“If men and women began to live their ephemeral dreams, every phantom would become a person with whom to begin a story of pursuits, pretences, misunderstandings, clashes, oppressions, and the carousel of fantasies would stop.”
- Trading Cities 2

CROSS- SECTION
PERPENDICULAR TO BANK STREET
1-100

Figure 11.4: A Guide to Maker Micro-Emporium at the Mayfair Theatre continued

"The participants in the dialogues die one by one and meanwhile those who will take their places are born, some in one role, some in another"

- Cities & The Dead 1

"All the rest of the city is invisible."
- Cities and Eyes 4

MAKER HAVEN AT THE TRINITY ANGLICAN CHURCH

Maker Haven at the Trinity Anglican Church is an intervention to the block between Cameron Avenue and Chelsey Street. Trinity Anglican Church is a masonry brick church (Type 1) that was originally built in 1948 to replace a church which was heavily damaged in a fire in 1926. The church has a one-storey annex which was built in 1958 and currently houses a day care. The church recently installed solar panels on its roof in order to reduce energy bills and generate income. Next to the annex to the north is Yardley's Antiques (Type 2), a curious two-storey building, which has a courtyard in the back and an elaborate display along the sidewalk on Bank street. Next to Yardley's is one storey Bond's Decor (Type 3) which sells paints and other building supplies.

The intervention proposes the creation of an entrance between Yardley's and the church annex, which would lead to a covered courtyard behind Yardley's. The latter would house a digital technology workshop for antique restoration. On top of the church annex is a new daycare space and a southwestern facing greenhouse. A skeletal tower built of steel members acts as a new entrance gateway for the church as well as for the elevated greenhouse. The tower houses a stair, a large water cistern and a hydraulic organ powered by the cistern.

Trinity Anglican Church is set back from Bank street, behind mature trees and a small playground. The proposal naturalizes the playground with native plantings and locates simple play structures within it. A berm and a swale replace the existing fence and create areas for play and exploration.

Above Bond's Decor, a four-storey intended for housing and offices perched on an independent steel structure mimics the peaked roof the church and the green house. This geometry also provides further surface area for solar collection.

At the Bank street level, the façade of the church annex pops out onto the sidewalk and engages pedestrians, while the new doorway draws people inwards to the workshop.

Figure 12.1: A Guide to Maker Haven at the Trinity Anglican Church

A GUIDE TO MAKER HAVEN AT
THE TRINITY ANGLICAN CHURCH

A BRICK CHURCH NAMED TRINITY, SET BACK BEHIND THE TREES. AN ANNEX AND PLAYGROUND FOR CHILDREN. AN OLD CHARACTER, YARDLEY'S ANTIQUES, WITH IRON HORSES ON THE SIDEWALK. A PAINT STORE NAMED BOND DECOR. A NEW COMMUNITY GARDEN, WITH A LARGE GREENHOUSE AND A SPACE FOR CHILDREN TO DRY HERBS. A PLAN FOR A TOWER, FINALLY REALIZED, WITH A HYDRAULIC ORGAN, A GATEWAY TO MAKER HAVEN. A NEW OFFICE AND RESIDENTIAL BUIDLING ON STILTS, PROTECTING BOND DECOR LIKE A MOTHER HEN. A SQUEEZE THROUGH THE BUILT FABRIC TO AN WORKSHOP FOR ANTIQUES.

ELEVATION-
PARALLEL TO BANK STREET
1-100

Figure 12.3: A Guide to Maker Haven at the Trinity Anglican Church continued

“Nothing of the city touches the earth except those long flamingo legs on which it rests and, when the days are sunny a pierced angular shadow that falls on the foliage.”
- Cities and Eyes 3

ELEVATION CONTINUED-
PARALLEL TO BANK STREET
1-100

“And then the shards of the original
splendor that had been saved...were now
preserved under glass bells, locked in
display cases, set on velvet cushions, and
not because they might still be used for
anything, but because people wanted to
reconstruct through them a city of which
no one knew anything now.”
- Cities and Names 4

Figure 12.5: A Guide to Maker Haven at the Trinity Anglican Church continued

“Cities have no name for me: they
are places without leaves, separat-
ing one pasture from another...”
Continuous Cities 4

MAKER DWELLING

Maker Dwelling is a renovation of an existing building block (Type 3), comprised of structurally sound buildings and a diversity of businesses but presenting unexploited potential and needed upgrades. Located between Cameron and Ossington Avenues, the block is composed of two attached buildings, each two storeys in height. The building on the corner of Cameron Avenue is older (dating around 1950) and has an angled form in plan and a brick facade. There are small businesses on the ground floor (Atlantica Fine Jewelry, Malak's pastry shop, Rite-way driving school, and Lazard Creditors) and apartments on the second floor. The adjoining building is newer (date unknown) and is clad in stucco. The entrance to the businesses (Sky Express Travel, Pappa's Pizza, Havana Café, Bytowne Beauty Supply, Starz Salon, and Planet of Sound) are set into the facade. The second floor is vacant, but previously contained Upper Canada Antiques, an antique bazar.

The proposal replaces the second floor of the stucco building with a three-storey residential building. The new facade is designed with a geometric pattern to reference a quilt. The entrance to this residential maker building occurs in one bay of the existing businesses (replacing Sky Express Travel). Over the older brick building, a two storey cantilevered extension occupies half of the footprint, while the front half towards Bank Street becomes a rooftop garden. In the gap between the bottom of the new, cantilevered, addition and the existing rooftop, a small tunnel serves as an animal habitat for bats. The garden is protected by a geometric screen which picks up the cadence of the quilted facade of the dwellings, and showcases metal digital fabrication techniques.

The dwellings consist of a variety of small and large units which occur on both sides of a wide corridor. The corridor terminates in the cantilevered addition which houses a large studio adjoining the rooftop garden. Dwelling units are placed on the second floor. At the other end of the corridor, a spherical cantilevered common space creates a unique view into the building's maker function. In this intervention, a new building and an ordinary old one co-habit. Further exploration on how the upper quilt might descend to the existing ground floor -- both to reveal and conceal it -- could form part of a next stage of research.

ATLANTICA JEWELRY, MALAK PASTRIES, RITE-WAY DRIVING SCHOOL, LAZARD CREDITORS
(TYPE 3)

SKY EXPRESS TRAVEL, PAPPA'S PIZZA, HAVANA CAFE,
BYTOWNE BEAUTY SUPPLY, STARZ SALON, PLANET OF SOUND
(TYPE 3)

A GUIDE TO MAKER DWELLING

AN ANGLED BUILDING AT THE CORNER OF CAMERON STREET AND BANK STREET, WITH A LEBANESE PASTRY SHOP NAMED MALAK. BESIDE THIS, SMALL DIVERSE SHOPS WITH AN EMPTY UPPER STOREY THAT HOUSED AN ANTIQUE BAZAR, WHICH IS SCOOPED OUT AND REPLACED WITH A BRIGHT QUILT OF MAKER DWELLINGS. A CANTILEVERED STUDIO AND ROOF TERRACE, PROTECTED BY A GEOMETRIC SCREEN. A TUNNEL FOR BATS. A DANGLING MOON, A COMMUNITY SPACE FOR MAKERS.

ELEVATION CONTINUED-
PARALLEL TO BANK STREET
1-100

CROSS- SECTION
PERPENDICULAR TO BANK STREET
1-100

“The city that they speak of has
much of what is needed to exist,
whereas the city that exists on its
site, exists less.”
- Cities and Names 1

MAKERSPACE HUB

Makerspace Hub is one of the proposed new buildings on the site (Type 4). Here, it makes sense to replace the entire block due to several “missing teeth” and the poor conditions of the other buildings on the block. A sequence of three such buildings exists on the block between Sunnyside Avenue and Belmont Avenue.

At the north end of the block between Sunnyside and Belmont Avenues, on the east side of Bank Street, is a row of “happy” businesses (Taylor’s Wine Bar, Hair Republic Salon, Anne Belanger Massage Therapy, Garden of Light Gift Shop, Ken Dodd’s Gallery, Stella Luna Cafe, Wine Rack, The Cyclery) with one exception: the former Ottawa Folklore Centre, now vacant. The building is not exceptional, and the Maker City proposal replaces it with a new structure that will house the Maker City patent and planning office.

Makerspace Hub occupies the south half of the block. To create its site, a vacant former video store, a small bank (Scotia Bank), and small laundromat (Majestic Laundry) would be demolished, creating a large site with side-street access for loading. However, the laundromat, which is only three hundred square feet in space, will be scanned and 3D printed with a mixture made of construction waste, and placed inside the new building. The “printed laundromat” would serve as a precedent of 3D printed building technology within the Makerspace Hub, and a learning tool for future projects.

Makerspace Hub is four-storeys in height, with the ground floor containing the workshops, the second floor containing offices and studios, and the top two floors containing housing. Lower floors have a translucent facade that follows the line of the glazing on the adjacent “The Cyclery” store. The translucent facade would be silk screened with different images and motifs, chosen by the residents. Two large bi-fold doors lead from Bank street into the makerspace. The main entrance is located at the corner of Belmont Avenue, and is protected by a generous overhang. At the back of the building is a loading bay accessed from Belmont Avenue.

The entrance to the housing is along Bank Street, highlighted by a fabric canopy that shelters the outdoor roof space located above The Cyclery. A central courtyard divided the housing into two sections, and provides the entrances to the units. The facade is punctuated by hexagonal and square

windows, which differentiate between sleeping (hexagonal windows) and living (square windows) spaces.⁶⁷

As the central makerspace within Maker City, Makerspace hub contains large workshops, large collaboration areas, and smaller studios, which allow users to explore both digital and traditional maker technologies. It is intended to act as the central point through which explorations in maker technology and maker architecture are introduced into the neighbourhood, and where opportunities to explore future developments in Old Ottawa South can be elaborated and developed.

⁶⁷ The hexagonal motif was inspired by a structure at Makerspace North in Ottawa. The structure was a partition wall created by a group of makerspace users who run a small business (growing herbs indoors throughout the winter) inside Makerspace North. The Hexagon has also now been adopted as the main logo for Makerspace North.

Figure 14.1: A Guide to Makerspace Hub

A GUIDE TO MAKERSPACE HUB

A CORNER BY BELMONT AVENUE. THREE BUILDINGS, WITH MISSING TEETH. TWO BECOME GHOSTS, BUT A SMALL LAUNDROMAT IS DUPLICATED AND SAVED. A MAKER COMMUNITY. A HAPPY BLOCK, WITH GAPS. A FACADE FOR MAKING MUSIC. A TERRACE FOR THE CARE OF BIKES, COVERED BY A KITE. AN OPEN PLAN WITH WORKSHOPS AND LIGHT. A LANE FOR TRUCKS TO DELIVER THINGS TO THE MAKERS. A FACADE THAT CAPTURES IMAGES. WOODEN HOUSING PERCHED ON TOP. THE CENTRAL HUB OF MAKER CITY.

ELEVATION-
PARALLEL TO BANK STREET
1-100

Figure 14.3: A Guide to Makerspace Hub continued

Figure 14.4: A Guide to Makerspace Hub continued

ELEVATION CONTINUED-
PARALLEL TO BANK STREET
1-100

Figure 14.5: A Guide to Makerspace Hub continued

Figure 14.6: A Guide to Makerspace Hub continued

A GUIDE TO MAKING ENTRANCES
MAKERSPACE HUB

MAKER PARK

Maker Park is a response to a typical building type in Old Ottawa South that is a legacy from the 1950 and 1960s, the Auto garage and the gas station (Type 5). Many of these sites have been transformed with larger buildings, but a number of these small one-storey buildings remain. They provide a large street-front parking lot for the permanent or temporary storage of cars.

This particular lot at 1063 Bank Street between Echo Drive and Sunnyside Avenue has housed Roy Barber Auto Services for the past fifty years. On the same block, and adjacent to the auto shop to the north, is the Sunnyside Public Library, and to the south, a block of small businesses including a pottery studio, a hair salon, a pizza place, a dog boutique and café, a used book store, a framing store, and a music venue/bar/arcade. To the south of this block at the southeast corner of Bank and Sunnyside is a parking lot on which a food truck is parked.

Roy Barber garage is in the process of closing their shop, having opened a larger garage further south on Bank Street. The qualities of the site which are interesting to preserve are the visual connection between Bank Street and the rest of the surrounding neighbourhood, and the possibility of a public open space for small groups to gather.

Maker Park proposes the transformation of the garage and parking lot into a public park, with public Makerspace amenities. This particular intervention demolishes the existing auto garage, but retains a memory of its characteristic mullioned garage doors and metal cladding. The proposal places a four-storey-tall planted vertical screen along the sidewalk, to create intimacy within the public park while retaining the views between Bank street and the neighbourhood beyond. The screen gently attaches to the Sunnyside public library, and then becomes the support for a glazed entry way to a new residential block built above the existing businesses to the south. Behind the park, eastward, is an elevated studio and makerspace in the form of a long bar that cantilevers over the existing south block. The latter is accessed by a long stairway and freight elevator. Below the elevated makerspace are market stalls. There are open outdoor studios on the roofs. The bar building creates a passageway behind the existing businesses to the south. Acting as an annex to Maker Park, this covered passageway connects Maker Park to the existing parking lot at Bank and Sunnyside (and its food truck) and provides a work area for scaffolding assembly and other large construction equipment, for projects in other parts of the Maker City, on other sites along Bank Street. Roy Barber Garage has been a space of making for decades. This intervention aims to keep the site's spirit alive.

Figure 15.1: A Guide to Maker Park

A GUIDE TO MAKER PARK

AN AUTO SHOP NAMED ROY BARBER. A SPACE FOR CARS AND CUSTOMERS FOR FIFTY YEARS. SOON CLOSING ITS DOORS, ONLY TO RE-OPEN THEM. A GARDEN WALL ANNOUNCING A NEW SPACE. A PARK, A LUSH GREEN CANOPY. A SPACE FOR TREES AND CUSTOMERS. A MAKER MARKETPLACE WITH A STUDIO IN THE SKY. ARCHITECTURE THAT REMEMBERS GARAGE DOORS. NEW RESIDENCES PERCHED ON A MUD OVEN.

ELEVATION CONTINUED-
PARALLEL TO BANK STREET
1-100

CROSS- SECTION
PERPENDICULAR TO BANK STREET
1-100

Figure 15.5: A Guide to Maker Park continued

PLAN-
BANK STREET LEVEL
1-200

“You advance for hours and it is not clear to you whether you are already in the city’s midst or still outside it”
Continuous Cities 5

CONCLUSION

In *Invisible Cities*, Calvino describes a Maker City in *Cities and the Sky* 3:

Those who arrive at Thekla can see little of the city, beyond the plank fences, the sackcloth screens, the scaffolding, the metal armatures, the wooden catwalks hanging from ropes of supported by saw-horses, the ladders, the trestles. If you ask, 'Why is Thekla's construction taking such a long time?' the inhabitants continue hoisting sacks, lowering leaded string, moving long brushes up and down, as they answer, 'So that its destruction cannot begin.' And if asked whether they fear that, once the scaffolding is removed, the city may begin to crumble and fall to pieces, they add hastily in a whisper, 'Not only the city.'

If, dissatisfied with the answer, someone puts his eye to a crack in a fence, he sees cranes pulling up other cranes, scaffolding that embraces other scaffolding, beams that prop up other beams. 'What meaning does your construction have?' he asks. 'What is the aim of a city under construction unless it is a city? Where is the plan you are following, the blueprint?'

'We will show it to you as soon as the working day is over; we cannot interrupt our work now,' they answer.

Work stops at sunset. Darkness falls over the building site. The sky is filled with stars. 'There is the blueprint,' they say.

Calvino creates a captivating portrayal of the relationship between the construction of the city of Thekla and its inhabitants. The blueprint is not simply an instrument to guide the construction of an isolated building: time and time's passage are written into Calvino's Thekla, and this makes that city memorable and creative.

Creativity makes a city resilient because the act of building and designing spaces forms a bond between physical spaces and memories, dreams, and patterns of living. Counter to totalizing urban development, incremental Maker City development follows a different timeline, one where new constructions do not erase old ones. For instance, in Maker Dwelling, the shops on the Bank Street level are retained despite the fact that they create a tension with the new architecture. As these businesses and their facades expire or no longer serve the neighbourhood, they will be replaced by new interventions (See Figures 18.1-18.5). This thesis provides a snapshot into such interventions, as they would occur at a singular moment in time.

The interventions in this thesis are primarily developed horizontally, in proportional response to the existing one and two-storey fabric, augmenting the latter with two or three additional stories. The interventions thus represent an incremental step in the vertical development of the Maker City. Were this work to continue, a second series of interventions could explore a taller fabric, and perhaps even

high-rise buildings. The key would be that the vertical insertions meet the ground in a manner that both activates and expresses the Maker City.

This thesis emphasizes significant moments that exist in Old Ottawa South. For example, the discovery of the re-created 3D printed laundromat in the Makerspace Hub facade provides a moment of curiosity that triggers a recollection and rearrangement of neighbourhood memories. Another example is the recognition of gaps, such as the gap between the Mayfair Theatre and the Shoppers building, or the gap between Yardley's Antiques and the Trinity Anglican Church annex, and development of their potential to become new spaces of habitation and exploration.

In the interventions, moments which are particularly successful are those where the new or modified façade engages the sidewalk dynamically. Disruptions of the "flat" two-dimensional façade and the creation of interstitial spaces between old and new fabric invite creative habitation and participation. The Makerspace Hub façade engages passers-by through the use of large opening garage doors and hexagonal and square operable windows. It also plays with transparency and the slope of the site, as the view into the makerspace workshops slowly disappears with one's movement along the sidewalk. Entrance platforms from the sidewalk create spatial opportunities where pedestrians can choose to engage with the maker realm by walking down the ramp and into the workshop spaces. Additionally, the large overhanging entry way at Makerspace Hub serves as a threshold between the creative making space and the rest of the city.

The five projects are intended to be tangible, tactile interventions that provide orientation and a sense of place to the inhabitants of Old Ottawa South. The projects celebrate moments of making and living within the city. A richer urban realm is made possible by a maker architecture, which, as written by Roh, recognizes that "mystery does not descend to the represented world, but rather hides and palpitates behind it."⁶⁸ A dimension of mystery exists in Old Ottawa South, and, guided by Magical realism, Maker City's architectural interventions serve to pull it out and reveal it. Maker City architecture provides a framework for subtle but heightened urban experiences, whether of discovering a hidden passageway where before existed a gap, or discovering a gateway into a creative space where before existed a parking lot. The maker approach seizes upon opportunities for "magical" experiences: these magical experiences can be spatial, such as the experience of a tall narrow space (at the Maker Micro-Emporium), or material, such as the use of 3D printing of a demolished building with building waste. In

⁶⁸ Davos Frauenkirch, March 1925, quoted in Franz Roh, "Magic Realism: Post-Expressionism," 16.

Maker City, making is the thread that stitches together new and old. Architecture, in this context, is closely tied to act of making and is therefore subject to making's inventions and innovations. New urban forms are much more likely to occur in a maker city than in a conventionally developed one. The city, beyond the domain of consumerism, becomes a locus for making and fabrication, where business and work opportunities are woven together with public participation, street life, and the joy of daily wandering.

Bridge to bridge humdrum

Makers stitch new cityscapes

With magical thread.

Figure 16.1: Old Ottawa South Bank Street east elevation

ELEVATION
BANK STREET EAST
1-1500

Figure 16.2: Old Ottawa South Bank Street east elevation continued

ELEVATION CONTINUED
BANK STREET EAST
1-1500

Figure 16.3: Old Ottawa South Bank Street east elevation continued

ELEVATION CONTINUED
BANK STREET EAST
1-1500

Figure 16.4: Old Ottawa South Bank Street east elevation continued

ELEVATION CONTINUED
BANK STREET EAST
1-1500

Figure 16.5: Old Ottawa South Bank Street east elevation continued

ELEVATION CONTINUED
BANK STREET EAST
1-1500

Figure 16.6: Old Ottawa South Bank Street east elevation continued

ELEVATION CONTINUED
BANK STREET EAST
1-1500

Figure 17.1: Old Ottawa South Bank Street west elevation

ELEVATION
BANK STREET WEST
1-1500

Figure 17.2: Old Ottawa South Bank Street west elevation continued

ELEVATION CONTINUED
BANK STREET WEST
1-1500

Figure 17.3: Old Ottawa South Bank Street west elevation continued

ELEVATION CONTINUED
BANK STREET WEST
1-1500

Figure 17.4: Old Ottawa South Bank Street west elevation continued

ELEVATION CONTINUED
BANK STREET WEST
1-1500

Figure 17.5: Old Ottawa South Bank Street west elevation continued

ELEVATION CONTINUED
BANK STREET WEST
1-1500

Figure 17.6: Old Ottawa South Bank Street west elevation continued

ELEVATION CONTINUED
BANK STREET WEST
1-1500

Figure 18.1: Maker City incremental progression

MAKER MICRO-EMPORIUM AT THE MAYFAIR THEATRE

Figure 18.2: Maker City incremental progression

MAKER HAVEN AT THE TRINITY ANGLICAN CHURCH

Figure 18.3: Maker City incremental progression

Figure 18.4: Maker City incremental progression

Figure 18.5: Maker City incremental progression

MAKERSPACE HUB

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APPENDIX A: ILLUSTRATION SOURCES

Figure 3:

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Figure 5:

Roh, Franz. Feindliche Compagnons berühren sich im Maschinen Keller (Fellow Enemies Are Removed from the Basement Machine) from Metamorphosen des Herrn Miracoloss. Engraved collage, 12.5cm x 20 cm. Reproduced from Tenerife Espacio de las Artes exhibition, Franz Roh el collageaños 30's. <https://www.scribd.com/doc/94909573/Franz-Roh-El-collage-anos-30>.

Figure 8:

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Figure 12.1:

Fennings Taylor, L, Circa 1924, Trinity Anglican Church Archival Collection, Document 51 07 13, Anglican Diocese of Ottawa Archives, Ottawa.

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ELEVATION
BANK STREET EAST

ELEVATION
BANK STREET WEST

ELEVATION
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