

Dwelling in Time

by

Amir Ali Charmchi, B.F.A

A thesis submitted to the
Faculty of Graduate and Postdoctoral Affairs
in partial fulfillment of the requirements for
the degree of

Master of Architecture

In

M. ARCH (Professional)

Carleton University

Ottawa, Ontario

© 2015, Amir Ali Charmchi

Abstract

When enabled by an adequate built-environment, humankind can find both welfare and meaning within the *act of dwelling*. This thesis explores the potential of the *act of dwelling* by framing an understanding of the built-environment as both the setting for, and the product of, dwelling.

Humankind's instinctive need for shelter has placed the house at the crossing point of rational and emotional action. In order to build good homes – that, beyond being economically conscious, are also socially meaningful – an exploration of the social, cultural, political, and economic factors pertaining to their construction, and a reflection on the theorization, education, production, and evaluation of residential architecture, are necessary.

Driven by the dual goal of achieving meaning and economy in dwelling, and supported by historical and contemporary built examples, this thesis develops an architectural proposal that integrates concepts of user agency, spatial flexibility, variable density, and financial feasibility in the form of a medium-rise residential complex sited in Ottawa's Centretown neighbourhood.

Acknowledgements

My family for their support and generosity through my years of study.

My partner Ms Saeedeh Rahmati for her incredible support and understanding during every moment of my studies.

My advisor Professor Federica Goffi who supported me during this undertaking.

Showing me the true spirit of learning—that is to embrace the moments spent thinking, exploring, imagining, and dreaming.

Professors Janine Debanné who generously offered her valuable time and expertise towards the conclusion of this study.

My friend Mr Nersi Makki, who gracefully helped me refine the written expression of my ideas.

My fellow colleagues here at Carleton with whom I have countless happy memories.

The magnificent city of Ottawa, which I have been proud to call home for the past four years.

Table of Contents

Abstract	i
Acknowledgments	ii
Table of Contents	iii
List of Illustrations	iv
The Matter, Introduction	1
The Concept, Chapter One	11
Being-in, Being-in-the-world, and Being-in-time	13
Rationalism, Communication, and Interface	16
Authenticity, Idle Talk, and Curiosity	21
The Content, Chapter Two	26
The Object, The Myth, The Product	28
Space, Time, Material Expression	37
Contingency, User Agency, Vernacular Construction,	45
The Context, Chapter Three	51
The Policy, The Practice, The Outcome	54
The Project, 381 Kent Street Ottawa	67
Commencement, Conclusion	91
Bibliography	94

List of Illustrations

Figure 1: The House is Black, installation (Hechmat 2013)	15
Figure 2: Playtime, film still (Tati 1967)	22
Figure 3: Universal Space, illustration (Mies van der rohe 1940)	29
Figure 4: The Bauhaus Curriculum, illustration. (Bauhaus 1923)	30
Figure 5: Radiant City, illustration (Le Corbusier 1979)	34
Figure 6: Support Structure, illustration (Habraken 1963)	35
Figure 7: Space Systems, illustration (Bragdon 1918)	39
Figure 8: Types of WHL houses, illustration (RAIC 1942)	47
Figure 9: Ville St-Laurent house, photograph (Demine 1942) & (Lamothe 1995)	48
Figure 10: Scaled model, photograph (Lamothe 1995)	49
Figure 11: <i>Let Us Prey</i> , book cover (1974)	59
Figure 12: <i>Plastic House of the Future</i> , illustration (RAIC 1942)	62
Figure 13: <i>67 Homes for Canadains</i> , book cover (CMHC 1947)	63
Figure 14: Collage, (Frascari 2010)	64
Figure 15: Aerial photograph, 381 Kent Street	67
Figure 16: Row house, photograph	68
Figure 17: Site Massing Proposal, collage	70
Figure 18: The in-between space, photograph (Hertzberger 2005)	74
Figure 19: House Above the Bridge, sculpture (Armajani 1974)	75

Figure 20: Lafayette Towers, photograph (Debanné 2012)	76
Figure 21: Contemporary family life cycle, illustration (Friedman 2012)	77
Figure 22: Conceptual exercise in the use of support structure, illustration	78
Figure 23: <i>Next Home</i> , illustration (CMHC 2012)	79
Figure 24: Project's contextual dynamics, illustration	80
Figure 26: Site Plan, 1:500	81
Figure 25: Schematic site Plan, illustration	81
Figure 27: Underground Plan, 1:500	82
Figure 29: Ground Floor Plan, 1:500	83
Figure 28: Vertical and Horizontal schematic circulation, illustration	83
Figure 31: Second Floor Plan, 1:500	84
Figure 30: Axonometric circulation, illustration	84
Figure 32: Third Floor Plan, 1:500	85
Figure 33: Forth Floor Plan, 1:500	86
Figure 34: Fifth Floor Plan 1:500	87
Figure 35: Roof Plan, 1:500	88
Figure 36: West Section, 1:400	89
Figure 37: North Elevation, 1:400	90
Figure 38: Modern Masterpiece #8, collage (Santiago Baptista 2010)	92

The Matter, Introduction

The term *dwelling* is abstract. As an act *dwelling* occupies a spectrum that expands between most inexplicable human sentiments and experiences to the highest level of pragmatic functionalism. The term *dwelling* is also frequently used in reference to a place where one or more individuals live. This broad range of existential and practical connotations, therefore, empowers *dwelling* in resisting a fixed conceptual definition.¹ But in an era when scientific and technological thinking dominate the description and organization of human affairs,² and in a culture obsessed with the elimination of its contingencies,³ what is it that prevents the forces of reductive rationalism from limiting the interpretation of *dwelling*?

An unassuming response to this question is that dwelling's innately abstract nature renders it so obscure as to defy a strict definition. In an age dominated with what shall here be termed, *new-thinking*¹ – the instrumental thinking favoured by modern scientific outlooks in which speculative concepts have little to no place, the answers to the question of dwelling risk over-simplification. Indeed, the question of dwelling demands speculative reflection and, in its built form, non-fixed solutions.

1 Peter King, *Private Dwelling: Contemplating the Use of Housing* (New York: Routledge, 2004), 17.

2 Sylviane Agacinski, *Time Passing: Modernity and Nostalgia*, (New York: Columbia University Press, 2003), 5.

3 Georg Wilhelm Friedrich Hegel, *Lectures on the philosophy of world history: introduction, reason in history*. (Cambridge: Cambridge University Press, 1975), 28.

I The term *new-thinking* is derived from what Hegel describes as “the new ways of thinking.” In his preface to his book *The Science of Logic* Hegel writes: “The new ideas have imperceptibly become the accepted currency even to those opposed to them. And if these [referring to speculative thoughts] continue to fuss about their sources and principles and to dispute them, they have nevertheless surrendered to their consequences, unable to fend off their influence. They have no other way of giving a positive importance, and some content, to their increasingly irrelevant negative attitude, except by falling in with the new ways of thinking.” (Hegel 1969, 9)

And this is not easily achieved. From this answer then arises a new set of questions. Namely: How can dwelling maintain its relevance to the practice of building and the formation of the built-environment in the face of the brute forces of logical pragmatism? More specifically, what means can architects and builders avail themselves of in order to imbue residential architecture with a fuller interpretation of dwelling's meaning and potential with respect to humankind's existence?

Political theorist Peter King provides a telling answer to these two questions in his book *Private Dwelling: Contemplating the Use of Housing*. King points out that it is dwelling's two rudimentary characteristics, its innate "ambiguity" and its "ubiquitous" nature which enable dwelling to resist reductive rationalism.⁴ Together these two traits empower dwelling to uphold a degree of contingency in favour of its future actions, and place it in direct defiance of new-thinking's reductive practices. From this position, dwelling is able to engage with, navigate through, and mediate between, the seemingly incongruent yet interdependent realms of humankind's *mortal-being*.¹¹ In other words, in its abstraction and open-endedness, dwelling manages to elevate all that is banal in human existence, towards a meaningful consciousness.

But contrary to dwelling's impulse toward conceptual transcendence, its

11 The term *Mortal-Being* is extracted from Heidegger's etymological examination of the German term *bauen*, meaning: to build. He writes: "Now, what does *bauen*, to build, mean? The Old High German word for building, *buan*, means to dwell. This signifies to remain, to stay in a place. The proper meaning of the verb *bauen*, namely, to dwell, has been lost to us. ... Where the word *bauen* still speaks in its original sense it also says *how far* the essence of dwelling reaches. That is, *bauen*, *buan*, *bhu*, *beo* are our word *bin* in the versions: *ich bin*, I am, *du bist*, you are, the imperative form *bis*, be. What then does *ich bin* mean? The old word *bauen*, to which the *bin* belongs, answers: *ich bin*, *du bist* mean I dwell, you dwell. The way in which you are and I am, the manner in which we humans *are* on the earth, is *buan*, dwelling. To be a human being means to be on the earth as a mortal. It means to dwell." (Heidegger 1993, 348-349)

⁴ King, *Private Dwelling*, 17.

material expression binds it back to the tangible realities of the built-environment. This dual-directionality is indeed what defines dwelling as building and dwelling are intimately related. As philosopher Martin Heidegger explains,

Dwelling and building are related as end and means. However as long as this is all we have in mind, we take dwelling and building as two separate activities. ... By the means-end schema we block our view of the essential relations. For building is not merely a means and a way towards dwelling—to build is in itself already to dwell.⁵

In other words, building and dwelling find meaning in a mechanism of mutual concerns and distinct traits where they engage one another to produce a meaningful built-environment in support of a meaningful existence. But there remains a weakness in this mechanism. For despite their mutual concerns, building and dwelling each have their own set of distinct apprehensions that can disrupt their mutual engagement, and negatively affect their product: the built-environment.

There is no question that dwelling is an inherently human act and that all humans engage in the act of dwelling. And yet, few are involved in decisions pertaining to human habitats as constructions. Who is, and who should be, qualified and entrusted with this agency? A mere quantitative approach to housing design, concerned only with material, layouts, and labour standards is incomplete, and is

⁵ Martin Heidegger, "Building, Dwelling, Thinking." *In Basic Writings: From Being and Time (1927) to The Task of Thinking (1964)*, ed. Farrell Krell David.(San Francisco: Harper, 1993), 348.

not likely to produce dwelling-spaces in the full sense of the term. But since both acts of building and dwelling as Heidegger describes are “worthy of questioning and thus ... worthy of thought,”⁶ one can assert that what qualifies an individual to make decisions about dwelling is his or her capacity for thinking.

Heidegger explains that “thinking,” much like “building,” “belongs” to dwelling. They are, “each in its own way, inescapable for dwelling.”⁷ But neither building, nor thinking alone, is sufficient for dwelling. Rather, they both must interact with one another through a relationship led by the act of dwelling. More precisely, neither building, nor thinking, nor both are qualified to fully inform dwelling. However, both acts are required for a sensible engagement between the act of dwelling and the “workshop of long experience and incessant practice” that is the built-environment.⁸ In other words, only when humankind is informed of its own dwelling nature and begins thinking and acting accordingly, can it begin to build a meaningful environment suitable to its mortal-being.

As a product of architecture, the built-environment is the setting where the constructive qualities of both scientific reason and speculative thought come together and provide humankind with a platform for an active and meaningful worldly

6 Heidegger, “Building, Dwelling, Thinking,” 362.

7 Heidegger, “Building, Dwelling, Thinking,” 362.

8 Heidegger, “Building, Dwelling, Thinking,” 362.

presence. Architectural theorist Alberto Pérez-Gómez expounds on architecture's potential for facilitating this "existential orientation," stating,

Architecture does not communicate a particular meaning, but rather the possibility of recognizing ourselves as complete ... in order to dwell poetically on earth and thus be wholly human. ... In other words, good architecture offers societies a place for existential orientation. It allows for participation in meaningful action, conveying to the participant an understanding of his or her place in the world.⁹

But simply knowing what it means to dwell and what constitute thoughtful acts of dwelling and building does not guarantee that meaningful dwelling inevitably occurs. For a building to be deemed truly meaningful, it must be a welcoming receptacle for dwelling, rather than seeking to define its context. In fact, the contextual variability to meaning within the act of dwelling makes general assessment of the meaning within the building and built-object nearly impossible.¹¹

At their utmost predominance, new-thinking's utilitarian preferences provoke an emphasis, perhaps an over-emphasis, on scientific elaboration and cultivation of materials and methods.¹⁰ The house, today, as a material product of human consumption is required to be scientifically perfected. Designers invest great effort in elaborating better performing building materials and methods. Such pragmatic

III This irony is a direct challenge to the virtue of thinking. For the built-object is but the product of thinking, the embodiment of an enterprise of rational acts informed by the exercise of science, and if left uninformed by the experience of dwelling, it would be a mere object of use, incapable of imbuing any true meaning. Thus far, the instinctive reaction of new-thinking to this challenge has been to supply a constant stream of context to the means-and-end relationship between building and dwelling. The correlation between the tangible traits of building and adequacy within mortal-being, driven by the expediency of means-and-end schema, compels new-thinking towards conceptualizing a false virtue upon sustaining the banal exercises of the mortal realm.

⁹ Alberto Pérez-Gómez, "Ethics and Poetics in Architecture", In *Towards an Ethical Architecture: Issues within the Work of Gregory Henriquez*, ed. Alberto Pérez-Gómez. (Vancouver: Blueimprint, 2006). 68-69.

¹⁰ Georg Wilhelm Friedrich Hegel. *Science of Logic*, (London: Allen & Unwin, 1969). 9.

exercises, supported by new-thinking's means-and-end approach, inevitably gain momentum since they carry with them numerous quantifiable advantages. Renowned political theorist Hanna Arendt views these practices as unsuitable to humankind's true needs and desires:

Man's "propensity to truck and barter" is the source of exchange objects, ... as his ability to use is the source of use things. These are capacities of man and not mere attributions of the human animal like feelings, wants, and needs, to which they are related and which constitute their content. Such human propensities, are as unrelated to the world which man creates as his home on earth, as the correspondent properties of other animal species, and if they were to constitute a man-made environment for the human animal, this would be a non-world, the product of emanation rather than of creation. Thought is related to feeling and transforms its mute and inarticulate despondency, as exchange transforms the naked greed of desire and usage transforms the desperate longing of needs—until they all are fit to enter the world and to be transformed into things.¹¹

With regards to dwelling, new-thinking's approach has been to subjectively define a series of quantitative requirements for defining the adequacy of buildings. These measures are then supported by and applied through scientific common sense and objective industrialized production.

As the primary determinant of the act of building, thinking is responsible for the complex cognitive exchange that takes place across and between all existential

¹¹ Hannah Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1958), 168.

and pragmatic modes of dwelling. The adequacy of a built-environment can only be fairly assessed when all of these modes are considered. Yet, new-thinking faces a dilemma as it is not adapted to evaluating the *ambiguity of meaning* and *contingency in action* that is innate to the act of dwelling.

New-thinking's greatest challenge is in contending with what Heidegger terms the "Temporality of Being."¹² Time is the only aspect of dwelling that cannot be manipulated by universal theory. Contemporary philosopher Sylviane Agacinski explains this phenomenon in her book *Time Passing: Modernity and Nostalgia*. She writes: "rationality has deployed an economics according to which time must be productive, useful, and profitable. [And in doing so giving the impression that humankind] must forever 'gain time,' because time itself gains [it] something else."¹³ The only way in which new-thinking considers time is numerically, notably, in predicting changes in market values, and therefore crude at best.

Speculative forms of *humanist-thinking*^{IV} struggles to maintain relevance in light of technological advances in all spheres of human activity, and under the long shadow of reductive rationalism's control over human affairs. But it is important to reserve a place for *humanist-thinking* when approaching residential architecture.

IV *Humanist-thinking* is a term in reference to necessary place for "humanities" in reductive design practice of today. It is neologized in response to Leonidas Koutsoumpos' article in *Humanities, Ethics in architectural praxis*. Koutsoumpos writes: "Humanities have been marginalized in higher education by the monopoly of technological development. This view gives humanities an inherent value in the context of the design disciplines and architecture in particular. Moreover, this value is arguably not aesthetics of any other kind but primarily ethical. ... My argument opposes other views that approach the problem of ethics as an application of a theoretical problem to 'real world dilemmas.' Often such views end up suggesting norms or rules that can be applied on architecture as external imperatives. ... I see architecture as an *inherent* human activity. But at the same time, I will challenge the centrality of human rationality as it appears in the tradition of the enlightenment." (Koutsoumpos 2010, 16-17)

¹² Heidegger, *Being and Time*, 40.

¹³ Agacinski, *Time Passing*, 6.

By adopting a more balanced outlook, architecture's primary concern becomes the production of a built-environment that is both frugally conscious and socially meaningful. As Alberto Pérez-Gómez explains architectural meaning "is not merely one of semantic equivalence; rather it occurs in experience."¹⁴ Understanding of the intimate tie between the solid nature of building and the fluid temporality of humankind's existence leads to a meaningful *Being*, embodied in a phenomenological exercise of dwelling.

The aforementioned *humanist-thinking* bypasses reductive reason's preoccupation with overcoming time through defining a universal truth; rather, it is concerned with nurturing the temporality of human existence. Here, time becomes both the necessity of and the destiny for serving the spirit of dwelling.¹⁵ Simply put, good residential architecture does not find its meaning in the good performance of a dictated set of functions nor in its ability to communicate preconceived ideals in connection with so-called standards of living. Residential architecture derives its value from its ability to negotiate the existential dualities of humankind's *Being*, towards a meaningful *Becoming*, guided by the spirit of *dwelling*.

This thesis takes on the task of addressing the existential inquiries of dwelling

¹⁴ Alberto Pérez-Gómez, "Ethics and Poetics in Architecture", 68.

¹⁵ Agacinski, *Time Passing*, 21.

in terms of its spatial realization. The following paragraphs outline an approach to the three notions of dwelling, thinking, and building, with an outlook towards their application in residential architecture.

Chapter One begins by laying down the conceptual grounds for discussion upon Martin Heidegger's concept of "Being-in," and questions around the existential states of "Being-in" and "Being-in-the-world."¹⁶ These concepts support an exploration into the primary ethical challenges faced by new-thinking, priory defined. The question of adequacy of the built-environment and the possibilities of interdisciplinary data analysis are also tapped in view of establishing an ethical and mutually beneficial platform of communication between intangible and tangible realms of dwelling.

Chapter Two explores the notions of building and the built-object. It begins by examining early modernist approaches to the theorization, design, and production of housing. It seeks to understand how conceptual content can be brought to bear upon the built-environment, and of the means by which design intents can be imbedded into the built-object. Lastly, this chapter will explore the potentialities of vernacular architecture in absorbing temporal content and user agency in residential construction.

¹⁶ Martin Heidegger, *Being and Time*, (New York: Harper, 1962). 84.

Chapter Three pursues a contextual understanding of the current condition of Canada's housing stock by examining practices in industrialized building, architectural consultation, and the dominant socio-economic policies of the past seven decades. The chapter then seeks to find means for alleviating some of the precariousness of these conditions within the existing building and economic practices of Canadian housing production.

Finally, both conceptual and contextual findings of this study are applied to the formation of a site-specific architectural proposal for a residential development in Ottawa's Centretown neighbourhood, seeking to answer this concluding question: How can residential architecture facilitate a relative synchronicity between humankind's temporal existence and its built receptacle – the built-environment?

The Concept, Chapter One

With dwelling at the centre of its concerns, it may seem natural for this study to begin by defining and contextualizing the notion of dwelling. But as stated above, the concept of dwelling inherently resists strict definition. This study therefore explores the concept of dwelling as the contextual foundation of humankind's existence, that is to say, as the act through which humankind understands things and orients itself within the world.

This chapter is informed by the philosophy of Martin Heidegger and his exploration of meaning within the notions of "Being-in" as "the formal existential expression for the Being of Dasein, ... [that is] Being-in-the-world."¹⁷ In so doing it will explore the notion of temporal consciousness and its necessity for reaching an "authentic existence." From there, the chapter examines humankind's cognitive efforts in providing context and thus finding meaning in its own affairs, beginning with Hegel's analysis of the exercise in "logical thinking," followed by Friedrich Nietzsche's writings on the vulgar traits of the "reductive spirit," and Hannah Arendt's masterful explanation of the "human condition," together formulating a critique of contemporary instrumental thinking. Finally, this chapter sets up a discussion

¹⁷ Heidegger, *Being and time*, 80.

regarding adequacy within *Dasein* and authenticity of action towards humankind's
"potentiality-for-Being-in-the-world."^V

V Both notions of an "authentic existence" and the "potentiality-for-being-in-the-world" are part of Heidegger's advancing on his idea of human existence. Heidegger writes: "Dasein's Being is in the state of Being-in-the-world, ... [Its] falling, as a kind of Being of this Being-in, affords us rather the most elemental evidence for Dasein's existentiality. In falling, nothing other than our potentiality-for-Being-in world is the issue, even if in the mode of inauthenticity. Dasein *can* fall only *because* Being-in-the-world understandingly with a state-of-mind is an issue for it. On the other hand, *authentic* existence is not something which floats above falling everydayness ; existentially, it is only a modified way in which such everydayness is seized upon." (Heidegger 1962, 224)

Being-in, Being-in-the-world, and Being-in-time

In his book *Being and Time*, Heidegger examines the initial dogmatic interpretation of meaningful *Being*. He initiates his argument by establishing that a universal impression of *Being* makes it the “emptiest of concepts” and renders any questioning about its meaning redundant.¹⁸ Examining both theological and philosophical presumptions of spatial distinction between the tangible and intangible realms of existence, he highlights the necessity of context in the formation of an existential interpretation for *Being*.

Heidegger supplements Hegel’s notion of existence or *Dasein*, defined then as *Being*, in a place empty of spatial representation,¹⁹ with the thought of “Being-in-the-world”—“the compound expression ... for a unitary phenomenon.”²⁰ This is the “essential structure of *Dasein* [and what gives] insight into [its] existential spatiality.”²¹ Heidegger writes:

Being-in ... is a state of *Dasein*’s *Being*; it is an *existential*. So one cannot think of it as the *Being-present-at-hand* of some corporeal Thing, ... Nor does the term “*Being-in*” mean a spatial ‘in-one-another-ness’ of things present-at-hand, any more than the word ‘in’ *primordially* signifies a spatial relationship of this kind. ‘In’ is derived from “*innan*”—“to reside”, “*habitare*”,

18 Heidegger, *Being and Time*, 21.

19 Hegel, *Science of Logic*, 83.

20 Heidegger, *Being and Time*, 78.

21 Heidegger, *Being and Time*, 83.

“to dwell” ... ‘An’ signifies “I am accustomed”, “I am familiar with”, “I look after something”.²²

Heidegger’s etymological examination of the word “in” distinguishes the term “Being-in” as the “formal existential expression for the Being of Dasein,”²³ which itself is “ontically distinguished by the fact that, in its very *Being*, that *Being* is an issue for it.”²⁴ In other words, Heidegger’s expression of the term “in” grants *Dasein* with a “Being alongside the world in the sense of being absorbed in the world.”²⁵ This is what ultimately empowers humankind to dwell, and thus find meaning, within the distinctions of its own existential and mortal realms of *Being*.^{VI}

Dasein is distinct from *Being*, in that it is both a subject to and a determinant of the conditions of *Being*. Indeed it is this characteristic of *Dasein* that makes up the conditionality of *Being*. It is within this uniquely human existential duality that *Dasein* must dwell. Nowhere is the dichotomy between the worldliness of *Being* and the worldlessness of *Dasein* more of a challenge than in the interpretation of “Being-in-time.” Heidegger explains that *Dasein* instigates a question of authenticity towards its own being by laying a claim to “primordially,” a question rooted in the discrepancy between the inescapable condition of “Being towards death” and

22 Heidegger, *Being and Time*, 80.

23 Heidegger, *Being and Time*, 80.

24 Heidegger, *Being and Time*, 32.

25 Heidegger, *Being and time*, 80.

VI It should be made clear that, despite Heidegger’s use of a spatial vocabulary to describe the state of Dasein, Dasein itself is by no means a spatial state. Heidegger places great emphasis on the importance of understanding this matter, writing: “Being alongside the world never means anything like the *Being-present-at-hand-together* of Things that occur. There is no such thing as side-by-sideness of an entity called Dasein with another called world.” In other words, as a determinant of worldly conditions, Dasein is separate from worldly things. But as worldly conditions are its concerns, its falling subject to these very conditions is inevitable. For despite being separate from worldly things, Dasein is not worldless, and thus it always “present-at-hand ‘in’ the world,” making Dasein subject to worldly conditions. (Heidegger 1962, 81-82)

“Dasein’s potentiality-for-being-a-whole,”²⁶ or *Becoming*. And since the passage of time is inescapable, *Dasein* must find authenticity in a meaningful engagement with time.

Heidegger points out that the emptiness imposed upon *Being* by its universal interpretation indeed makes “it possible to individualize it[s meaning] very precisely and for any particular Dasein.”²⁷ But even this meaningful emptiness alone, cannot infuse *Being* with a meaning. For “as long as the existential structure of an authentic potentiality-for-Being has not been brought into the idea of existence, the fore-sight by which an existential interpretation is guided will lack primordially.”²⁸ According to Heidegger, this structure can be found in the “interpretation of *Dasein* in terms of temporality ... [and the] phenomenological destruction of the history of ontology, with the problematic of Temporality as our clue.”²⁹

In this way time becomes the one platform where the certainties of *Being* and ambiguities of *Becoming* can begin to engage in a dialectic interchange towards a meaningful existence—a continuous *Becoming*, understood as successful human endeavours through a conscious human presence, accounting for the contingency demanded within human affairs.

26 Heidegger, *Being and Time*, 276-277.

27 Heidegger, *Being and Time*, 63.

28 Heidegger, *Being and Time*, 276.

29 Heidegger, *Being and Time*, 63.



Figure 1: The House is Black, by Behrouz Hechmat. (2013)

“To Hechmat, the house is central to human existence, and his treehouses emphasise the instability and frailty of our notions of home. His treehouses mutate; their materials, colours and contents continually change. (Rose Issa Projects 2013)

Rationalism, Communication, and Interface

The contemporary state of the world reflects centuries of humankind's effort to reconcile the incongruent conditioning forces of its *Being*. With its direct, practical, and immediate reflection on the tangible realm, scientific reason has managed to progressively weaken theoretical speculation as its opposition. The latter—once the guardian of abstract thought “dedicated to the contemplation of the eternal” as Hegel so poetically describes it, has retreated to the place of an expression “for feelings, popular practicality, and erudite historiography.”³⁰ For, the lack of any immediate reflection on the tangible conditions of the mortal realm prevents speculative thought from effectively opposing scientific reason.^{VII}

Hegel explains that in addition to an indiscriminate renunciation of the ambiguous traits of human existence, scientific reason cautiously avoids “the period of fermentation that goes with the beginning of every new creation [that is the] past,”³¹ and eschews the historical context to humankind's *Being*. Blessed with pragmatic imminence, scientific reason takes on the role of history supplying the ersatz context to humankind's existence, and in effect shapes the modernist concept of the universal human. In this way, new-thinking alleviates the concerns of

VII In addition to this disadvantage, speculative thought faces another set of obstacle in opposing scientific reason. The first obstacle is that opposing any entity requires the recognition of its presence, something that is irrefutable given the strictly tangible nature of rationalism. The second obstacle is that examining an entity's virtue must take place within its own realm. Although it is possible to oppose the virtue of some of the products of rationalism, opposing the virtue of the practice is nearly impossible since the virtue of scientific practice is the practice itself. But despite its inherent advantage over speculative thought, scientific reason cannot escape the banality that is rooted in its indisputable physical presence. Facing a self-imposed challenge to its own authenticity, scientific reason's frantic search for virtue takes on an unprecedented level of contextual withdrawal causing it to rationalize an introverted interpretation of virtue, and undertake incessant efforts towards producing context and this meaning for its activities.

³⁰ Hegel, *Science of Logic*, 8.

³¹ Hegel, *Science of Logic*, 9.

its own underdeveloped strength, to a point where it demands the acquisition and reinforcement of its referential principles from its own science.³²

Such is the dominant paradox to the reductive spirit of the well-intended new-thinkers, who believe to have a grasp on the “measures of human unreason and self-deception, [but] are usually themselves in the grip of some ancient fantasy.”³³

Philosopher Friedrich Nietzsche confronts these realists by calling on them:

You sober people who feel armed against passion and phantastical conceptions and would like to make your emptiness a matter of pride and an ornament — you call yourself realists and insinuate that the world really is the way it appears to you: before you alone reality stands unveiled, and you yourselves are perhaps the best part of it — ... But aren't you too in your unveiled condition ...all too similar to an artist in love? And what is “reality” to an artist in love! ... Your love of “reality” ... that is an old, ancient “love”! In every experience, in every sense impression there is a piece of this old love; and some fantasy, some prejudice, some irrationality, some ignorance, some fear. ... We are not nearly as strange to one another as you think, and perhaps our good will to transcend drunkenness is just as respectable as your belief that you are altogether incapable of drunkenness.³⁴

In its attempts to gain control and power over what it recognizes but cannot validate, new-thinking has become disillusioned with its own ideals, and can only rest when it manages to transform the world into an idealized and thus constant state.

³² Hegel, *Science of Logic*, 9.

³³ Bernard Williams, “Introduction” in *The Gay Science* (Cambridge: Cambridge University Press, 2001), ix.

³⁴ Friedrich Nietzsche, *The Gay Science* (Cambridge: Cambridge University Press, 2001), 69.

Hannah Arendt describes this arc as the “Human Condition.” In her book of the same title, Arendt expounds on the realities of humankind’s grasp over its own conditional existence—a knowledge that demands understanding of the conditions through which humans have come to be today. Arendt returns to two fundamental human modes of being: “vita activa” and “vita contemplativa.”³⁵ She writes:

In addition to the conditions under which life is given to man on earth, ... men constantly create their own, self-made conditions, which, their human origin and their variability notwithstanding, possess the same conditional power as natural things. Whatever touches or enters into a sustained relationship with human life immediately assumes the character of a condition of human existence. This is why men, no matter what they do, are always conditioned beings.”³⁶

In other words, humankind as a species is unique in that it has the capability to determine, construct, and direct the conditions of its own existence within the built-environment. But the limited scale of the manner in which humankind is able to impress its desired forces onto its own existential condition is no match for the natural forces that are beyond its control. This discrepancy in scale and tempo of action lies at the root of the humankind’s concerns with preserving and safeguarding its presence within the material world.³⁷ Simply put, it is predominantly the human fear of death that propels modernity’s penchant for the reductive classification of

³⁵ Arendt, *The Human Condition*, 7-9.

³⁶ Arendt, *The Human Condition*, 9.

³⁷ Heidegger, “Building, Dwelling, Thinking”, 53.

knowledge and material production forward.^{VIII}

It must be established that logical thinking is a learned skill, and therefore it is only effective when all participants have a shared understanding of its methods. Logic must be communicated by its thinkers and understood by those who are to use it. The setting in which logic is to be applied is thus extremely important in the successful application of rationalism.

The challenge of communication is particularly acute in the application of logic to human affairs such as the act of dwelling. Although a reasonable understanding of logic may be expected from the dweller, it is logic that is left with the burden of facilitating and negotiating the exchange between the dweller and the built-environment. This responsibility however, presents logical thinking with a new paradox. For, the value of logical thinking lies in its ability to refrain from abstractions through the experience of sciences while at the same time displaying in itself a spirit of universal truth.

In the shadow of universal reason, logical thought, and practical science, the only thing that prevents the complete dismissal of speculative thought is its formal utility as a “subject of public instruction.”³⁸ Recognizing the ineffable ambiguity of

VIII This is also a beginning point for the general dismissal of the collective nature of *vita activa*, by the narrow vision of use-oriented production. This necessary recognition of the inherent social nature of *vita activa* is one pointed out by Arendt, and one that this writing will return to when addressing the adequacy of the built-environment. Arendt observes: “Things and men form the environment for each of man’s activities, which would be pointless without such location.” She elaborates this point, by stating that “all human activities are conditioned by the fact that men live together, but it is only action that cannot even be imagined outside the society of men.” The key to her statement is the use of the plural form men in reference to *vita activa*. This is the critical point where thinking can escape the banality of the mortal and provide an adequate environment for the human inclination towards the experience of the eternal. For Arendt shows that the experience of an infinite presence is possible by *homo faber’s* exercise of continuous transcendence in *vita activa* which, at the same time, is a testament to human-kind as a social beings. Between labour, work, and action within *vita activa* it is only action that can lead to an eternal-being that is inevitably a social-being. (Arendt 1958, 22)

³⁸ Hegel, *Science of the Logic*, 8.

dwelling as the primary determinant of a meaningful *Being* is the first step towards easing some of new-thinking's preoccupation with relinquishing dwelling from its uncertainties. As Heidegger points out,

No matter how rich and firmly compacted a system of categories it has at its disposal, [rational thinking] remains blind and perverted from its own most aim, if it has not first adequately clarified the meaning of being, and conceived this clarification as its fundamental task. ... Scientific research is not the only manner of Being which [Dasein] can have, nor is it the one which lies closest.³⁹

This idea leads to the conclusion that scientific and speculative thought are not separate and cannot be examined separately. And most importantly, neither can fit through the appropriate cognitive means for exploration of the other. Yet both realms are related through *Dasein*, and thus must seek for their meaning in relation to *Dasein*. In this regard a truly adequate built-environment can only occur when it is understood as the primary interface between the rationality of thinking and the humanity of dwelling.

³⁹ Heidegger, *Being and time*, 31-32.

Authenticity, Idle Talk, and Curiosity

It must be established that despite its predominance within modernist practice, reductive rationalism is neither a modern phenomenon nor is it exclusive to modernism. Rather, reductionism is a basic tool of human cognition. More specifically, reductive rationalism operates as a device towards reaching an objective. This understanding can be applied to thinking that has dwelling as its objective. In this regard, the built-environment becomes the interface with which thinking must engage in order to facilitate dwelling.

This relationship is not without complexities due to dwelling's aforementioned temporality and existential interdependency with the built-environment. Faced with the responsibility of negotiating the complexities of this multifaceted relationship, thinking is also in a constant internal battle of virtue over the question of its own authenticity. And although rationalism is philosophically oriented toward remaining authentic within its spectrum, any notion of potentiality loses ground to the tangible imminence of pragmatism. As an enterprise conceived through scientific reason, rationalist enquiry finds its immediate synchronicity with the "tempo" of the mortal-realm.⁴⁰

40 Agacinski, *Time Passing*, 6.

This universal tempo, or as Agacinski calls it “Western hour,” has proved effective towards easing much of life’s temporal ambiguities.⁴¹ But despite its universality, this reductive tempo is not the sole culprit in rationalism’s elusive quest for authenticity. Another significant contributor to this challenge is the collective nature of *vita activa* and its manifestation within dwelling—that is the “belonging to men’s being with one another.” This “primal-oneness” centred on mortal sustenance results in a false illusion of authenticity: the care of *mortal-being* via *mortal-belonging*.⁴² Heidegger describes this crisis best:

With Dasein’s lostness in the “they” that factual potentiality-for-Being which is close to it [the tasks, rules, and standards, the urgency and extent, of concerned and solicitous Being-in-the-world] has already been decided upon. The “they” has always kept Dasein from taking hold of these possibility of Being. The “they” even hides the manner in which it has tacitly relieved Dasein of the burden of explicitly choosing these possibilities. It remains indefinite who has ‘really’ done the choosing. So Dasein makes no choices, gets carried along by the nobody, and thus ensnares itself in inauthenticity.⁴³

The phenomenon Heidegger warns about is the conceptualization of “normative standards for living” which began in the late nineteenth century and reached its peak in the years following World War II. In its scientific approach towards the study of human behaviour, new-thinking adopts a perception of living “in terms of

41 Agacinski, *Time Passing*, 6.

42 Heidegger, “Building, Dwelling, Thinking”, 351.

43 Heidegger, *Being and time*, 312.



Figure 2: A criticism of this submissive behavior towards the “they” is found in the work of French film maker Jacques Tati. In *Playtime* he depicts the modern dweller as introverted and conformist individuals completely unaware of their surroundings despite the exposure provided to them by the structure. (Tati 1967)

population norms, means, and other measures of central tendency. ... [Befitting] positivist attitudes of social progress through the rigorous application of scientific principles to human problems.”⁴⁴ Grounded by their empirical performance, these measures have surpassed the concerns of particular individuals and households as determinants to *adequacy* of dwelling-space.

The term *adequacy* refers to the satisfactory performance of a product in respect to a given scope. But this description is only valid when the relationship between a product, its use, and its user, is blessed with a high degree of stability and relevance. In light of the ambiguous nature of dwelling, it is difficult to assess what constitutes an adequate dwelling-space. Adding to this difficulty is dwelling’s life-tempo, or its inscription in human time, which continuously challenges its built counterpart. In the industrial era and onwards, rationalist thought has responded to the question of the built dwelling, indeed to the question of housing, by demanding forms and techniques that are ever more efficient, and at the same time withdraw further away from the all that is ambiguous.^{IX}

The tangible success of industrial production has succeeded in persuading many that the new atmosphere of subject-centred rationalism is a suitable platform for engagement across all fields. This thinking suggests that human action is not

IX Heidegger calls this exercise Idle Talk, one that scientific rationalism uses to project a faux-sense of conceptual understanding of Dasein, by finding false agreements within the they and presenting “curiosity and ambiguity ...in such a manner as to indicate that they are already interconnected in the Being. [And that] we must now grasp ...the kind of Being which belongs to this interconnection. The basic kind of Being which Belongs to everydayness.” (Heidegger 1962, 219) This phenomenon is manifested in the systematic organization of scientific knowledge, expressed and exchanged as quantitative content, and supported by a self-determined context—that is quantitative measures of adequacy.

⁴⁴ Peter G. Rowe, *Modernity and Housing*, (Cambridge, Mass.: MIT Press, 1993). 48.

inherently rational and thus may be subject to evaluation and restriction. In an article titled *Competing Paradigms in Qualitative Research*, academic theorists Egon Guba and Yvonna Lincoln point out a variety of implicit problems with exclusively quantitative analysis of social matters such as housing. Guba and Lincoln's main criticism takes aim at the common practice of subjective prioritization of variables in order to satisfy an arbitrarily defined objective projection. Such practice typically leads towards the selective inclusion of favourable variables and the exclusion of factors that pose a threat to the theoretical rigour, value, and virtue of a given study.

New-thinking's desire to find the truth can lead to the formation of a self-imposed illusion of truth suited to the limitations of its method, effectively dismissing the bigger picture and the entirety of the situation in question. Worst still, by stripping away all ambiguity, this practice directly opposes the exercise of curiosity in dwelling. In response, Guba and Lincoln propose a method of "cross-paradigm analysis" which they describe as an act of constructive relativism that assumes "multiple, apprehendable, and sometimes conflicting social realities that are the products of human intellects, but may change as their constructors become more informed and sophisticated."⁴⁵ While privileging the simultaneous evaluation and application of quantitative and qualitative measures in design, Guba and Lincoln

⁴⁵ Egon G. Guba and Yvonna S. Lincoln. "Competing Paradigms in Qualitative Research." In *Handbook of Qualitative Research*, ed. Norman K. Denzin and Yvonna S. Lincoln, (Thousand Oaks: Sage, 1994). 111.

recognize the necessity for imbedded evolutionary traits within man-made systems. Their construct calls for a dialectic engagement between both the evident and the obscure determinants of adequacy.

This dialectic rationale suggests that truth is found in neither scientific understanding nor in its theoretical determinants alone. It recalls the Hegelian idea that truth is found in a dialectic interaction between reason and understanding – one not simply bound by their interdependence but rather dissolved in their differences.^{X,46} This challenges the validity of universal truth through scientific reason in favour of a contextual relevance found via a conscious recognition of the intent behind practice. Through a skillful engagement with its determinants, modern thinking may step past the objective abstractions of idealism and instead find meaning within a phenomenological spirit⁴⁷ where transcendent validations of reason and the imminent realities of existence, each by their own virtue, engage in a continuous dialectic interchange⁴⁸ towards becoming the truth.^{XI}

46 Hegel, *Science of the Logic*, 10.

47 Hegel, *Science of the Logic*, 28.

48 Hegel, *Science of the Logic*, 80.

X Hegel he writes: “in as such as philosophy is to be science, it cannot borrow its method from a subordinate science, such as mathematics, any more than it can remain satisfied with categorical assurances of inner intuition, or can make use of arguments based on external reflection.” (Hegel 1969, 9)

XI As Heidegger explains “Only if the inquiry of philosophical research is itself seized upon in an existentiell manner as a possibility of the Being of each existing Dasein, does it become at all possible to disclose the existentiality of existence and to undertake an adequately founded onto logical problematic. But with this, the ontical priority of the question of being has also become plain. Dasein’s onto-ontological priority was seen quite early, though Dasein itself was not grasped in its genuine ontological structure.” (Heidegger 1962, 34)

The Content, Chapter Two

Many historians and critics have stated the fact that modern practices of utilitarian building have had a negative effect on the current conditions of the built-environment. As Heidegger observes, the pragmatic exercises in modernist housing production that is the means-end schema for residential building “is reassuring and to the good; residential buildings do indeed provide lodgings.” Modernist theory addresses housing as a social need, and can produce houses that are cheap, relatively easy to maintain, well lit and ventilated, and logically planned. Yet these *mortal* exercises, no matter how precisely determined, tend to fall short of answering the question of human dwelling appropriately.⁴⁹

Dwelling demands a level of sophistication in design that is beyond the mere satisfaction of building standards, spatial programs and predetermined feedbacks. Dwelling takes place in an environment capable of the active reception and resonance towards the dwellers’ actions. Such environment is not fully programmable or predictable as built-object, and is often in direct contradiction with the hard-to-contain act of dwelling. An adequate dwelling-space evades aesthetic and programmatic evaluation. Rather it finds value in its embodiment of skilfully

⁴⁹ Heidegger, “Building, Dwelling, Thinking”, 348.

distributed and useful spatial and programmatic contingencies. Dwelling in its true meaning can only take place in an environment where contingencies are thoughtfully anticipated by the building's design, are kept in mind by its construction, and are maintained through the entire time of its occupancy.

Using principal examples of modernist architectural theories conceived during the time between World War I and World War II, this chapter explores modernism's allegiance to technological means in the production of housing.⁵⁰ The chapter further examines modernism's quest "to master the chaos of the world, ... and the strife that are part every human life."⁵¹ It then delves into the notion of architectural product – specifically how the contextual nature of residential architecture sets it apart from other fabricated objects of use. Lastly the chapter re-evaluates architectural design to unfold a dialectical platform for dwelling within the built-environment, returning to the notions of spatial contingency and user agency in vernacular construction.

⁵⁰ Rowe, *Modernity and Housing*, 4.

⁵¹ Natalia Ilyin. *Chasing the Perfect: Thoughts on Modernist Design in Our Time*. (New York: Metropolis Books, 2006). 32.

The Object, The Myth, The Product

In order to better understand the notions behind the built-object in modern architecture, it is useful to revisit some of modernist theory's most renowned outcomes. This section examines three highly influential theories including Ludwig Mies van der Rohe's essay, *Industrialized building*, Walter Gropius' *Principles of Bauhaus Production (Dessau)*, and Le Corbusier's manifestos: *Towards a new architecture: guiding principles*. These documents have withstood the test of time and continue to be celebrated within the canon of modern architecture as germinal statements regarding industrial material, design, and production.^{XII}

The great and charmingly pragmatist Ludwig Mies van der Rohe writes in his essay titled *Industrialized building*:

I see in industrialization the central problem of building in our time. If we succeed in carrying out this industrialization, the social, economic, technical, and also artistic problems will be readily solved.⁵²

For Mies the universality of industrialized building promises to be complementary to the ubiquitous nature of dwelling. This is a sentiment with a fair amount of truth, for even the crudest application of industrialized building embodies very clear evidence

XII Note that a proper interpretation of these theories demands a contextual awareness of the circumstance at the time of their respective conceptions. Each of these statements claims to be the definitive guideline towards a vision of a new world, and were all conceived at a critical point of economic, political, and social change. This era saw the fervent increase in the use of reductionist exercises in industrialized production.

⁵² Ludwig, Mies van der Rohe, "Industrialized Building" In *Programs and Manifestoes on 20th-Century Architecture*, ed. Ulrich Conrads, (Cambridge: MIT Press, 1970), 81.

of the intentions within action and thus reveal context.

Rather than acknowledging building's contextual obligations, however, Mies sets out to separate building from its context in order to fulfil a larger vision of the modern world. As he explains:

The question of how industrialization is to be introduced is easily answered once we know what stands in the way. The supposition that antiquated forms of organization are the cause is incorrect, they are not the cause but the effect of a situation, and they in no way crash with the character of the old building trade.⁵³

But context is unique, and, one might even say, virtuous. Bearing with it the gift of meaning for the built-object and the built-environment, context should rarely if ever be condemned to indifference. Rather, context must always be deemed worthy of careful reconsideration. In light of this, Mies' vision may be deemed problematic. But his position is complex: for, universality does provide a way, of sorts, of engagement with context. And the realization of Mies' modern gridded buildings does not require total erasure of an existing contextual fabrics.

A primary part of modernism's vision is the approach of housing as a product, with its height at pre-fabrication building parts, and their categorizations in accordance to fixed building-types. The limitations of this vision is that it fails to take

⁵³ Mies van der Rohe, "Industrialized Building", 81.

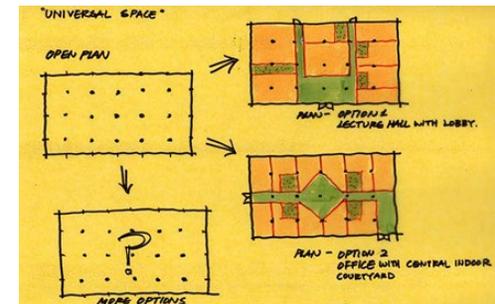


Figure 3: Illustration of the "universal space" made possible by the implantation of the modern grid structure. (Mies van der rohe 1940)

account anything other than use and purpose. The modernist “machine for living” is a built product – one in which the existential act of dwelling risks being flattened.

A notable modernist affirmation of a supposedly empathetic relationship between industrial and natural mechanisms is found in Walter Gropius’ *Principles of Bauhaus Production (Dessau)*. In it he expresses:

The Bauhaus wanting to serve in the development of present-day housing, from the simplest household appliances to the finished dwelling. ... Seeking – by systematic practical and theoretical research in the formal, technical and economic fields – to derive the design of an object from its natural functions and relationships.⁵⁴

Gropius’ “natural” and “functional” relationships allude to a material understanding of building, in which design solutions are permanent. Gropius follows his initial statement with a claim regarding human wants and needs betraying, once again, an instrumental vision: “Modern man ... needs a modern home appropriate to him and his time, equipped with all modern devices of daily uses.”⁵⁵ Gropius’ assertion implies design’s ability to produce final solutions, and in this sense, to arrest time in its place. Yet humankind’s actions of daily use are always changing, and therefore demand appropriate responses from the built realm.

⁵⁴ Walter Gropius, “Principles of Bauhaus Production (Dessau)” in *Programs and Manifestoes on 20th-Century Architecture*, ed. Ulrich Conrads, (Cambridge: MIT Press, 1970), 95.

⁵⁵ Gropius, 95.

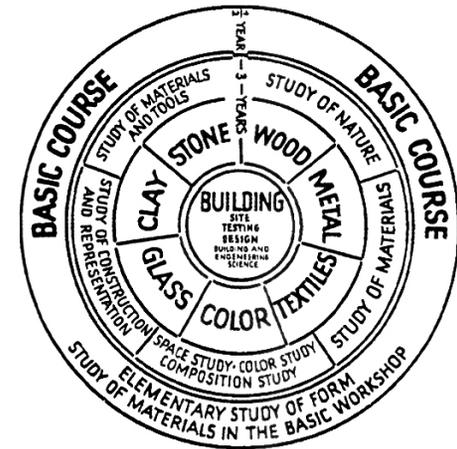


Figure 4: The Bauhaus Curriculum places the “building” at the core separating it from context. (Bauhaus 1923)

Gropius' definition for the purposefully objective and naturally functional product avoids any ambiguity:

An object is defined by its nature. ... Design[ed] ... to function correctly. [It may be] – a container, a chair, or a house. – ... It must serve its purpose perfectly, that is, it must fulfil its function usefully, be durable, economical, and “beautiful.” ... Forms will evolve that are often unusual and surprising, since they deviate from the conventional.⁵⁶

Interestingly enough, in taking a stance against the value of convention, Gropius sets his sight on defining a new set of conventions for modern design. He states that:

On the whole, the necessities of life are the same for the majority of people. The home and its furnishing, ... and their design is more a matter of reason than a matter of passion. ... There is no danger that standardization will force a choice upon the individual, since, due to natural competition, the number of available types of each object will always be ample to provide the individual with a choice of design that suites him best.⁵⁷

In formulating an answer to the housing question, Gropius chooses to create a distance between the conception of the built-object and its prospective user. This is an understandable and defensible strategy for general mass production. But the commodity-like treatment of contemporary housing within the market, however, is far from the balanced exercise of choice described here. Gropius' theory can be

56 Gropius, “Principles of Bauhaus Production (Dessau)”, 95.

57 Gropius, “Principles of Bauhaus Production (Dessau)”, 96.

interpreted as one that hinders the effective illumination of the act of dwelling and all that it brings to human existence.^{XII}

Theories such as Gropius' "principles of production," are examples of the introverted rationale found in modernism's mythical belief in a practice of "architecture as a social art [with a traditional discourse towards] ... the avant-garde,"⁵⁸ combined with the typical contradictory "bourgeois ideology of ... [technocratic] return to an unchangeable nature."⁵⁹ They are the result of new-thinking's crisis of identity due to its inability for achieving a "more than an unstable grasp of reality [that] doubtless gives [new-thinking] the measure of [its] present alienation."⁶⁰ They are the reason behind much of the industrialized building's detachment from its historical and environmental context.^{XIV}

It may appear rather discriminating to exert such negative deconstruction onto one document, in order to draw a critical line across the entire modernist doctrine. It should be established that the assertive stance found in early modernist theories must be given the benefit of the doubt and be understood as enthusiastic exercises of speculative wanderings within rationalist thinking. The apprehension begins once this assertion becomes inherent and thus becomes the primary concern

58 Paul Jenkins, Leslie Forsyth, Tim Sharpe, and Martin Edge, "Preface" in *Architecture, Participation and Society*, ed. Paul Jenkins and Leslie Forsyth, (New York: Routledge, 2010), xiv-xv.

59 Roland Barthes, *Mythologies*, (New York: Noonday Press, 1972). 141.

60 Roland Barthes, *Mythologies*, 159.

XIII Arendt confronts this inherent perplexity of utilitarianism by stating: "utility established as meaning generates meaninglessness. ... In the world of homo faber, where everything must be of some use, ...meaning itself can appear only as an ...'end in itself' which actually is either a tautology applying to all ends or a contradiction in terms." (Arendt 1958, 154)

XIV Roland Barthes offers a measured defense of modernism's industrial vision: "[new-thinking] constantly drift[s] between the object and its demystification, powerless to render its wholeness. For if [new-thinking] penetrate[s] [the object], [it] liberate[s] it but [at the same time] destroy[s] it; and if [new-thinking] acknowledge[s] [the object's] full weight, respects it, but ... restore[s] it to a state which is still mystified." (Barthes 1972, 159)

of the exercise itself. With regards to architecture, as it will be explored further in this writing, this misguided concern can have dire effects on the built-environment.

Only after accepting and understanding the significance of the inherent ambiguities of life as well as the realities and necessities of industrialized production can architecture begin to find resolutions in its practice.⁶¹ But the contemporary imperatives of the market economy effectively place housing in the same category as other products subject to conditions of the commodity market. Defining a scope for the house-product thus becomes an inevitable part of maintaining the practice of residential construction in tune with the market economy.

Modernism's process of normalizing residential environments is indeed the pragmatic response to a real and urgent condition which was the congestion and squalor of the industrial city. As early as the mid-nineteenth-century, governments tackled basic matters of public health, safety, and welfare, in building. Working with architects and planners, city officials formulated regulations regarding adequate light, ventilation, fire protection, public facilities and support services, and appropriate building practices in the form of standard sets of "quantitatively defined minima," with a view to ensuring consistency and order in the modern city, and "minimize

⁶¹ Karl Ulrich. "The Role of Product Architecture in the Manufacturing Firm." *Research Policy* 24 (1995): 419-440, 421.

risks to both occupants and investors” of industrialized housing.⁶² The challenge then was, and remains today, how to place standardization and mass-production of housing in the service of meaningful dwelling.^{XV}

An answer to this quandary is found in Le Corbusier’s canonic manifesto: *Towards a New Architecture: Guiding Principles*. In it, Le Corbusier points out two disciplines of modernist practice that are separate from while complimentary to a successful exercise in new architectural design. These two disciplines are, Engineering and Architecture as side-by-side praxes. He states:

The Engineer’s Aesthetic and Architecture are two things that march together and follow one from the other: ... The engineer inspired by the law of Economy and governed by mathematical calculations, puts us in accord with universal law. ... The architect, by his arrangement of form, realizes an order which is a pure creation of his spirit; ...he affects our senses ...and provokes plastic emotions; ...he gives us the measure of an order which we feel to be in accordance with that of our world.⁶³

Le Corbusier calls this product the “House-Machine.” He describes this mass-production house as “healthy [and morally so too] and beautiful in the same way that the working tools and instruments which accompany our existence are beautiful.”⁶⁴—Le Corbusier’s design attempts to reconcile humanistic sensibilities

62 Rowe, *Modernity and Housing*, 47.

63 Le Corbusier, “Towards a New Architecture: Guiding Principles” in *Programs and Manifestoes on 20th-Century Architecture*, ed. Ulrich Conrads, (Cambridge: MIT Press, 1970), 59.

64 Le Corbusier, *Towards a New Architecture: Guiding Principles*, 62.

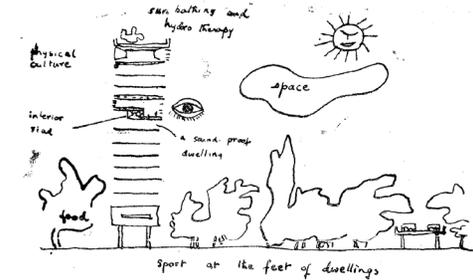


Figure 5: Conceptual drawing of the “radiant city” by Le Corbusier. The context is clearly imposed on the structure, which in turn is shown to be responsive. (Le Corbusier 1979)

XV The standardized housing scope dominating residential construction practice today is the result of “a long tradition of humanist culture [of design] ...seriously challenged by the apparent efficiency and adequacy of instrumental representations and models,” (Rowe 1993, 47) over the past twohundred years. Placed “against a background of a tendency toward internationalization of culture and the instrumentalization of life, politics, and power,” (Bandyopadhyay 2010, 187)

and the inevitable functionality of the new way of building.

John Habraken, author of *Supports: An Alternative to Mass Housing*, argues that theories such as Le Corbusier's "House-Machine" have given many an incorrect yet comforting impression that housing is merely a technological problem and therefore is no more complicated than any other machine.⁶⁵ But a more accurate reading of Le Corbusier's theory suggests that the house is the mechanism where rationalized functionality engages with the uncertainties of the act of dwelling and the spirit of the dweller. In other words, the "house-machine" is to be a tool. As Habraken advocates, mass housing can be a tool that enables its inhabitants to dwell in time; it can be what Le Corbusier dubs the "materialization of human indifference" standing in for the dweller on tasks that are beyond his or her physical capability and below his or her intellectual interest.⁶⁶

The architecture Le Corbusier calls for is one of practice, analysis, and experiment. Its virtue comes from its responsiveness not just to the needs but to the dwellers' acts of living as well. The outcome of its application is closer to an artefact than a commodity, despite being geared towards mass production. It is vernacular-engineering geared towards producing vernacular houses that thrive on

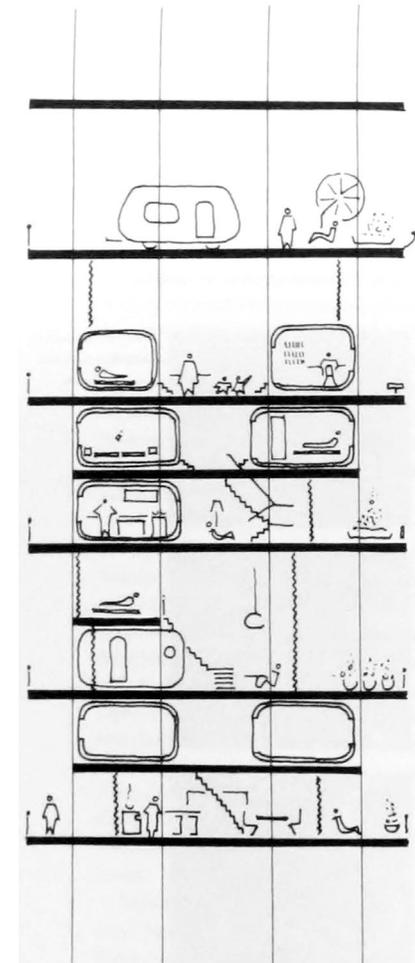


Figure 6: Habraken's illustration of the support structure. (Habraken 1963)

⁶⁵ N. J. Habraken, *Supports: an Alternative to Mass Housing* (London: Architectural Press, 1997), 17.

⁶⁶ Habraken, *Supports*, 18.

the uncertainties of the human life taking place within it.⁶⁷ Arguably, the true modern house does not revolt against the past, but instead provides the dweller with a form of contentment with respect to the economic and material conditions of the built-environment.⁶⁸ The true modern house frees up resources towards pursuing higher human aspirations. In this sense, “technology as the characteristically modern way of engaging the world,” is perhaps humankind’s best tool for mediating and altering time and space relationship,⁶⁹ and the construct most able to provide *homo faber* with the necessary platform for engaging with the temporal nature of *Being*. To achieve this, the built-environment must embody and communicate wonder to the dweller.

⁶⁷ Danial Wills, *The Emerald City and Other Essays on the Architectural Imagination*. (New York: Princeton Architectural Press, 1999). 123.

⁶⁸ Le Corbusier, *Towards a New Architecture: Guiding Principles*, 62.

⁶⁹ Peter, Rowe, *Modernity and Housing*, 20.

Space, Time, Material Expression

As the product of architecture, the built-environment has the potential to excel beyond its physical presence. For the late architectural scholar Marco Frascari, the built realm transcends from being a mere “sum of buildings, places, and spaces” and rather become the host to the development of “knowledge, organization and techniques of life.”⁷⁰ This is possible when architecture is treated as a phenomenological exercise of dwelling. More to the point, Frascari sensitively describes the meaningful exchange between design’s intended spatial qualities and its ever-evolving wants and needs, in terms of “living well:”

The constructed world is the physical embodiment of the art of living well and of all the arts ...that make good living possible. In its physical expression (architecture) is an incorporation of the history of arts and their diverse relationship within time and space in a specific place.⁷¹

A contextual breakdown to the modes and realms of this exchange, in reference to the practices of industrialized building is found in architect Amos Rapoport book *The Meaning of The Built Environment: A Nonverbal Communication Approach*. Rapoport here classifies the exchanges which occur within the built-environment

⁷⁰ Marco Frascari, “Elegant Tectonics, Clearly Confused Representations, Franco Albini and the Wonder of Lightness.” In *A Carefully Folded Ham Sandwich: Towards a Critical Phenomenology*, ed. by Roger Connah, (Montreal: FAD Design House, 2013), 127.

⁷¹ Marco Frascari, *Monsters of Architecture: Anthropomorphism in Architectural Theory* (New York: Rowman & Littlefield, 1991), 17.

into three sets of “relationships between things and things, things and people, and people and people.” He explains that sensory communication of meaning occurs within space and time, via a complex and continuous interrelationship across as well as amongst both things and people.⁷² Such a multifaceted exchange calls for a high level of ubiquity, found only within a meaningful act of dwelling.^{xvi}

In his contemplation of the meaning of the term “space,” Rapoport defines space as “the three-dimensional extension of the world.”⁷³ It is important to note here that the term space entered architecture’s vocabulary only in the 1890’s. In an article titled: *Architecture is the Pattern of Human Mind in Space*, Christina Malathouni attributes the first explicit use of the term space to the American architect Claude Fayette Bragdon, who himself adopted the notion from his German contemporaries. She describes Bragdon’s book *A Primer of Higher Space: The Fourth Dimension* is a wonderful example of poetic yet technical writing and a beautifully illustrated window into the mind of an inquisitive person “with a profound interest in scientific developments and strongly influenced by the mystical basis of Pythagorean philosophy of numbers.”⁷⁴

72 Amos Rapoport, *The Meaning of the Built Environment: A Nonverbal Communication Approach*, (Tucson: University of Arizona Press, 1990). 178.

73 Rapoport, *The Meaning of the Built Environment*, 179.

74 Christina Malathouni, “Architecture Is the Pattern of Human Mind in Space: Claude F. Bragdon and the Spatial Concept of Architecture”, *The Journal of Architecture* 18, no. 4 (2013): 553-69. 565.

XVI Socio-economic scholar Herbert A. Simon explains: Any act of communication among people, whether verbal or non-verbal, is conducted through organizing and communicating information within space and time. The environment plays its part in this exchange by reflecting, modulating, channeling, controlling, facilitating, and inhibiting communication, between dwellers. As the most recognized means of human communication, language is regarded as a highly characteristic cognitive skill used by human beings. Language is unique in the sense that it serves platform for both processing and transferring information. It must be noted that in this paper the terms verbal and linguistic are not referring the study of syntax and grammar but rather are concerned with the interpretation of linguistic strings of two-dimensional visual stimuli, or other non-linguistic stimuli, which form the clues for interpretation of communicated information, (Simon 1996, 75-77)

Bragdon's artful description of space propels its concept past the common "associations with enclosure, or the three-dimensional form of the physical aspect of architecture," and towards a "notion of space as a property of the mind."⁷⁵ Bragdon describes space as the invisible form bound between built planes.^{XVII,76} This seemingly self-evident analogy highlights an important duality between subjective and formal exploration of built-form, within both realms of theory as well as the practice of architecture.⁷⁷

Bragdon finds the practical and utilitarian perception of three-dimensional space in architecture insufficient, and only apt to produce a partial understanding of spatial reality limited to physical conditions.⁷⁸ Thus, he calls for a spatial understanding found only in the "fourth dimension of space," a dimension where "an amplitude of unfamiliar motions by various departments of nature" can begin to form a relationship with the known conditions of the physical realm.⁷⁹ Bragdon claims that in order to perceive the transcendental as real, human-kind must first adapt an intentional *consciousness* of space.⁸⁰

75 Malathouni, "Architecture Is the Pattern of Human Mind in Space: Claude F. Bragdon and the Spatial Concept of Architecture", 553.

76 Claude Fayette Bragdon, *A Primer of Higher Space: The Fourth Dimension*, (New York: A.A. Knopf, 1918). 2.

77 Malathouni, "Architecture Is the Pattern of Human Mind in Space: Claude F. Bragdon and the Spatial Concept of Architecture", 554

78 Bragdon, *A primer of higher space*, 5.

79 Bragdon, *A primer of higher space*, 6.

80 Bragdon, *A primer of higher space*, 15.

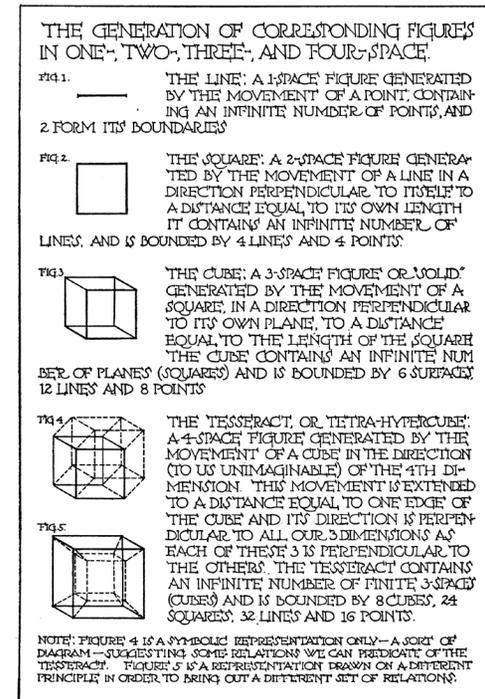


Figure 7: Bragdon's illustration of the space system. (Bragdon 1918)

XVII Bragdon writes: "Familiar both to the eye and the mind are the space systems of one, two, and three dimensions; that is lines, planes, solids. Lines are bounded by points, and themselves bound planes; line-bound planes in turn bound solids. What then do solids bound? ... Higher solids: four dimensional forms (invisible to sight) related to the solids we know as these are related to their bounding planes, as planes to their bounding lines." (Bragdon 1918, 1)

What Bragdon describes as the “fourth dimension” is not a new region of space but rather a measure of change, of growth, and of relations which cannot be expressed geometrically.⁸¹ These phenomena manifest themselves in the temporal-realm of *Being* and are rationalized within time. A proper perception of potentiality for action within the built-environment requires a tandem examination of both space and time. In other words, a combined exercise of spatial and temporal consciousness is necessary for making architecture that is receptive of the “potentiality-of-Being” found within act of dwelling.^{XVIII}

Going beyond the utilitarian way of the “western hour,” an engagement between the two realms of space and time can reveal and support the temporal nature of *Being*. This engagement ushers three-dimensional architectural space into a new mode of space-time consciousness. Here, architectural design can begin to move past its preoccupation with the physical boundaries of the built-objects and focus its intentions on the “now transcendental fourth dimension” of space, which is time.⁸²

Since human activities are inherently temporal, they require time, are distributed across time, and incorporate temporal rhythms and repetitions.

XVIII In this very same regard, Heidegger writes: “By casting light on the source of the ‘time’ ‘in which’ entities within the world are encountered—time as ‘within-time-ness’—we shall make manifest an essential possibility of the temporalizing of temporality. Therewith the understanding prepares itself for an even more primordial temporalizing of temporality. In this is grounded that understanding of Being which is constitutive for the Being of Dasein. Within the horizon of time the projection of a meaning of Being in general can be accomplished.” (Heidegger 1962, 278)

81 Bragdon, *A primer of higher space*, 17.

82 Bragdon, *A primer of higher space*, 16.

Respectively, the very behaviours that are used to establish boundaries within the built-environment are in fact temporal, although, writes Rapoport, “while they are happening they need and use settings and other physical elements.”⁸³ In other words, as does one’s perception of time, the built-environment directly influences behaviours towards self and others.

As time is the primary dimension in which human interactions occur, the built-environment’s enactment of time becomes critical to the welfare of human relationships. Frascari depicts the built-environment’s embodiment of time as a “kind of corporal time machine where the past, the present and the future are related architecturally through memory.”⁸⁴ Frascari’s notion of the “time machine” is an evocative one, and one that underscores the potential dangers of new-thinking and its tendency to freeze time in a limited present, and consequently reduces its one finite and most valuable asset, into mere means for serving its mortal presence. Through its handling of time the built-environment affects humankind’s existential condition in nearly the same level as the human activities which have blessed built-environment with its physical presence in the first place.

As the setting for social exchange, the built-environment mediates, enhances,

⁸³ Rapoport, *The Meaning of the Built Environment*, 180.

⁸⁴ Marco Frascari, *Monsters of Architecture*, 61.

and suppresses the relationships and interactions that occur amongst dwellers. The rate and quality of communication between dwellers varies with respect to distance, exposure, and proximity. This communication is primarily modulated via the spatial qualities of the built-environment. Determined by architectural design, sensory mediations are critical to the building of healthy dwelling-spaces.⁸⁵ Therefore the careful articulation of public, private, and shared spaces, are key to the building of a socially rich environment.

Complimentary to the spatial stimuli of architectural form are sensory clues embodied in building materials. The tactile qualities of a material serve to either ground or propel the dweller's imaginative comprehension of the design. Frascari advances that separate from the organization of space, "details ... [are] the minimal units of signification in the architectural production of meaning."⁸⁶ By demonstrating various levels of architectural production, details serve as witnesses to the tandem presence of human acts and its material form that is the built-environment. Building elements are "like grammatical entities whose particular juxtaposition connote certain meanings embodied in the metaphysics of humanism."⁸⁷ A proper exercise in tectonics is what brings meaning to an otherwise abstract spatial form. The appropriate and successful development of building details carries the building

⁸⁵ Rapoport, *The Meaning of the Built Environment*, 181.

⁸⁶ Marco Frascari "The Tell-The-Tale Detail." in *The Building of Architecture*, 1984, 23

⁸⁷ Gevork Hartoonian, *Crisis of the Object the Architecture of Theatricality* (London: Routledge, 2006), 10.

outside of itself, into a meaningful as well as useful built-environment.

Material expression, when executed correctly, triggers in the act of dwelling an emotional “search for knowledge, a desire to build, a state of hope.”⁸⁸ Frascari provides an unmatched conclusion to this architectural phenomenon by stating:

The cognitive aspect of imagination provides the foundation for a rigorous analogical knowledge allowing architecture to evade the dilemma of a rationalism that gives us only a banal choice between ‘matter’ and ‘mind’ –or ‘material’ or ‘form’. Forging links between ...then and now, ... it can demonstrate the transhistorical permanence of the products ...in tectonic expressions. ...imagination in architecture cannot be reduced to a technology or to a humanity ...or to the use of technology by the humanities.⁸⁹

This outlook endows the built-environment with a central role in the accommodation of dwellers’ spiritual desires and well-being. Despite modern attempts at substituting dwelling’s spirit with scientific common sense, the dweller still recognizes the rarest of places where architecture resonates with his or her dreams, thoughts, and imagination, and where a “space of desire” – a space in which he or she can be at home even while remaining “incomplete” and open to mortal finitude – is opened.⁹⁰

Residential architecture cannot find meaning in the good performance of a

88 Frascari, “Elegant Tectonics, Clearly Confused Representations, Franco Albini and the Wonder of Lightness.”, 131.

89 Marco Frascari, “Ge wiz,” in *Interstices*, Sep 2005; v.6:p.84-89; 88.

90 Pérez Gómez, “Ethics and Poetics in Architecture”, 68.

programmed set of utilitarian functions or perfected construction standards alone.
Good residential architecture is not merely prescriptive; rather, it is the outcome of
a close alignment between the two human acts of building and dwelling.

Contingency, User Agency, Vernacular Construction,

So far modern theory has relied on new-thinking's reductive practice of quantifying, evaluating, and marketing time, yet some would argue that, in the realm of architecture, time evades the designer's control. In a book titled: *Architecture Depends*, Jeremy Till writes: "Time is the medium that most clearly upsets any notions of static idealized perfection in architecture."⁹¹

Till argues that through tectonic articulation and prowess, contemporary architecture adopts a heightened aesthetic stance. This is in an attempt, perhaps, to overcome "the dirt, the insignificant, the trivial, and the confused," banal yet vital acts of the mortal realm.⁹² In doing so, however, architectural practice risks falling into a radical inwardness where tectonic exercises become the "primary principle of [its] autonomy" and the correct making of buildings is believed to be a "sufficient as [a] cultural activity."⁹³ This is largely due to attempts at defining authenticity in action, rather than accepting the fact that action, and the act of dwelling as its most human form, find authenticity in ambiguity and contingency.

Till describes the truly authentic approach to architectural design with

91 Jeremy Till, *Architecture Depends*, (Cambridge: MIT Press, 2009), 66.

92 Jeremy Till, *Architecture Depends*, 65.

93 Jeremy Till, *Architecture Depends*, 132.

respect to this very human duality as “inauthentic phenomenology.” He states:

Being an inauthentic phenomenologist means being ordinary. An inauthentic phenomenological reading of space in all its lived senses, engaging in it as sensitive bodily beings alert to touch, to light, to scale, to smell, to softness, to heaviness—to all those aspects that exceed objective measures. ... In the unraveling of hard space through the twin agents of social space and inauthentic phenomenology, a new kind of space emerges. It is by implication a space that is ‘softer’ than what it has replaced, insofar as it is not founded on the principles of abstraction, normalization, and order that underpin hard space.⁹⁴

This “soft space” of lived experience is born of the active participation of the dweller in their world. The dweller’s agency is the missing element of the built environment.

As social and urban theorist, Richard Sennett writes in his book *The Craftsman*, “We become interested in things we can change. ... [We] invest thought in [them]”⁹⁵ By separating it from false pretensions toward certainty, the built-object can offer agency to the dweller, who in turn can engage in the act of dwelling through the continuum of time. Meaning is produced not as the end to a means but rather as the physical realm where human *Becoming* is the ultimate end.

A contextual example of the phenomenon of design contingency and user agency in contemporary residential architecture in Canada is found in a study titled:

⁹⁴ Jeremy Till, *Architecture Depends*, 132-133

⁹⁵ Richard Sennett, *The Craftsman* (New Haven: Yale University Press, 2008), 120.

Wartime Housing and Architectural Change, 1942-1992. In this article architectural scholars Annmarie Adams and Pieter Sijpkens review the fifty year-long evolutionary course of twenty-five first generation *Victory Houses*, in the Ville St-Laurent neighbourhood of Montreal, built as part of a federal emergency housing mandate, by the crown corporation known as Wartime Housing Limited (WHL) during World War II. Breaking down the study into three working hypothesis of: “wartime work experience,” “copy-cat phenomena,” and “domestic supervision,” Adams and Sijpkens reveal how the presence of user agency in vernacular design entices the occupants to explore the potentiality of the built-object, in this case the house.

The original temporary intent of the WHL houses included the prevision that the *Victory Houses* were to be dismantled and recycled after the war. This intention became moot when the short-lived WHL was absorbed by the Central (now Canadian) Mortgage and Housing Corporation (CMHC) following the agencies formation in 1945, when the CMHC began selling most of the *Victory Houses* to their original tenants. The *Victory Houses* were by no means good houses. At less than ten years old, much of their essential components required extensive attention. Their new owners, most of whom were wartime factory workers, soon began applying their work skills to retrofitting their newly acquired homes. They dug their own basements and upgraded the foundation, wiring, insulation, and heating

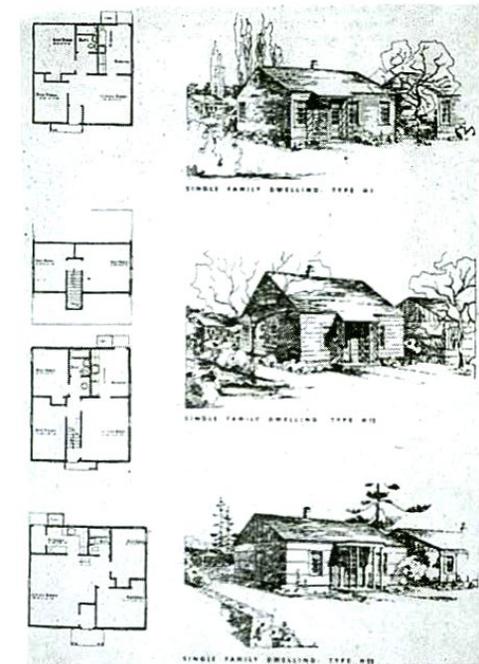


Figure 8: Types of WHL houses. (RAIC 1942)

equipment of their houses, and in doing so, they learned the potentials and limits of the structure.⁹⁶

The next wave of modifications came over time and with respect to each household's changing family structure, size, and availability of resources. Addition of garages which doubled as workshops followed by extension to the main structures continued to the point that by the year 1970 most of the original structures were unrecognizable.⁹⁷ Willingness and confidence, residual of war-time culture, had led some of the owners into trying their hand at designing and executing extensive changes to their houses, further inducing their pride and affection for them.⁹⁸

The extent of modifications by more enthusiastic and imaginative members of the community began serving as a model to others. A network of exchange for ideas, expertise, experiences, and services began forming amongst neighbours. Some owners who had improved their skills by working on their own house, began providing services to their neighbours. For example one resident of Ville St-Laurent was responsible for excavating fifty-two basements and several second story additions to the neighbourhood houses.⁹⁹ Soon the neighbourhood had begun

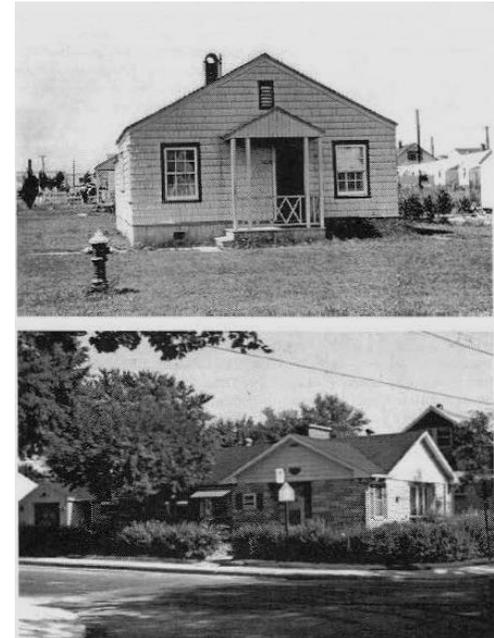


Figure 9: Above, the original Ville St-Laurent WHL house. (Demine 1942) Below, the same WHL house in its contemporary state. (Lamothe 1995)

96 Annmarie Adams and Pieter Sijpkens, "Wartime Housing and Architectural Changes, 1942-1992" *Canadian Folklore*, vol. 17 no. 2 (1995): 13-29, 18-20.

97 Adams and Sijpkens, 20.

98 Adams and Sijpkens, 23.

99 Adams and Sijpkens, 27.

resembling an ever-changing environment of exchange and cooperation.

The last and perhaps the most important role played by the *Victory House* was creating a dynamic balance within each household. Women and men equally shared the responsibilities of managing and executing every modification, and the successful completion of every project, reinforced a healthy environment for democratic practice of domestic life in each family.¹⁰⁰

Adams and Sijpkens' study of Ville St-Laurent is a telling case of the inherent potentiality within vernacular architecture for the temporal exercises of dwelling, over an extended period of occupancy.¹⁰¹ The study also presents a more fundamental argument with respect to architecture itself, underlining the dangers of limiting the study of architecture to design intentions alone, reminding all that "buildings are dynamic systems and all people are active participants in their own spaces."¹⁰²

Avoiding the confrontation of these realities results only in the formation of an inadequate built-environment. The generic type and general purpose of vernacular architecture allows a building to be receptive of the dweller's actions. By serving as a platform for the dweller's intuition, the simple structure helps the

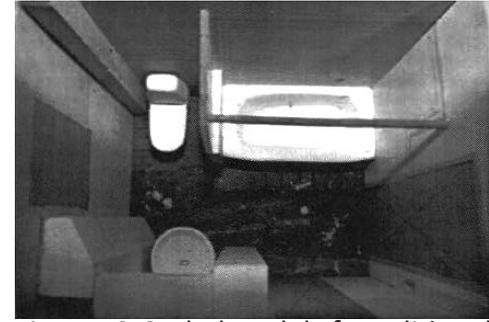


Figure 10: Scaled model of an additional bathroom made by one of the Ville St-Laurent residents. (Lamothe 1995)

100 Adams and Sijpkens, 28.

101 Adams and Sijpkens, 15.

102 Adams and Sijpkens, 29.

dweller in gaining a true understanding of the built-object and a higher appreciation for the built-environment. In the case of Ville St-Laurent, the *Victory House* created an environment of cooperation and coexistence, around a common interest in well-being and an exercise of self-reliance.

On a social level, vernacular design provides an environment that is inclusive of, and receptive to, humankind's temporal being. Vernacular buildings are a setting for convivial social interactions, where measures of progress are tangible, relatively immediate, and far less abstract than with other commodities in the exchange economy.¹⁰³ The vernacular consolidates transcendent ideals into simple, clear and memorable buildings in which the contingencies of life find a home, and where feelings of true belonging, true adequacy, and true living are nurtured.^{XIX}

XIX Simon explains: the built-object "can be thought of as a meeting point If the inner environment [dwelling] is appropriate to the outer environment [building], or vice versa, the artifact will serve its intended purpose." (Simon 1996, 6)

103 Willis, *The Emerald City and Other Essays on the Architectural Imagination*, 122.

The Context, Chapter Three

The current condition of the built-environment is far from its modernist ideals. Despite industrialized building's efficiency and intelligence, the built-environment registers numerous uninformed, wasteful, and misguided decisions, inside city cores and well beyond them. This phenomenon is typical of the urban housing stock of the developed world. Social and urban theorist Richard Sennett confronts this phenomenon in his book: *The uses of Disorder: Personal Identity and City Life*. In his book, Sennett contrasts the present reality with the un-realized potential of cities as follows:

On the one hand, there exists a life in which the institutions of the affluent city are used to lock men into adolescence even when physically adult. On the other hand, there is the possibility that affluence and the structures of a dense, disorganized city could encourage men to become more sensitive to each other as they become fully grown. I believe the society that could be is not a utopian ideal; it is a better arrangement of social materials, which as organized today are suffocating people.¹⁰⁴

Sennett calls for a thoughtful re-ordering of the social material of the city. He wishes to see citizens correct the confusion and suffocation brought about by overly functionalist approaches to the city's social spaces. For Sennett, the adequate

104 Richard Sennett, *The uses of Disorder: Personal Identity and City Life*, (New York: W.W. Norton, 1992). 189.

and thus mature city – the city of “fully grown” individuals – is not determined by quantitative data. Rather, it is a city of sensitive relationships.

There are many forces at work that lead to the monotony in residential construction. The planning, financing, erecting, and marketing of buildings, makes construction a relatively high-risk venture. And even though the need for shelter ensures a rather consistent demand for residential buildings, thus mitigating some of the risk for the developer, developers are not inclined to expand their practices so as to embrace a larger conception of dwelling. The diversity of dwellers’ needs, the ambiguity of desires only add to the uncertainties that residential construction might choose to deal with, further solidifying more pragmatic approaches to housing. The inherent certainty required by optimized design and build practices, combined with the magnitude of the resources required for the construction of buildings, overshadow much of the qualitative and mostly human concerns of true dwelling. Yet, however much diversity and open-endedness might be subjugated to the realities of the rational market, users are never entirely freed from their inexorable drive to be whole dwellers..

The essential need for housing as a consumer product, driven by the imminence of modern production, tips the scale in favour of hard data over ambiguity, where physical and social requirements of dwellers falsely merge together within

the housing scope, reducing the nature of dwelling to an exercise of means-and-end where maintaining of the mortal condition and its environment take priority over the true human virtue of *Becoming*.

The following chapter begins with a review of residential development in Canada from the early twentieth-century to the present, and examines the roles played by public agencies and private enterprises in the rise and acceptance of de-contextualized industrial housing. It begins by reviewing administrative approaches to the question of affordability in housing. The discrepancies imposed upon the development of housing stock as a result of the engagement between building and lending regulations in Canada is also critically examined. The chapter then reviews the stance of the architectural community in response to the new practice of housing in Canada. The chapter concludes by testing conceptual and contextual findings in a design proposal for a residential development in Ottawa's Centretown.

The Policy, The Practice, The Outcome

The current state of Canada's housing stock registers a multitude of discrepancies. Although the effect of each one is relatively small and thus able to be absorbed in the totality of the housing equation, these collectively add up to a significant inadequacy of housing. A telling article on this matter is planner Hans Blumenfeld's study: *Mismatch Between Size of Household and of Dwelling Units*, published in 1984. Blumenfeld sees the increasing size of Canadian houses despite the reducing number of household members as a problem of definition in scope and measures of adequacy.

Blumenfeld describes the notion of housing adequacy as a "culturally conditioned measure." He determines that Canadian measures are focused in the houses' ability to provide "shelter," "privacy," and "social prestige," rather than enabling the "full physical, mental, and moral development of all ... occupants."¹⁰⁵ While Blumenfeld's observation may not be surprising, nor a departure from rhetoric of housing critics of today, it is quite revealing of the context within which Canadian housing policy, design, and development have been practiced for the better part of the past century.

¹⁰⁵ Hans Blumenfeld, "Mismatch Between Size of Household and of Dwelling Units" in *The Canadian City*, ed. Kent Gerecke (Montreal: Black Rose Books, 1991), 198.

The most telling part of Blumenfeld's report is not in what is included as entities of scope, but what is missing from this list – the fundamental entity of affordability.^{xx} The ability and the willingness of a household to endure the cost of a dwelling is a significant determining factor in the evaluation of housing adequacy,¹⁰⁶ yet in Blumenfeld's report affordability is not included as a part of the scope. In fact, it appears that affordability has not been a primary concern for the Canadian housing market for some time. But why?

The answer lies in the long practice, among Canadian policymakers, of isolating price amongst the determinants of access to housing, and housing form and production, as well as by the peculiar logic behind the apparent success of the price-determination model. It is important to realize that practitioners and policymakers of housing have very different concerns and priorities. One early example of this concern is the *Report of the Lieutenant-Governor's Committee on Housing Conditions in Toronto, 1934*, commissioned by Dr. Herbert A Bruce, which highlighted the immediate need for adequate urban housing stock by citing the “unsanitary,” “verminous,” and “grossly overcrowded” living conditions of thousands of low-income families in Toronto.¹⁰⁷

XX In the context of this writing, affordability does not refer to the practice of housing lowincome households.

106 Denton Marks, “Housing Affordability and Rent Regulations” *Research Study (Ontario Commission of Inquiry into Residential Tenancies)*, no. 8 (Toronto: Government of Ontario, 1984), 102.

107 Dennis Guest, *The Emergence of Social Security in Canada* (Vancouver: UBC Press, 1997), 100.

Interestingly, despite the highly sympathetic response of Prime Minister R. B. Bennett to the Bruce report, the federal leader did not address any of its three main areas of concern. Rather, the Prime Minister wrote: “I am interested in the housing problem. The only difficulty is the financial one. ...I am afraid we will have to leave cities to private lenders.”¹⁰⁸ He later referred Bruce’s concerns to the House of Commons Special Committee on Housing. In that same year the industry alliance known as the National Construction Council (NCC) presented the same committee with its own report expressing its concerns about the affordable housing sector. The NCC report held: “Our investigations of housing for low-income groups show that provisions to this class of housing cannot be ultimately profitable to private enterprise.”¹⁰⁹ It then went further, suggesting the designation of affordable housing development to become a part of public-works projects, a market serving economic stimulants program.¹¹⁰

The first extensive attempt at addressing the need for affordable urban housing by the Canadian legislature came with the passing of the Dominion Housing Act (DHA) in 1935. This program ushered the way for the similar legislation that

108 Robert A. Wardhaugh and William Johnston, *Behind the Scenes: The Life and Work of William Clifford Clark* (Toronto: University of Toronto Press, 2010), 95-96.

109 Joan L. Selby, “Urban Rental Housing in Canada, 1900-1985: A Critical Review of Problems and The Response of Government” (Master diss., University of British Columbia, 1985), 58.

110 John C., Bacher, *Keeping to the Marketplace: The Evolution of Canadian Housing Policy* (Montreal: McGill University and Queen’s University, 1993), 70.

followed it, and set a precedent for other Assisted Market Strategies¹¹¹ of today, leading to an environment where maintaining an affordable housing stock is seen as a question of policy and the responsibility of policymakers rather than an entity of scope to be addressed in the design. And thus the changeover was completed, effectively transferring what had previously been the responsibility of market practitioners on to public policy.^{XXI}

By the year 1940 the financial relief brought upon the Canadian economy by the success of the war industry had started to trickle down into the housing market. Demand for housing close to factories was overwhelming and had quickly outstripped supply. In 1941, Wartime Housing Limited (WHL) was charged with the research, development, and production of low cost workers' housing was created to meet this demand. Favourable allocation of resources combined with sophisticated engineering made the WHL an extremely successful project. Designed for prefabrication and quick installation, the four room *Victory House* was far ahead of its time in both technology and performance and set the precedent for much of today's standardized building practice.¹¹²

In the first four years following the formation of WHL, the Crown Corporation

111 Lynn Hannley, "Substandard Housing" In *House, Home, and Community: Progress in Housing Canadians 1945-1986*, ed. John R. Morin (Montreal: McGill University and Queen's University, 1993), 204.

112 Marc Denhez, *The Canadian Home: From Cave to Electronic Cocoon* (Toronto: Dundurn, 1994), 79.

XXI As Peter King writes: "we seek to do meaningful things and most things are meaningful because of what we do. Dwelling is the activity that contains this meaning. ... Yet we need to remember that policy makers and professionals do not talk about dwellings, ... for them there is only one level. ... the one entity. ... the brick box." (king, 2004 18)

had managed to build nineteen-thousand houses across Canada, and by 1947 this number had reached thirty-thousand houses.¹¹³ Yet the significance of WHL's success is not limited to the building of thirty-thousand small houses in six years. In its success the WHL had managed to reinforce the clear distinction between public and private interests in the Canadian housing market, a gap that is continuously growing despite frantic political efforts to control it.

In his book *Canadian Housing Policies (1935-1980)*, Albert Rose describes the National Housing Act (NHA) of 1944 as a "declaration of faith in the nation's future in which housing policies would play a large role in post war readjustment."¹¹⁴ As Rose points out, the preamble to the legislation describes it as "an Act to promote the construction of new houses ... and the expansion of employment in the post war period."¹¹⁵ To give it full faith and credit, it can be said that the legislation had two equally praiseworthy objectives: avoiding a post war depression similar to the one Canada had just managed to climb out of; and improving Canadian housing standards at the same time. What history has proved, however, is that social aspirations of any policy tend to be overshadowed by the tangible measures of its economic performance.

113 J. B. Cullingworth, "Groping for a National Urban Policy." In *Urban and Regional Planning in Canada* (New Brunswick, U.S.A.: Transaction Books, 1987), 164.

114 Albert Rose, *Canadian Housing Policies* (Toronto: Butterworth & Company, 1980), 28.

115 Rose, *Canadian Housing policies*, 28.

The formation of the Central (now Canadian) Mortgage and Housing Corporation (CMHC) in 1945 marked the acceptance of the universal notion of cost-to-income ratio as the benchmark measure of affordability across the Canadian housing stock.¹¹⁶ The CMHC has “all attributes of a well-run business ... [and to this day] the corporation has never disappointed the financial community.”¹¹⁷ CMHC’s main role is the regulation of the housing market by the securing of financial resources, and its distribution through private lenders. CMHC loan guarantees in effect eliminate all risk for lenders. Accordingly CMHC mortgages are more favourable and competitive than what the lenders could otherwise offer. That said, buyers who finance through CMHC are subject to tighter restrictions.

CMHC’s ownership incentive programs since World War II have made ownership the most viable means of access to housing for Canadians. Canadian households have often been forced into allocating far more than the anticipated portion of their annual income to owning and maintaining a house, in many cases having to relocate to car-oriented suburban subdivisions where they end up incurring large transportation costs, further reducing their disposable income, free time, and quality of life.¹¹⁸

116 John Sewell, *Houses and Homes: Housing for Canadians* (Toronto: James Lorimer & Company, 1994), 17.

117 Rose, *Canadian Housing policies*, 29.

118 Simon Langlois, “Life Style, Market Goods and Services” In *Recent Social Trends in Canada 1960-2000*, ed. Lance W. Roberts (Montreal: McGill University and Queen’s University, 2005), 481.

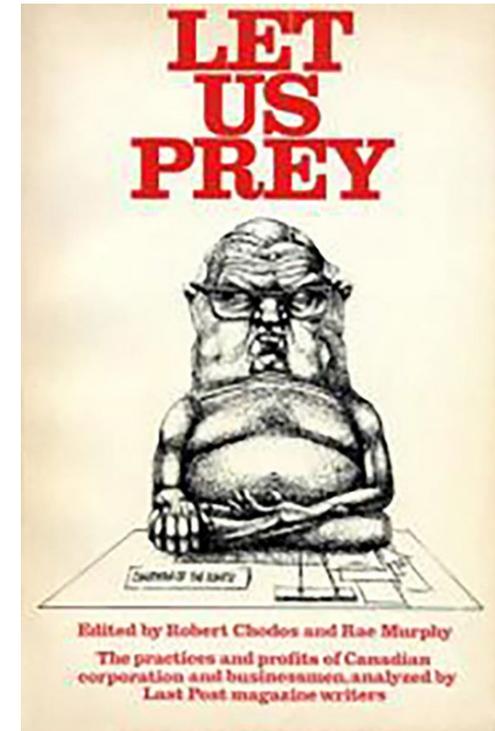


Figure 11: A collection of telling editorials on the residual effects of Canada’s various financial incentive programs. Notably an article titled: *Home is Where the \$50,000 Mortgage is*, by Rae Murphy. (1974)

The state of Canada's housing stock three decades after the passing of the original NHA reveals how tackling the multifaceted and fundamental question of adequate housing for all Canadians through the narrow focus of economic stimulant programs has resulted in outcomes far removed from the original intentions. Economist Harvey Lithwick compiles these outcomes in a comprehensive report titled *Urban Canada: Problems and Prospects*, published in 1971. In his report, Lithwick condemns thirty years of Canadian housing, planning, and urban development policies, referring to them as "futile gestures which were at best anti-social."¹¹⁹ The report makes it clear that what the public needs is more than a place to live.^{XXII}

Lithwick's report claims that contemporary housing policies are the main reason behind the rampant "urban inequity" and the ill-distribution of resources that favour the elite at the expense of the poor.¹²⁰ By the time Lithwick's report was published, the shortcomings of Canada's rigid housing policies had become quite evident, and the bottom half of the income bracket was absorbing the bulk of the resulting pressure. Housing policies of the time had placed the control of labour, material, and land for the production of housing stock in the hands of few large

XXII Heidegger warns of the dangers of use oriented production, with respect to production of dwelling-space, leading that the engagement of building cultivation and construction as acts of "genuine building, that is, dwelling," with the habitual nature of mortal being, inevitably elevates the practice of building above the reality of dwelling. In one sentence, he writes: "Building in the sense of preserving and nurturing is not making anything," (Heidegger 1993, 348) meaning that the act of seeking significance in an object's utility renders both the object and its production meaningless.

119 Rose, *Canadian Housing policies*, 51.

120 N. Harvey Lithwick, *Urban Canada: Problems and Prospects* (Ottawa: Central Mortgage and Housing Corporation, 1971), 18.

builders thereby putting the construction industry on top of the housing pyramid.¹²¹ The most surprising part of this report, however, is its conclusion which suggested that the remedy to the regulatory crisis of Canadian housing is indeed further regulations: regulations that will “harmonize regional and national objectives,” objectives, which one could argue, are in most cases quite contradictory.¹²² This is a clear indication of a lack of alternatives, for Canadians, to a practice of which the flaws were well known.^{XXIII}

In the complicated and lucrative landscape of Canadian residential development, market forces have been able to maintain a relative dominance over the determinant of the housing scope. Interestingly in the dramatic course of events during the establishment of CMHC, design managed to keep a low but relevant presence in policy. This was in part due to the success of WHL houses which proved the value of engineering and design, as well as efforts by organizations such as The Royal Architectural Institute of Canada (RAIC) which sought to ensure that Canadian architects maintained a presence in the fast paced exchange of interests between legislators and developers.

Canadian architects were aware of the post-Bauhaus modern movement that

121 George Fallis, “The Suppliers of Housing” In *House, Home, and Community: Progress in Housing Canadians 1945-1986*, ed. John R. Morin (Montreal: McGill University and Queen’s University, 1993), 89 .

122 Cullingworth, “Groping for a National Urban Policy”, 37.

XXIII The federal government’s response to Lithwick’s report was the hasty formation of the Ministry of State and Urban Affairs in that same year. An act that is generally noted as an empty gesture towards regaining the confidence of frustrated urban advocates and civic leaders, rather than a genuine effort towards improvement of urban housing.(Spicer 2011, 198) As it turned out it had also not foreseen the complex jurisdictional limitations it would face at provincial and municipal level at the time of its formation, which rendered it powerless, and led to its closure in just eight years. (Spicer 2011, 123)

had swept the imagination of their colleagues to the South. Canadian architectural journals in the thirties were littered with articles calling for answers to the Canadian city's "need for this architectural Final Solution."¹²³ The reach of modernist design towards Canadian housing prior to World War II, however, was limited to the *Dominion Architectural Competition for Small Housing* in 1935, in which modernist designs prevailed.¹²⁴ This small victory was not enough to persuade the struggling market of the Depression-era to invest in the new design approach.

In 1940 the RAIC published a review of James Ford's *The Modern House in America*. Perhaps disheartened by the recent housing legislations, the review concluded that: most Canadians "have neither the imagination nor (the) individuality" to demand such variety of housing and "they would fit into one of a small number of good house plans just as they fit into one of the standard plans for life insurance."¹²⁵ The article fails to present an alternative or a variation of the practice suitable to the domestic market. It does, however, suggest the unfeasibility of involvement in the housing practice for Canadian architects.^{xxiv}

In 1942 the RAIC Journal published an article titled *Plastic Possibilities*, in which T. Warnett Kennedy presented the Canadian "house of the future". In the

123 Denhez, *The Canadian Home*, 77.

124 Denhez, *The Canadian Home*, 77.

125 Richard Bolton, "Book Review: The Modern House in America" *RAIC Journal* (October, 1940), 183.

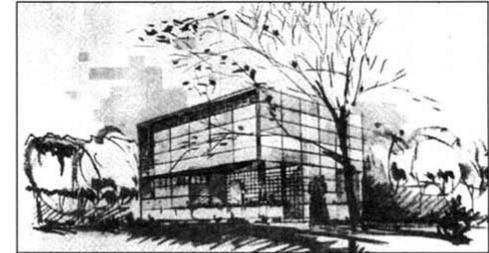


Figure 12: The RAIC's plastic *House of the Future* (RAIC 1942)

xxiv Alberto Pérez-Gómez presents an appealing explanation for the challenges faced by architecture towards maintaining a social consciousness. In his book titled: *Built upon Love*, he claims that contemporary culture's skepticism of "the social role of architecture" is due to the both "clients and practitioners" having been disillusioned by the "utopian and ideological programs" of modernity. To Pérez-Gómez contemporary culture's misconception of modernist ideal is rooted in the modern politics' historical de-contextualization of the undoubtedly "noble ideals of equality, fraternity, and liberty." (Pérez-Gómez, 138) Combined with the pragmatic abilities of universal modernism, these fantastical modernist ideals potentially lead their own makers into an endless search for a false virtue in service of the false reality of the mortal realm.

article he wrote that plastic will bring “the ideal of complete prefabrication of houses” to realization, and that the incorporation of plastic materials will “hold out the promise of higher standard of living, colour, weather, and fire resistance, insulation, and flexibility of design.”¹²⁶ The RAIC’s plastic house appears to be a reaction to the success of the WHL. But it is undoubtedly an attempt towards maintaining a voice in a residential Industry that at the time had become virtually inaccessible to Canadian architects.

In an effort to regain the interest of the architectural community in the residential market, CMHC commissioned the *Canadian Small House Competition* in 1947. Administered by the RAIC, the selected entries were published as an appendix to a CMHC publication which featured building instructions and drawings of original and modified WHL designs, titled *67 Homes for Canadians*. The winning designs of the competition were categorized by region, and interestingly enough, these categories were accompanied by a note stating: “It is quite possible that the design contributed in any region could have been suitable and successful in any other region.”¹²⁷ Such a statement can only be read as a testament to the acceptance of a separation between design and context, or worse, a reliance on the manipulation of specific sites and contexts to suit pre-determined designs.

¹²⁶ T. Warnett Kennedy, “Plastic Possibilities” in *RAIC Journal* (April, 1942), 53.

¹²⁷ CMHC, *67 Houses for Canadians*, (Ottawa: Central Mortgage and Housing Corporation, 1947), 76.

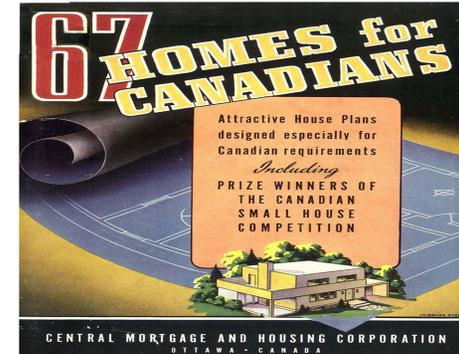


Figure 13: CMHC publication, *67 Homes for Canadians* (CMHC 1947)

Despite the self-confessed arbitrary nature of its designs, nearly thirty thousand copies of the book were sold across Canada in one year making it the most influential house plan book for two decades following the war.¹²⁸ One can debate whether the success of CMHC's book was due to the quality of its designs or the advantage given to corporation's own designs in jumping the queue for securing finances.¹²⁹ In any case, the publication grounded a utilitarian position for design in residential architecture. The intention of residential architectural design has for the most part shifted, to use Marco Frascari's words, from reaching towards an "objective blessed condition" to the "subjective happiness in the conceiving of buildings."¹³⁰

In his essay *MAK'APIOI (blessed) are the "poor" architects*, Frascari presents an ethical challenge to the introverted exercise of function-driven design by asking the architect one question: "are you having fun?"¹³¹ In its simplicity, the question digs deep into the roots of what it means to take action, and of what action brings to life in terms of meaning.^{xxv} What Frascari challenges is a common phenomenon with the quite simple remedy that is awareness. It is only through being aware of oneself and others that one can maintain virtue in his or her actions. This is not to be confused with awareness of one's self and other's needs and wants but rather an

128 CMHC, "History – CMHC Milestones." CMHC, .

129Denhez, *The Canadian Home*, 95.

130 Frascari, "Mak'apioi (blessed) are the poor architects," Essay. 1.

131 Frascari, "Mak'apioi (blessed) are the poor architects," 1.

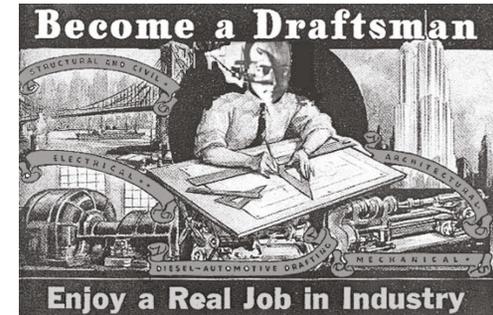


Figure 14: Collage by Marco Frascari (Frascari 2010)

XXV Frascari's question is reflective of Friedrich Nietzsche's writing on work and boredom. Nietzsche writes that to most people "work is just a means and not itself the end." He does however, acknowledge the presence of what he calls a rare breed of choosy and hard to please individuals for whom work is the reward, adding that "to this rare breed belong artists and contemplative men [and women] of all kind." (Nietzsche 2001, 57) reference The subjective nature of architecture as a creative practice combined with deductive reason's susceptibility to self-indulgence with respect to virtue, makes architecture extremely vulnerable in maintaining its virtue.developments.

awareness of every individual's being.

As Frascari explains: “solving problems and setting problems is how architects of the contemplative paradise perpetuate, legitimize and justify their professional presence ... [forgetting that] the best solution to an architectural problem is not necessarily a building.”¹³² An object's performance is measured by its imminent output followed by its ability to maintain its performance. Architecture is not exempt from this rule. Through time, occupants find ways to make buildings perform and meet their expectations. If a building fails to maintain relevance and value, it is not because its users have failed to recognize its potential for use as an object. It is simply a case of architecture failing to recognize dwelling's potentiality-for-Being, and thus failing to incorporate occupancy through time within its design.

Building and maintaining adequate dwelling-spaces requires the collective participation of all members of the community. Regardless of its merit, CMHC's focus on a single aspect of the question of housing, price, loses sight of the complexity of the true end of the practice that is dwelling. As Peter King points out: “Policy can only achieve the basics.” It can, at best “provide enough brick boxes and make sure people can afford them.” These are significant tasks and policy is quite capable of

132 Frascari, “Mak'apioi (blessed) are the poor architects,” 5.

performing them, but they are not enough for the forming of dwelling-spaces.¹³³
Yet with respect to the tried methods of practice, affordability may indeed be the junction between quantitative and qualitative measures of performance. Criteria that extends beyond the minimal satisfaction of standards and budget can then be met through true dwelling. In this way price becomes a node for the dweller's engagement with the dwelling-space and is elevated in status from a constant hindrance to a variable controlled through dwelling.¹³⁴

133 King, *Private Dwelling*, 19.

134 King, *Private Dwelling*, 19.

The Project, 381 Kent Street Ottawa

Making good residential architecture requires a good understanding of the cognitive behaviours that guide human dwelling. It is, however, equally important to understand the context in which a dwelling-space is to perform its function. As contemporary philosopher Hans Gadamer writes in *Truth and Method*:

A [building's] ... purpose, through which it belongs in the context of life, cannot be separated from it without it losing some of its reality. ... Works of architecture do not stand motionless ... [and] must mediate a new and better way between the past and the present. The special importance of architecture ... [is that] it belongs inalienably to its world.¹³⁵

This hypothesis combined with the proven function of the empirical approach to housing production in Canada, leads to a forthright argument for flexible housing at a very basic level.^{xxvi} The key to good design is to differentiate between the universality of modernist concepts as technical solutions for flexibility, and the contextual aspects of the environment as its determinant.

The project's site is located at 381 Kent Street. It measures nearly three thousand square-meters and is bounded by Gilmour Street on the north and James Street on the south. A six story concrete residential building and a three story



Figure 15: Aerial photograph of the site.

XXVI As architect and housing critic N. J. Habraken writes: "By accepting the involvement and initiative of the user as a starting point for contemporary housing, we may begin to see a way out of the constraints in which we operate." (Habraken 1972, 3) Habraken's sentiment has been shared by architectural theorists and practitioners, in various degrees, as it will be examined with respect to the context of this project.

¹³⁵Hans Gadmer, *Truth and Method* (New York: Seabury Press, 1975), 150.

converted house/apartment occupy the adjacent lots to the east of the lot. The site is currently used as a paid-parking lot to The Kent Medical Building, a five story square shaped concrete structure with a setback on the ground floor, occupying the south-west corner.

There is a dominant trend to the current residential stock of Centertown, where medium to large houses have received extensive additions in the rear, due to the original structures' small setback from the street. In many cases, houses in closer proximity to the main roads have also been made into multiple unit structures of up to four stories; many of them have been extended to make use of the attics and nearly all of them are walk-ups.^{XXVII} A 2012 report by city of Ottawa titled: The Centretown Community Design Plan (CDP), is a very good example of a pragmatic yet contextual approach to the neighbourhood's prospective development, and is taken into consideration in this design proposal.

In order to maintain the current function of the site, the project must provide the existing structure with pay-per-use parking spaces while accounting for the parking needs of its new occupants. Parking takes up ground. Underground parking has proven a viable choice for automobile storage since the rise of medium and high-density urban development.^{XXVIII} It does, however, come with a much greater initial cost compared to its aboveground alternative. This project aims to offset the



Figure 16: Row house converted into multi dwelling structure.

XXVII Despite the clear signs present in this trend, much of the newly built residential structures, which are generally along the main roads, are examples of typical multiunit town homes, with three stories, a garage, and shared courtyard/driveways.

XXVIII Interestingly, the first example of underground parking successfully applied to medium density housing, is found in a development at Flemingdon Park in Toronto, done in the early 1960s by architect Irving Grossman. This design has been subsequently applied to a large number of Canadian medium density developments. (Schoenauer 2003, 427)

initial cost of underground parking construction with rental revenue.^{XXIX} To provide access to the underground parking, the project proposes minimal modifications to James Street. Part of the land is allocated to widening the street to make it a two-way drive, and an island is placed in the road to prevent through-traffic travelling past the site's east boundary. A number of short-term parking spots and a loading bay are provided for the complex, and a ramp placed in the setback of the original building leads to the underground parking.

Moving the current function of the site underground has obvious advantages.

It also presents the site plan with the challenge of negotiating the three-dimensional order of space, one typically reserved for the building. Enter here Johan van de Beek's theory of "space plan."^{XXX} Space plan does not refer to a solution to a given problem of spatial organization. It is rather an understanding of the referential elements which define the boundaries and extensions of space. Compared to Bragdon's theory of three-dimensional containment of space, space plan provides a more inclusive notion of space, which is spatial differentiation. In other words, space plan is the theory of spatial negotiation of differences.

Vertically, three main differentiations operate on the site: the underground, the grade, and the roof. These are engaged in various ways within the design. In the south courtyard, there is a square sunken garden that leads from grade to

XXIX An audit of the city of Ottawa's parking operations, reveals that each off-street parking spot generates a net revenue of nearly onethousand and three hundred dollars per year. The possibility of alternate occupation between daytime users (patrons) and night-time users (residents) can achieve even higher income without having to increase capacity. It also removes the burden of owning and financing a parking spot by the dweller. Providing medium density housing with strictly rental parking, alleviates one of the largest concerns in urban housing development and administration, while every aspect within its vicinity benefits from the residual effects of its proven financial viability. (City of Ottawa, 2008 iv)

XXX Based on the theory of "*Raumplan*" a term strictly used in connection to the work of Adolf Loos, space plan is adopted as a comprehensive theory for organization of three-dimensional space. Just as it is important to maintain much of the positive contextual aspects of a site, particularly with respect to an urban infill project such as this, it is also necessary to incorporate an appropriately distinct spatial sequence within a design that highlights the distinctions between the design and its surrounding, and in doing so demonstrates the design's perspective spatial conditions. The difference between top and bottom, front and back, left and right, and most importantly the difference between the interior and the exterior are all referential components that makeup the space plan, which ideally provides the built-environment with the means for successful and continuous negotiation between its spatial conditions. (van de Beek2008, 53)

the underground. It provides the underground parking with light and air. It also serves as an indication of the ground from which all things rise. This drop in grade is contrasted by an elevated patio which provides shelter for the temporary parking spots off James Street. Accessed from the residential level, the patio is a platform for the residents to maintain authority over the site, by being able to look over the activities of the grade and the movement to and from the underground level.

The project's proposed massing consists of three residential building blocks of various heights. The residential blocks mark the boundaries of the site by extending the length of the street frontage and in doing so maximise the open space in the middle. Each of the three, four, and five story blocks follow the vertical transition guidelines of the CDP with respect to existing mid-rise and low-rise buildings as well as one another.¹³⁶

The open area confined in the middle of the three residential block and the existing structure on the site is a valuable commodity, as it occupies the highly sought-after grade level reclaimed by the construction of underground parking, and thus demands a respectful treatment by the space plan. The answer is found in the historical role of architecture in making of social order by "providing a space for



Figure 17: Site Massing Proposal

¹³⁶ City of Ottawa, *Centretown Community Design Plan*, (Ottawa: City of Ottawa, 2013). 95.

philia,”¹³⁷—a space for mediation of social relations via the arbitration of personal differences.^{XXXI} Constituting a space for *philia*, requires the establishment of a variable negotiation of proximity by the space plan.

It may seem counterintuitive but a proven way to achieve this is by promoting a “centrifugal use of space.”¹³⁸ In this case the residential blocks are pushed towards the edge of the site leaving the space in the middle empty, allowing it to gain autonomy through vacancy. At the same time the orientation of the dwelling units towards the site’s empty centre imposes a degree of vulnerability to the centre space, coming from the same protective elements that form its enclosure, the residential blocks.^{XXXII}

This spatial dichotomy is broken up by a single story pavilion at the core of the site. The square shaped building with its open plan, exposed structure, and transparent façade serves as a multi-purpose communal service building for the complex. With its large footprint and downplayed height, the pavilion presents the dwellers with its very own duality of mass, when viewed from the various heights within the site. From grade level, the single story and transparent façade of the pavilion make it approachable and unimposing. Viewed from the residential blocks,

137 Alberto Pérez-Gómez, *Built Upon Love: Architectural Longing after Ethics and Aesthetics*, (Cambridge, Mass.: MIT Press, 2006), 138.

138 Van De Beek, “Adolf Loos-Patterns of Townhouses”, in *Raumplan versus Plan Libre*, ed. Max Risselada, (Brugge: Die Keure, 2008). 53.

XXXI A long forgotten notion of respect, as described by Hannah Arendt, “*philia politike* is a kind of friendship without intimacy and without closeness; ... a regard for the person from the distance which the space of the world puts between us, ... independent of the qualities which we may admire or the achievements which we may highly esteem.” (Arendt 1958, 242)

XXXII Strengthening the presence of this centre space for *philia* is critical to its success, considering the introverted nature of modern living. The root of this withdrawal is best clarified by philosopher Gaston Bachelard in his book *The Poetics of Space*, Bachelard explains That the fear which pushes contemporary human-kind toward its “introverted withdrawal” from the exterior, “does not come from the outside, nor is it composed of old memories. ... Here fear is being itself.” In other words, to be able to face the ambiguities of the other beings, whether space or other people, the dweller must first reconcile the uncertainties of his or her own being. Bachelard suggests that architectural presentation of a “supplest image of being-there,” to the dweller, allows the dweller’s mind to lose its “geometrical homeland”, and for its spirit to begin drifting in an ambiguous being within space-time. Subtle spatial organization of the necessary ambiguous proximities of space for *philia*, is key for allowing the dweller to escape the fear of its own being, and find distinctness in an uncertain becoming with others. (Bachelard 1994, 218)

the large footprint of the pavilion gives it a presence that is grand enough to challenge the illusive comfort of the indoors, yet able to disappear into the viewer's peripheral vision and avoid projecting an unwanted assertion.

The pavilion's other role is representing the functional relationship taking place between the three vertical differentiations of the site. Placed below the pavilion is the site's utility distribution infrastructure, and a central heating and cooling system serving both air-conditioning and hot water needs of the blocks.^{xxxiii} The chimney stack rising through the interior of the pavilions and past its roof line is an indicator of the functional mechanism housed below the structure. There are two wood-burning fireboxes adjacent to the chimney, one inside the pavilion and another on the roof, further highlighting this functional relationship.^{xxxiv}

On the exterior of the pavilion, the roof line and the transparent façade signal an approachable enclosure. Inside the pavilion the firebox and the staircase are the primary orienting element for the interior's otherwise open floor plan. Its minimum spatial program serves two purposes, one is a realistic utility and the other is security. Ottawa's climate demands extended periods of indoor activity. The open plan provides the occupants with maximum flexibility with rapid turnover. The possibilities for this large indoor space is limited only by the imagination and willingness of its occupants. It provides its occupants with shelter from the harsh

XXXIII This approach was first used in Ottawa by CMHC in 1982. Known as the LeBreton Flats District Heating System, the system still is operating today providing one-hundred and forty-two units of medium and low rise housing with heat, at a total annual cost of less than four hundred dollars per unit. A more recent example is the geo-thermal heating and cooling system at Centretown Citizens Ottawa Corporation's housing complex Beaver Barracks, providing two hundred and fifty-four housing units with year-round heating and cooling. nomy within a dense urban environment, but when considered as a strictly structural concept, it permits the full exploitation of a built-object, towards achieving true dwelling.

XXXIV In addition to serving as a secondary reference to the vital function of the of the chimney stack in providing the complex with heat, the fire boxes serve a much more fundamental role, as a constant reminder of human-kind's potential to conquer, control, and apply one of the most destructive forces of nature. Contained in a firebox, fire is at first an "object of reverie (and) an invitation to repose." (Bachelard 1964, 14) Its inconstant nature, however, makes fire a direct metaphor for the sudden change and circumstantial development, suggesting a "desire to change (and) speed up the passage of time." (Bachelard 1964, 16) In its volatility fire presents the dwellers with its own duality, and respectfully reminding them of their own. It demonstrates the limits of time and the constraints within in Being, and how transcendence is relative to one's ability to embrace the uncertainties of dwelling.

elements and in return demands an active role. Its program is one of instigation rather than direction.

The open plan of the pavilion also provides the occupants with a clear view of the complex at grade level. The transparent walls become a dynamic display of the activities outside. The occupant is constantly aware of the surrounding grounds but more importantly those on the outside are just as aware of the fact that they and their activities are exposed to the collective force of the complex's dwellers. This hierarchy of access is negotiated by the operable walls of the pavilion. On occasion entire walls of the pavilion can open up, incorporating the experience of the interior and exterior conditions of the space for *philia* into one continuous movement.

The open area at grade incorporates the same minimal spatial program as the pavilion. It also accommodates much of the circulation across the site and between the site and its surrounding structures. Unlike a true street, the courtyard is free of vehicle traffic and therefore possesses a slower tempo than the surrounding roads. But much like a street, the courtyard is the primary node for negotiation of the private and public realm.^{xxxv} The courtyard provides all occupants with a benchmark for proper interpretation of the complex's entirety and appropriate exchange with others.

XXXV Heidegger claims that in being-with-oneanother, humans encounter a variety of discourses, so diverse indeed that determining between one that is based on genuine understanding and one that is not is near impossible. Stating: "This ambiguity extends not only to the world, but just as much to being-with-one-another as such, and even to Dasein's Being towards itself." (Heidegger 1962, 217) But contrary to Arendt's suggestion that this ambiguity is best absorbed in *vita activa* via a social existence, Heidegger claims that ambiguity of being is so essential that it may never be absorbed, but rather it must be understood in contrast to the authentic being of one's-self; a condition that is detached but is not exceptional to a social existence, or as he himself describes it: "an existentiell modification of the 'they'." (Heidegger 1962, 168) The dialectic engagement between these two seemingly opposing views forms the basis for understanding of the notions of private and public realm and their negotiation via architecture..

Individual units are accessed from the grade level through a network of elevated walkways.¹³⁹ This feature eliminates the need for indoor corridors and provides the possibility for exploring of concept of the in-between space.^{xxxvi} The in-between marks the entrance to the private realm. More importantly it serves as an extension of the dwelling-space. It allows for each individual dweller to project his/her claim into the exterior, while negotiating the vulnerabilities that come with the inherent exposure to the outside. Combined with the proposed variable use of the ground floor by the design (a feature discussed further in the proposal) the courtyard becomes the grounds for an ever changing promenade of various interpretations of space by the dwellers.

Another form of spatial negotiation between private and public realms in the proposed design is a network of bridges that connect the three residential blocks. Elevated just above the ground level, the bridges impose an authority from the residential blocks on to the entire site. The main bridge extends across the site from the west block and onto the roof of the pavilion, providing a physical separation with the public realm of the grade level. Two other smaller bridges follow suit, connecting the other two blocks to the roof of the pavilion. The pavilion's roof serves as the hub for circulation between the residential blocks. A fourth and a fifth bridge connect



Figure 18: The in-between space. (2005)

xxxvi Architect and educator Herman Hertzberger explores the notions of public and private extensively in his book: *Lessons for Students in Architecture*. Hertzberger claims that in attempting to negotiate the differences between the two fundamental conditions of public and private being, modern humans have adapted a set of false alternatives to the two concepts namely individualism and collectivism. Citing modern individualism as doomed due to its imaginary basis and modern collectivism as a barrier erected by the modern human seeking to escape an encounter with his/her own being. Hertzberger suggests the implementation of a threshold between the private and public realm as a spatial reconciliation between the two. Dubbed appropriately as *The In-Between*, “the threshold is the key to the transition and connection between areas with divergent territorial claims and ... constitutes, essentially, the spatial condition for the meeting and dialogue between areas of different orders.” (Hertzberger 2005, 12)

¹³⁹ City of Ottawa, *Centretown Design Plan*, 93.

the west and north block at first level as well as the rooftop. The bridges are links between like conditions, separate from the conditions which they negotiates. The bridges are also a platform for observation of the various spatial conditions of the site by the dweller in one instance.^{XXXVII}

Just as the network of bridges and walkways negotiate the horizontal movement across the site, a set of exterior stairs and two elevator towers provide the platform for vertical movement within the complex. Unlike the bridges, the vertical movement of both stairs and elevators cross a range of conditions. To provide separation between these conditions, each level of rise is provided with an exposed landing. The same is the case with the elevator towers. In being separate from the structure their utilitarian role is reinforced, in addition, the openings in the tower exposes the movement of the elevator to the dwellers.

The vertical rises end at the rooftop of the residential blocks. The rooftop reclaims the footprint of the building. It is an inherent part of having an enclosure and thus the most economical built space. It also provides an unmatched separation from tempo of the urban environment. Serving as a second courtyard, the rooftop of the three blocks is accessible from inside the units. It provides relative privacy and may be reclaimed by the dwellers as seen fit. The rooftop also serves as a secondary entrance to the units and can be used as part of daily circulation.



Figure 19: House Above the Bridge, by Siah Armajani. (1974)

XXXVII In negotiating the distinction between two realms of private and public, the bridge becomes more than an extension of two like conditions and takes on a presence of its own. Citing philosophers Martin Heidegger and Alfred N. Whitehead, American artist Siah Armajani describes the bridge as an actual entity. Describing the experience of the bridge stating: “you have something before the bridge, you have something after the bridge, something above the bridge, something below the bridge. The bridge brings all that together into one neighbourhood.” (Armajani, 19:45) Or as Heidegger describes it: “the bridge gathers to itself in its own way earth and sky, divinities and mortals.” (Heidegger, 1993, 5)

The emphasis on exposure in circulation is repeated with the window openings in the residential blocks. The units are fitted with floor to ceiling windows. Unlike the in-between, windows do not negotiate an exchange between public and private realm, but rather facilitate a controlled exposure of the dweller to the outside. Windows serve to bring light and air indoors which puts their function in direct correlation with the quality of life inside the dwelling-space. But these benefits are delivered at the cost of exposure. In this manner the dweller must negotiate a balance between exposure and privacy, and in doing so become aware of the outside.^{XXXVIII} By being continuously exposed to the movements outside the dwelling unit, the dweller becomes in-tune with the collective tempo of urban life, while the physical separation provided by the window allows him/her to maintain a unique rhythm.

As both people and their environment exist within time, therefore exchange between the two is both reflected in and influenced by time. By structuring time as a linear continuum, the western clock facilitates the required global unification of rhythm for the referential field of technical development, as well as “the technical order that provides the fundamental standards for classifying societies.”¹⁴⁰ It is indeed the referential quality of this measure of time that supports the commodification

140 Agacinski, *Time Passing*, 5.

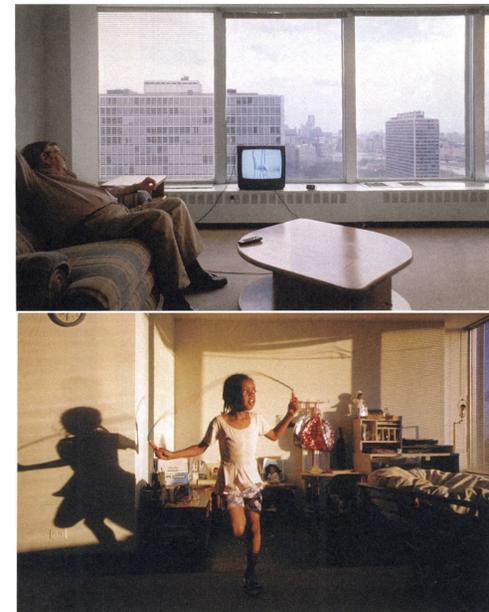


Figure 20: Lafayette Towers residents engaging with the curtain wall. (2012)

XXXVIII Proper approach to resolving the visual exchange between the inside and the outside requires very careful consideration of the inherent hesitation of modern human in confronting his/her own being. Architect and educator Janine Debanné presents an example of this phenomenon at the Lafayette Park Towers of Detroit. She describes her first-hand account of life at Lafayette Towers as one of unruly lives held together by the unrelenting order of Mies van der Rohe's firm geometrical building. Debanné's observation is centered on the curtain wall. To her the building's ordered façade are claimed by "a kind of otherworldly realm of happiness and possibility." (Debanné 2012, 267) A seemingly contradictory turn of events from intended function, but nonetheless welcomed and much needed contrast to the modern order of the structure.

and subdivision of time and its incorporation as a measure of social and economic performance. But this universal application of time contradicts the ambiguity of human nature that gives meaning to socio-economic performance in the first place.

Much of the determinant forces that influence function are macro-conditions, meaning they either are environmental or made universal by their irrefutable practicality. As Alberto Pérez-Gómez explains: Negotiating the second set of these conditions is where good architecture transcends from an exercise of formal innovation in planning buildings, and begins to produce poetic artifacts through an imaginative engagement “employing the dimensions of consciousness.”¹⁴¹ This outlook helps in the making of a convincing argument for flexible housing, as a viable solution for urban residential development.

As noted previously, the conversion of large single dwelling houses into multiple apartments is an existing practice in Centretown. The exercise is however quite crude in nature. The resulting units suffer from poor accessibility, fire safety, sound proofing, and substandard air and light quality. In addition, the conversions are typically funded by the owners and are not considered viable for financing. In the recent years, the CMHC has been working on a concept dubbed “Flexhousing.” This is a model that allows the possible financing of a provisioned auxiliary unit within

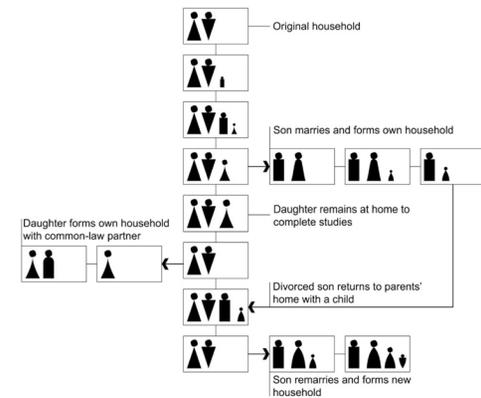


Figure 21: Scenarios of contemporary family life cycle, by Avi Friedman. Friedman uses this diagram in support of his argument for flexible design, demonstrating that shortcomings of a universal housing solution. (2012)

¹⁴¹ Pérez-Gómez, “Ethics and Poetics in Architecture”, 70.

a new built structure, within the corporation's guidelines.¹⁴² The CMHC's model intends to allow the perceived income of an auxiliary to be used as a supplement to the perspective buyer's income at the time of financing. It is however geared towards single dwelling detached structures, typical of low-density suburban subdivisions.^{XXXIX}

This project proposes a similar model in a medium-density midrise, with the possibility of combined residential and commercial use of the auxiliary units. In addition the project provisions a variable size to the auxiliary unit providing further flexibility in respect to the dwellers changing spatial and financial needs over an extended period of occupancy.

Each residential block consists of several row houses, utilizing a wall and slab structural system. The units are separated by bearing walls with all services and staircases running vertically along the walls providing every level with an open floor plan. The units have direct access to both courtyard and street at grade. Entrances are lined up with the staircases allowing for them to be enclosed and be made exclusive to the staircase, leaving the ground level autonomous. The access to from the ground level to the courtyard can be restricted as seen fit, further separating the semi-private setting of the courtyard from the traffic a ground level auxiliary unit

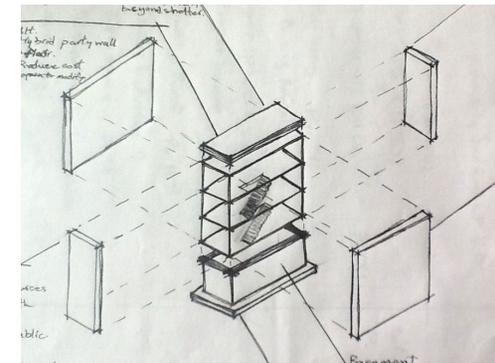


Figure 22: Conceptual exercise in the use of support structure.

XXXIX The concept of flexible dwelling within a support structure is not new. Habraken brings up a fairly pragmatic argument for such system in his book *Supports*. Placed in the context of housing practice of post-World War II Europe, Habraken's argument stands up in support of the largely dismissed private realm of dwelling, what he refers to as dwelling's independence. His proposed "support structure is a construction which allows the provision of dwellings which can be built, altered, and taken down, independent of the others." (Habraken 1979, 59-60) This may seem as an idealistic vision of inconceivable autonomy within a dense urban environment, but when considered as a strictly structural concept, it permits the full exploitation of a built-object, towards achieving true dwelling.

142 CMHC, "Research Report, Cost of Flexhousing," 2002. 5.

may receive form the street. The possibilities of different layouts and separations is only limited by the dwellers imagination.

In addition to the variable use of the auxiliary units, each level of a dwelling unit can be partitioned to fit the spatial needs of the dwellers. The windows and doors are interchangeable, and can be substituted to allow or restrict access. In addition windows do not extend the full length of the exterior walls, which allows for further possibilities for modification of the interior space. The services running along the bearing walls between units provide necessary utilities for bathrooms and kitchens on any level. In their minimal detail, the dwelling units will carry a much smaller initial cost. And combined with the perspective income of the auxiliary units, they can be considered a viable alternative to rental units and invite the tenant-residents of Centretown, who are considering ownership but are simply priced out of the market, to remain in the neighbourhood with the result that the human fabric of Centretown will be further strengthened.

Adding to the dynamic features of the units, the project also foresees several more static features to the project, which aim to engage with the context of the site and the neighbourhood. The first of set of these exceptions are four small units on the south wall of the wets block. They are directly accessed by an elevator and have large separate landings/patios. These units do not benefit from



Figure 23: CMHC's *Next Home*, is a detached single dwelling house capable of being divided into multiple units. The design however relies on being detached in order to function properly. (2012)

the same range of modifications as the others, and therefore are provisioned for a less frequent turnover. Facing the existing structure on the site, these units may serve as strict offices as well as dwellings. Perceived as the main corridor for foot traffic, considering its proximity to the existing structure, the path between the two buildings will greatly benefit from extended occupancy during working hours.

Another feature geared towards projected presence is the alternating walkways of the north block. The alternating circulation path, is a means of preventing the block from fully turning its back to the neighbourhood. It results in a two-way awareness of the surroundings by both the dwellers of the block as well as the occupants of the neighbouring structures. The dynamic display of life within the block becomes a display of possibilities of dwelling to the entire neighborhood. This exposure also reinforces the necessary consciousness of *Being* demanded by for true dwelling.

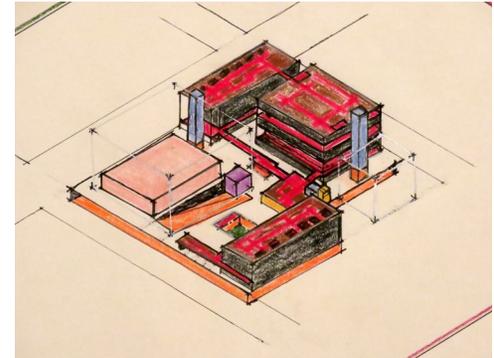


Figure 24: Illustration of the project's contextual dynamics.

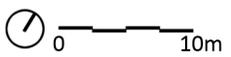
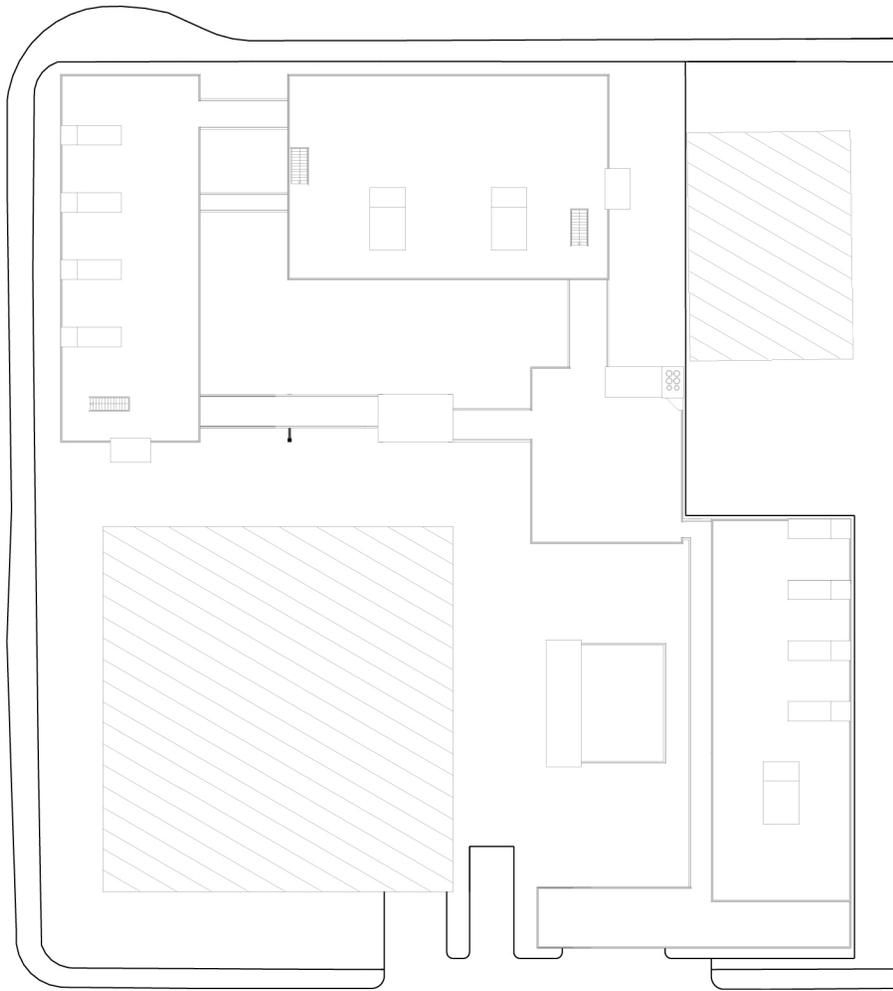


Figure 26: Site Plan, 1:500



Figure 25: Schematic site Plan

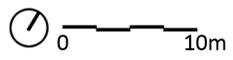
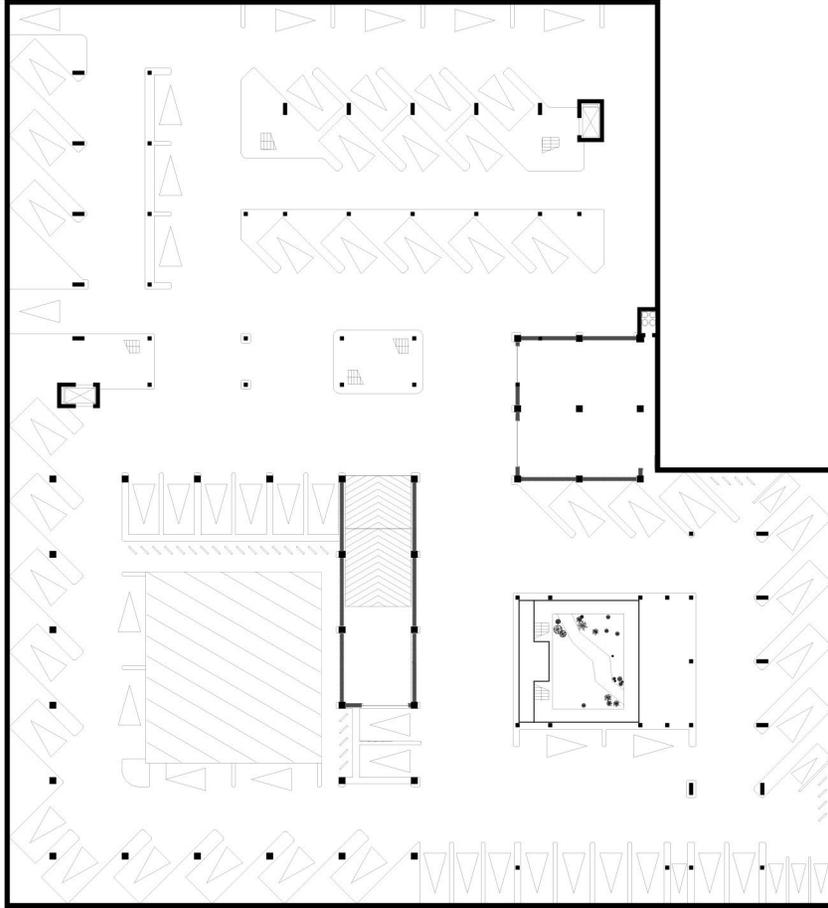


Figure 27: Underground Plan, 1:500

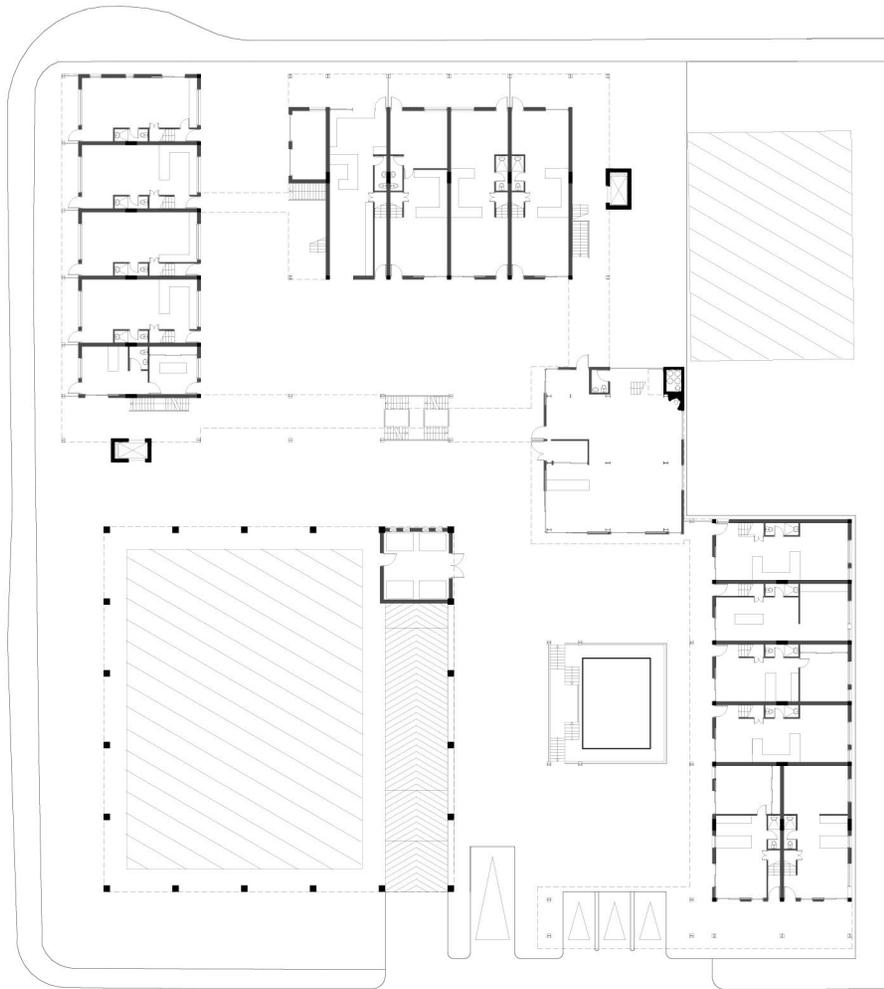


Figure 29: Ground Floor Plan, 1:500

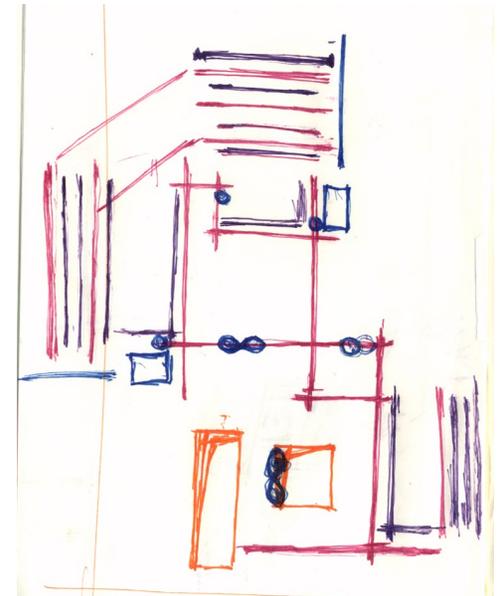
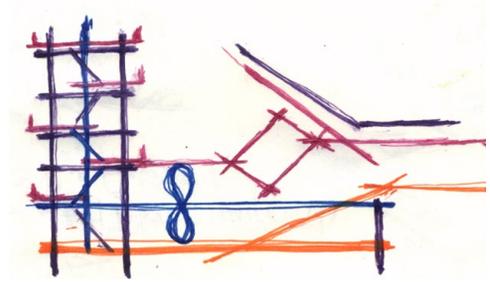


Figure 28: Vertical and Horizontal schematic circulation diagram.



Figure 31: Second Floor Plan, 1:500

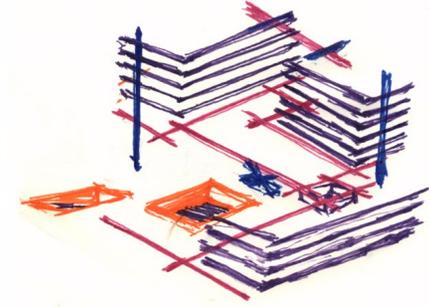


Figure 30: Axonometric circulation diagram.

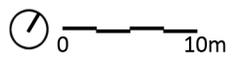
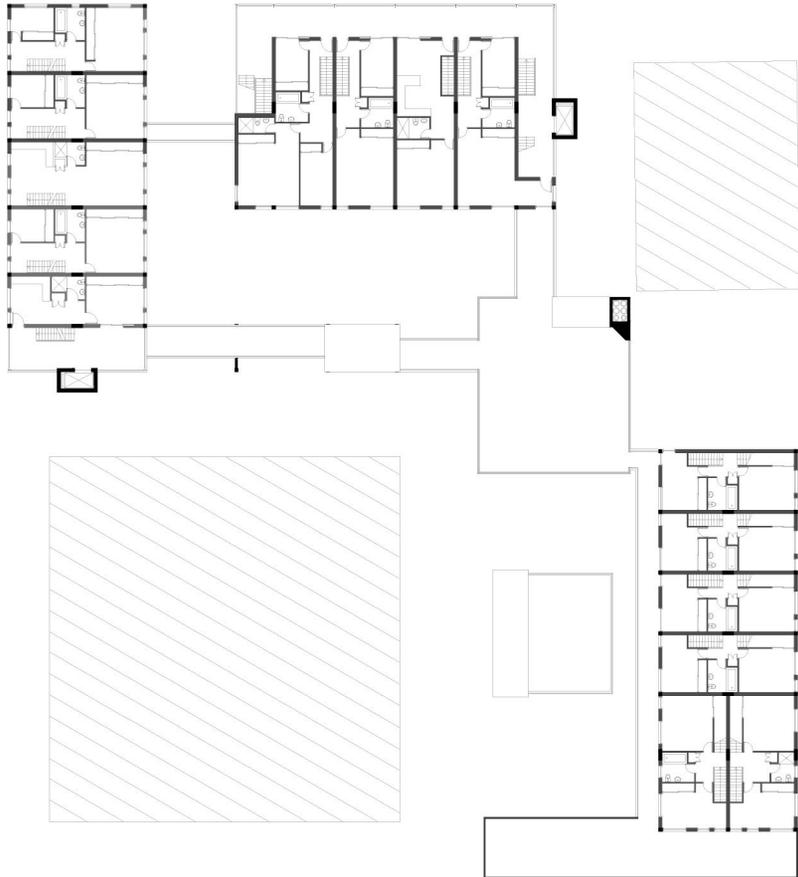


Figure 32: Third Floor Plan, 1:500

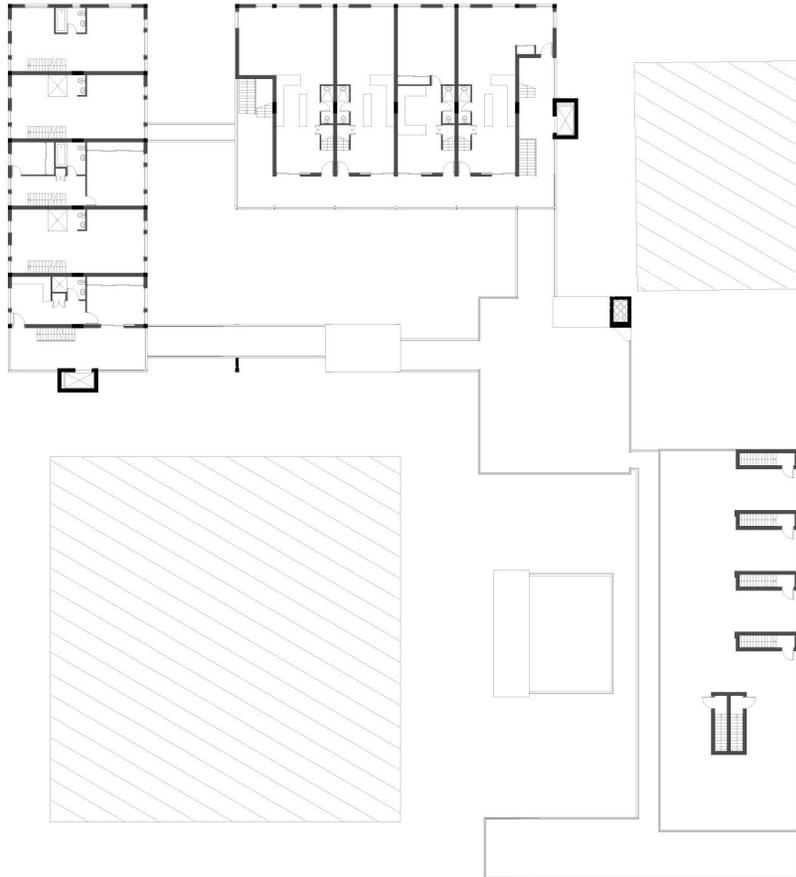


Figure 33: Forth Floor Plan, 1:500

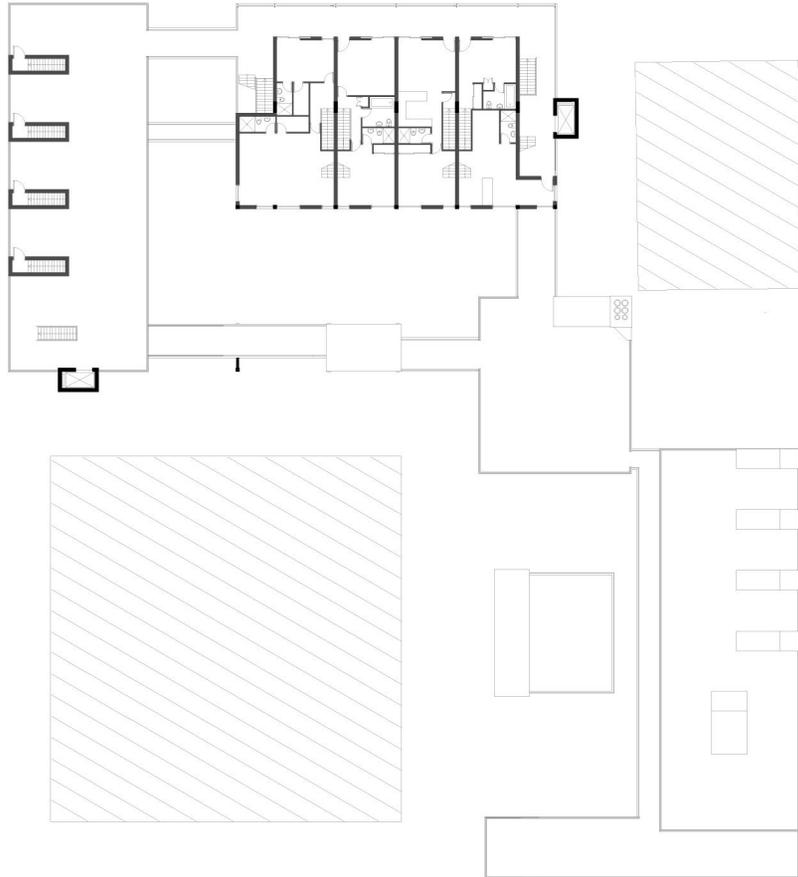


Figure 34: Fifth Floor Plan 1:500

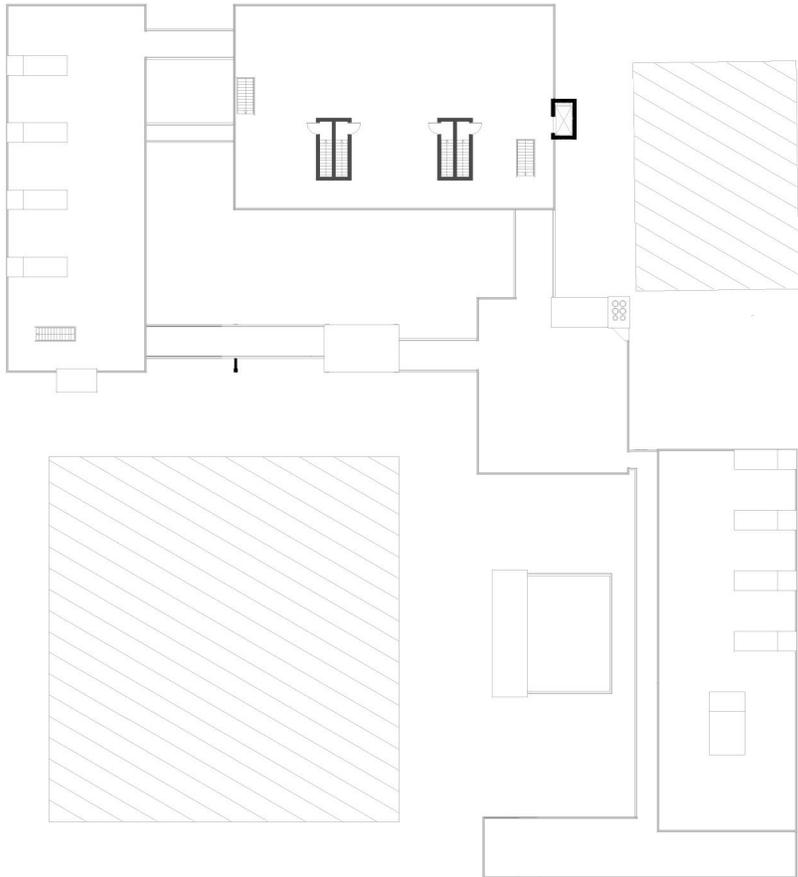


Figure 35: Roof Plan, 1:500



Figure 36: West Section, 1:400



Figure 37: North Elevation, 1:400

Commencement, Conclusion

It is critical to bear in mind that dwellers' are quite capable in determining their own welfare and interest, and will exercise all that is within their means to reach and maintain these interests. Their acceptance of regulatory administration is only due to their mortal presence dependence on modern amenities. Transferring liability onto the participant as a means of administrative enforcement has limits to its effectiveness.

As the late Dalibor Vesely points out in his essay, *Architecture as a Humanistic Discipline*,

Today architecture is treated most often as a technical discipline dominated by the knowledge of science seen as the ultimate criterion of truth and what is real. We are familiar with the reference of the 'real' world that we hear, almost as a cliché, so often today. What is meant by the real is usually the pragmatic reality of the everyday, defined by current politics, economics, market forces and technological developments. ...And yet there is still another sense of what is real that we encounter in our everyday life, in personal relations, in friendships, in our judgment ...etc.¹⁴³

It is this second sense of reality which common sense recognizes but fails to engage with it through its objective practices. That is because rationalism is incapable of a

¹⁴³ Dalibor Vesely, "Architecture as a humanistic discipline" In Soumyen Bandyopadhyay et al. *The Humanities in Architectural Design: A Contemporary and Historical Perspective*, 189.

such delicate task. This engagement requires a platform that can provide dwelling with authority over the mortal realm. A platform which provides the physical provision of space as well as the temporal provision of time to provide an adequate environment for the act of dwelling.

As the cognitive determinant to the act of building, architecture is responsible for guiding the formation of this platform, yet despite the endless possibilities which industrialized building has brought upon the practice of design, these appear to be a determination for gaining dominance over the basic human aspects of dwelling. As Jeremy Till writes:

The reasons for this are multiple, but central on the way that the complexity and strength of social forces are seen to upset the purity of architectural values, conceived as they are on the false hope of redemption through material and aesthetic matter alone. ...The result is the suppression of the voices of others in the production of architecture. Of course all architects do engage with others in the course of the project, most obviously with the clients but also inevitably users and the public as these two constituencies take on and then take over what the architect has left behind.¹⁴⁴

But this engagement needs to move past a sympathetic illusion of care and towards an empathetic mode of engagement. A true mode of such engagement is only possible when done through the entire term of the built-environment's occupancy.

144 Jeremy Till, "Forward", In *Architecture, Participation and Society*, ed. Paul Jenkins and Leslie Forsyth, (New York: Routledge, 2010), xi.



Figure 38: Modern Masterpiece #8: Le Corbusier, Unité d'habitation, Marseilles, France, 1946-52. (2010) by: Luís Santiago Baptista Part of a series *Modern Masterpiece Revisited*.

Baptista Writes: "[Modernism] is a history in the making that demanded rationality in defining the aims and transparency in configuring the end. Thus, a path to a known future. However, when the future as horizon collapsed in the here-and-now of the present, ... The truth is that modern utopia became increasingly relative and indeterminate. In this sense, the process gained autonomy as the final image got obscured."

User agency is the long forgotten module in the complicated equation of housing adequacy. The valuable role of the occupant in the continuous shaping of residential structures and the quality of life in and around the community play an important role in informing the design of the urban dwelling. In this context, every member of the community (woman, man, and child) has a say in the in the definition and experience of adequacy within the built-environment.

Bibliography

Adams, Annmarie and Pieter Sijpkens. "Wartime Housing and Architectural Changes, 1942-1992" *Canadian Folklore*, vol. 17 no.2 (1995): 13-29.

Agacinski, Sylviane. *Time Passing: Modernity and Nostalgia*. New York: Columbia University Press, 2003.

Arendt, Hannah. *The Human Condition*. Chicago: University of Chicago Press, 1958.

Armajani, Siah. "Sian Armajoni Interview" by: Hans Ulrich, *Beam Contemporary Art*, 2012. <http://vimeo.com/53599164>.

Bachelard, Gaston. *The Poetics of Space: the classic look at how we experience intimate places*. Translated by Maria Jolas. Boston: Beacon Press, 1994.

Bachelard, Gaston. *The Psychoanalysis of Fire*. Boston: Beacon Press, 1964.

Bacher, John C. *Keeping to the Marketplace: The Evolution of Canadian Housing Policy*. Montreal: McGill University and Queen's University, 1993.

Bandyopadhyay, Soumyen, Jane Lomholt, Nicholas Temple, and Renee Tobe, eds. *The Humanities in Architectural Design: A Contemporary and Historical Perspective*. Milton Park, Abingdon, Oxon: Routledge, 2010.

Barthes, Roland. *Mythologies*. New York: Noonday, 1972.

Blumenfeld Hans, "Mismatch Between Size of Household and of Dwelling Units" In *The Canadian City*. Edited by Kent Gerecke. Montreal: Black Rose Books, 1991.

Bolton, Richard. "Book Review: The modern House in America" *RAIC Journal*, (October, 1940).

Bragdon, Claude Fayette. *Architecture and Democracy*. New York: A.A. Knopf, 1918.

Concord, Ulrich. *Programs and Manifestoes on 20th-Century Architecture*. Cambridge: MIT Press, 1970.

CMHC, *67 Houses for Canadians*, Ottawa: Central Mortgage and Housing Corporation, 1947.

CMHC. "History – CMHC Milestones." CMHC, http://www.cmhc-schl.gc.ca/en/corp/about/hi/hi_001.cfm.

CMHC. "LeBreton Flats District Heating System Performance Assessment" *Research Highlights, Technical Series 02-127*. June 17, 2014.

City of Ottawa, Centretown Community Design Plan, Ottawa: City of Ottawa, 2013.

City of Ottawa, Ottawa Office of the Auditor General, Audit of the Parking Function, 2008.

Cullingworth, J. B. "Groping for a National Urban Policy" In *Urban and Regional Planning in Canada*. New Brunswick, U.S.A.: Transaction Books, 1987.

Debanné, Janine. "the lafayette towers: looking back" in *Thanks for the View, Mr. Mies: Lafayette Park, Detroit*. ed. Aubert, Danielle, Lana Cavar, and Natasha Chandani, New York: Metropolis Books, 2012.

Denhez, Mark. *The Canadian Home: From Cave to Electronic Cocoon*. Toronto: Dundurn, 1994.

Fallis, George. "The Suppliers of Housing" In *House, Home, and Community: Progress in Housing Canadians 1945-1986*. Edited by John R. Morin. Montreal: McGill University and Queen's University, 1993.

Fascari, Marco. "Ge wiz," in *Interstices*, Sep 2005; v.6:p.84-89/

Fascari, Marco. Mak'apioi (blessed) are the poor architects, Essay.

Fascari, Marco. "The Tell-The-Tale Detail." *The Building of Architecture*, 1984, 23-37.

Fascari, Marco. "Elegant Tectonics, Clearly Confused Representations, Franco Albini and the Wonder of Lightness." In *A Carefully Folded Ham Sandwich: Towards a Critical Phenomenology*, edited by Roger Connah, 127-146. Montreal: FAD Design House, 2013.

Fascari, Marco. *Monsters of Architecture: Anthropomorphism in Architectural Theory*. Savage, Md.: Rowman & Littlefield, 1991.

Gadamer, Hans. *Truth and Method*. New York: Seabury Press, 1975.

Guba, Egon G. and Yvonna S. Lincoln. "Competing Paradigms in Qualitative Research." In Norman K. Dezin and Yvonna S. Lincoln, *Handbook of Qualitative Research*, 105-117. Thousand Oaks: Sage Publications, 1994.

Guest, Dennis. *The Emergence of Social Security in Canada*. Vancouver: UBC Press, 1997.

Habraken, N. J. *Supports, an Alternative to Mass Housing*. London: Architectural Press, 1972.

Hannley, Lynn. "Substandard Housing" In *House, Home, and Community: Progress in Housing Canadians 1945-1986*. Edited by John R. Morin. Montreal: McGill University and Queen's University, 1993.

- Hartoonian, Gevork. *Crisis of the Object the Architecture of Theatricality*. London: Routledge, 2006.
- Hegel, Georg Wilhelm Friedrich. *Science of Logic*;. London: Allen & Unwin, 1969.
- Hegel, Georg Wilhelm Friedrich,. *Lectures on the philosophy of world history: introduction, reason in history*. Cambridge: Cambridge University Press, 1975.
- Heidegger, Martin, "Building, Dwelling, Thinking." In *Basic Writings: From Being and Time (1927) to The Task of Thinking (1964)*,and Farrell Krell David. San Francisco: Harper, 1993.
- Heidegger, Martin. *Being and Time*. Translated by John Macquarrie and Edward Robinson. New York: Harper, 1962.
- Hertzberger, Herman. *Lessons for Students in Architecture*. 5th Rev. ed. Rotterdam: 010 Publishers, 2005.
- Hulchanski, David. "Social Welfare Versus Market Welfare" In *The Canadian City*. Edited by Kent Gerecke. Montreal: Black Rose Books, 1991.
- Ilyin, Natalia. *Chasing the Perfect: Thoughts on Modernist Design in Our Time*. New York: Metropolis Books, 2006.
- Kennedy, T. Warnett. "Plastic Possibilities" *RAIC Journal* (April, 1942).
- King, Peter. *Private Dwelling: Contemplating the Use of Housing*. London: Routledge, 2004.
- Langlois, Simon. "Life Style, Market Goods and Services" In *Recent Social Trends in Canada 1960-2000*. Edited by Lance W. Roberts. Montreal: McGill University and Queen's University, 2005.
- Lithwick, N. Harvey. *Urban Canada: Problems and Prospects*. Ottawa: Central Mortgage and Housing Corporation, 1971.
- Madanipour, Ali. *Knowledge Economy and the City: Spaces of Knowledge*. London: Routledge, 2011.
- Malathouni, Christina. "Architecture Is the Pattern of Human Mind in Space: Claude F. Bragdon and the Spatial Concept of Architecture." *The Journal of Architecture* 18, no. 4 (2013): 553-69.
- Marks, Denton. "Housing Affordability and Rent Regulations" *Research Study (Ontario Commission of Inquiry into Residential Tenancies)*, no. 8. Toronto: Government of Ontario, 1984.
- Nietzsche, Friedrich. *The Gay Science*. Ed. Bernard Williams. Cambridge: Cambridge University Press, 2001.

- Pérez-Gómez, Alberto. "Ethics and Poetics in Architecture." In *Towards an Ethical Architecture: Issues within the Work of Gregory Henriquez*, 67-116. Vancouver: Blueimprint, 2006.
- Pérez-Gómez, Alberto. *Built upon Love: Architectural Longing after Ethics and Aesthetics*. Cambridge, Mass.: MIT Press, 2006.
- Risselada, Max, ed. *Raumplan versus Plan Libre: Adolf Loos [and] Le Corbusier*. [Rev., Updated English] ed. Rotterdam: 010, 2008.
- Rapoport, Amos. *The Meaning of the Built Environment: A Nonverbal Communication Approach*. Tucson: University of Arizona Press, 1990.
- Rose, Albert. *Canadian Housing policies*. Toronto: Butterworth & Company, 1980.
- Rowe, Peter G. *Modernity and Housing*. Cambridge, Mass.: MIT Press, 1993.
- Schoenauer, Norbert. *6000 Years of Housing*. 3rd ed. New York: W.W. Norton, 2003.
- Sennett, Richard. "The Architecture of Cooperation – Richard Sennett" Youtube video, 1:26:15, posted by Harvard GSD, February 29, 2012, <https://www.youtube.com/watch?v=tcXE4NEgLn8>.
- Sennett, Richard. *The Uses of Disorder: Personal Identity & City Life*. New York: W.W. Norton, 1992.
- Sennett, Richard. *The Craftsman*. New Haven: Yale University Press, 2008.
- Sewell, John. *Houses and Homes: Housing for Canadians*. Toronto: James Lorimer & Company, 1994.
- Simon, Herbert A. *The Sciences of the Artificial*. 3rd ed. Cambridge, Mass.: MIT Press, 1996.
- Spicer, Zachary. "The Reluctant Urbanist: Pierre Trudeau and the Creation of the Ministry for Urban Affairs" *International Journal of Canadian Studies*, no. 44 (2011).
- Spicer, Zachary. "The Rise and Fall of the Ministry for Urban Affairs: A Re-Evaluation" *Canadian Political Science Review*, vol. 5 no. 2 (2011).
- Till, Jeremy. *Architecture Depends*. Cambridge, Mass.: MIT Press, 2009.
- Jenkins, Paul and Leslie Forsyth. *Architecture, Participation and Society*. New York: Routledge, 2010.
- Ulrich, Karl. "The Role of Product Architecture in the Manufacturing Firm." *Research Policy* 24 (1995): 419-40.

Van De Beek, John. "Adolf Loos-Patterns of Townhouses", in *Raumplan versus Plan Libre*, ed. Max Risselada, Brugge:Die Keure, 2008.

Wardhaugh, Robert A., and William Johnston. *Behind the Scenes the Life and Work of William Clifford Clark*. Toronto: University of Toronto Press, 2010.

Willis, Daniel. *The Emerald City and Other Essays on the Architectural Imagination*. New York: Princeton Architectural Press, 1999.