FRAGMENTS: A POETIC APPROACH TO PLACE-MAKING

by

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While science has discovered the instrumental analytical meaning of the fragment, it is to poetry that we have to turn to “discover” its restorative and symbolic meaning.

-Dalibor Vesely, “The Rehabilitation of Fragment“, 322.

Fragments: A Poetic Approach to Place-Making
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Abstract

The notion of regional particularity and sensitivity to place remains in constant struggle with the persistent autonomous approach evident in most contemporary architecture, which under the pressures of globalization has paved the path toward commodification and the creation of universal non-places. Meanwhile the decline of craftsmanship within architecture and the perpetual emphasis on visual images and iconic forms continues to undermine human connection to the built environment.

The use of Fragments in architectural design involves a distinct understanding of perception of space that takes its theoretical basis in the communicative and situational character of Synthetic Cubism and Picturesque Landscape theory. Brought into an architectural context, these theories work in contrast to the rational approach based on proportion and perspectival imagery, bringing focus towards the experience of the body moving through space with emphasis on the poetics of construction, materiality, corporeal experience, and details that express craftsmanship, meaning, and emotion. Guided by Kenneth Frampton's theory of Critical Regionalism with the aim of resisting placelessness, the nature of such tectonic articulation is informed by the context and specificity of a site.

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To My Family

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1. Introduction

...the study of ancient treatises on architecture still provides one of the founts of wisdom which sustains our own thinking and action, either because their propositions shape and confirm our own vague impressions, or because they force us to refute them with sound reasoning.¹

In order to properly position architecture, beginning with its definition and ending with its purpose and the decisive role it plays in our lives, it is necessary to delve into the history of its evolution in terms of both theory and practice. As with the avant-gardist impulse of Modern art, architecture is not static and is subjected to constant change and evolution with respect to its contextual relationship to the world. The answer to what architecture is and what it should be is in constant flux as it cannot remain blind to progress and evolving societal needs. Through various standpoints in theory and practice, architecture reflects on itself and throws itself back into the world, awaiting to reflect again and again, in its desire for continual improvement. Only by looking back into the past to evaluate the benefits and shortcomings of previous movements in architecture can we gain a clear perception of how to give a proper response in our own time and place. Some of the main critiques that are currently directed toward contemporary architecture, such as the emphasis on the visual image, the split between the architect and the builder, and the anonymity of the built environment, have evolved over centuries. The former two mark their beginnings in the Renaissance and are becoming more serious concerns today. The latter is an ongoing dilemma which received a strong push through modernization and continues to contribute to the loss of sense of place.

¹ von Meiss, *Elements of Architecture: From Form to Place*, 8.

Emphasis on the Visual

The prioritization of sight over other senses dates back to the philosophy of Plato, who laid the foundation for Western philosophy, where thinking was itself understood in terms of seeing. This perception continued to act as a major influence on Western thought for centuries. All the way up to the Renaissance, Plato's successors contributed their own ocularcentric metaphors that emphasize the role of sight in the philosophical thought process "to the point that knowledge has become analogous with clear vision and light is regarded as the metaphor for truth."² During the Renaissance, sight persisted as the primary of the five senses, with touch being the least important³. Brunelleschi's discovery of the perspectival drawing technique that allowed him to create the illusion of three-dimensional space on a two-dimensional surface further elevated visual perception of space above all others. The influence of this ocularcentric approach to designing spaces persisted throughout the following centuries of architectural theory and practice including the various historical revival styles, the Modern and the Postmodern period.

Le Corbusier, who described architecture as "the masterly, correct and magnificent play of masses brought together in light,"⁴ frequently downplayed the role of other sensory modalities involved in our bodily perception. The visual emphasis is noticeable in his drawings, especially those dealing with urban planning, such as his Plan Voisin or the Skyline of Buenos Aires. This quality, where architecture is reduced to an abstraction of forms, is a recurring characteristic of the International Style that is highly criticized by Juhani Pallasmaa: "modernist design at large has housed the intellect and the eye, but it has left the body and the other senses, as well as our memories, imagination and dreams homeless."⁵

Postmodern architecture is often referred to as 'scenographic'. The style that never attempted to grasp the concept of being 'true to materials', pursued a synthetic approach to architectural representation that was made possible through advancement in technology and material finishes. Richard Weston characterizes Postmodern architecture as a "form of more or less permanent scene-painting, as a self-referential game of historical allusions and ironic illusions [neglecting] both its central role in the construction of the human world and its grounding in the 'art of building'"⁶.

² Pallasmaa. *The Eyes of the Skin: Architecture and the Senses*, 15.

³ Ibid. 15.

⁴ Le Corbusier. *Towards a New Architecture*, 29.

⁵ Pallasmaa. *The Eyes of the Skin: Architecture and the Senses*, 22.

⁶ Weston, *Materials, Form and Architecture*, 186.

Deconstructivist architecture also avoids the necessity of thinking about the human world and remains divorced from the physical process of building and assembly. Having its basis in an autonomous approach its emphasis lies in architecture as a discourse and formal exploration through drawing. First known as paper architecture that took form in drawings in architectural magazines of the 1970s and early 80s, the works began to be realized in later years with the possibilities brought by newly developed technologies. This Neo-Avant Garde approach maintains the prevalent focus on individuality in architectural production that is dominated by image and form-making and dedicated to the creation of the novel and the spectacular.

The Split Between Architect and Builder

In his treatise *De re aedificatoria* (1452), Leon Battista Alberti makes a clear distinction between the architect and the builder: “to make something that appears to be convenient for use, and that can without doubt be afforded and built as projected, is the job not of the architect but of the workman”⁷. His treatise goes against the traditional thinking of the architect as a medieval “Master-builder” whose practical experience is valued over scholarly or theoretical knowledge. He also differentiates the physical building and the architectural idea which exists in the architect’s drawings. Alberti delegates the responsibilities of construction to the builders where the final outcome is purposely left out of the architect’s control, absolving him of any “responsibility for the errors and mistakes committed by others”⁸. Tim Anstey compares Alberti’s concept of the architect to that of a judge, a figure that in the 15th century was regarded to have a semi-divine status⁹. The architect is responsible for making judgements and not for execution. Although such a shift in the architect’s role must have appeared radical at the time, it closely resembles the contemporary model of the architect’s disengagement from the process of building and whose task consists mainly of instructing the builders through a set of construction drawings. Rarely if ever does the architect get the chance to experiment with building techniques or take the role of the craftsman. Skills that were completely inseparable and innate to the role of a Master builder during the Middle Ages have begun to drift farther apart with the establishment of architecture as a profession during the Enlightenment and the advent of industrialization and the technological age.

7 Alberti qtd. in Anstey, *Authorship and Authority in L.B. Alberti’s De re aedificatoria*.

8 Ibid.

9 Ibid.

Loss of a Sense of Place

Loss of a sense of place is largely attributed to the technological developments that led to 19th century industrialization, followed by urbanization and globalization. Site-related issues that had been taken into careful consideration since Vitruvian times and continued to be reflected in the treatises of the Renaissance period reached a state of indifference in architectural design, which with increased technological possibilities, has been emancipated from the constraints of nature and locality. Advancements in building technologies and transportation increased the speed with which we are able plan and construct our cities, leaving little time for planning and leading to places of collective importance becoming less defined¹⁰. With the availability of materials from other parts of the world and means of artificial climate control, buildings could take any shape and orientation. Vernacular approaches were no longer relevant in architecture. The beginnings of technological freedom can be noticed for example in the construction of earlier American buildings where the local stone was not suitable for the desired agenda of Neo-Classical style architecture and necessitated the importation of marble and reliance on the skilled labour of Italian stone carvers. With the advent of urbanization, local landscape, which was once a significant place-defining element, has been flattened and divided into grids, while urban rivers were polluted, encased in concrete and buried underground. Without having to respond to climate, landscape, and availability of local materials cities began to lose their specific characters and conform to the culture of universality. As Kenneth Frampton noted, this has become more apparent in the last few decades: “The typical downtown which, up to twenty years ago, still presented a mixture of residential stock with tertiary and secondary industry has now become little more than a *buroladnschaft* city-scape: the victory of universal civilization over locally inflected culture”¹¹.

Although not without resistance, the highly promoted International Style with its machine aesthetic and disregard for locality had fairly contributed to the condition of placelessness and a diminished sense of belonging. The pastiche aesthetic within the eclectic façades of Postmodern architecture in the attempt to bring meaning to architecture only further participated in the eradication of cultural identity. At the same time one cannot ignore the irony in the autonomous approach of the Neo-avant Garde movement, which in its effort to resist commodification of architecture through individual expression has instead taken a position at the core of consumer society. Tahl Kaminar makes this observation and, in Jean Baudrillard's

¹⁰ von Meiss, *Elements of Architecture: From Form to Place*, 144.
¹¹ Frampton, *Labour Work and Architecture*, 79.

terms, describes how autonomous architecture assumes the status of the Model which is imitated by the series, mass culture.¹²

Conclusion

Architecture, operating within the public realm, has a strong impact on many aspects of society. Though not completely divorced from political, economic, or ecological implications, this thesis is more focused on thinking about how architecture is capable of manipulating built and natural environments and intervening with daily life situations, including the repercussions it has on the state of the human psyche. Emphasis on the visual image, the split between architect and builder, and the loss of the sense of place are facets of contemporary architectural conditions that are closely interrelated and thus form the tripartite critique. With the aim of exposing and addressing these issues a response comes from looking into the nineteenth and twentieth century theories that evolved in response to the conditions created by the rapid advancements in science and technology with the consequent change in the behaviour and needs of society. The theories and historical context in which they evolved together with the influences that followed serve as the primary source in establishing the key ideas of this thesis.

¹² Kaminer. "Autonomy and Commerce: the Integration of Architectural Autonomy", 69.

Fig.4: *Primitive Hut* - Frontispiece of Laugier's *Essai sur l'Architecture*, Charles-Dominique-Joseph Eisen, 1755.

2. From Neo-Classicism to Modernity

The Nineteenth Century: Three Contemporaries

The 19th century period of industrialization in Europe spawned a series of critiques among architectural theorists that began to re-evaluate the architect's role in relation to structure, technology, and craftsmanship. The impact of industrialization also initiated the perception of architecture as a socially responsible practice in terms of both construction process and inhabitation. It was a time of great confusion and uncertainty in architecture, as expressed in 1828 by Heinrich Hubsch in the book entitled *In welchem Style sollen wir bauen?* (*In What Style Should We Build?*). By the mid 19th century the question of style gained momentum together with resistance to the prevalent Neoclassical architecture of the period along with a debate in architectural theory.

Gottfried Semper (1803-1879)

This resistance to the rising historicist disposition of 19th century architecture can be noted in Gottfried Semper's rejection of the general principles of architecture together with the analogy of the Primitive Hut established by Marc-Antoine Laugier in his 1755 *Essai sur l'Architecture*. Semper's theories were moulded by his investigations and research dealing with ethnology and archaeology. A model of a Caribbean Hut observed by the architect at the Great Exhibition of 1851 in London served as the framework for the theories that he published in *The Four Elements of Architecture* in the same year. Semper separates the elements into structural-technical and structural-symbolic categories. The former is comprised of 'an Earthwork' and 'a Framework and a Roof' and the latter includes 'an Enclosing Membrane' and 'a Hearth'. Each of the elements is strongly related to the ancient technical craft. The hearth is associated with fire, which involves the gathering of tribes after the hunt and bears a symbolic connotation to all social institutions, such as family, settlement and society. The three

Fig.5: Caribbean Hut, Gottfried Semper, 1851.

remaining elements participate in safeguarding the sacred flame against the hostile elements of nature. The earthwork (also translated as the mound), which initially served to raise the flame off the damp earth, eventually evolved into the construction of dams, canals, terracing and masonry. Similarly, the roof which was used to protect the flame, developed into the craft of carpentry and the construction of structural framework. The enclosing membrane, originating as latticework or fabric, protected the flame against the winds and defined the spatial boundary or separation between the public exterior and private interior spaces. This composition of the four elements is appropriately represented in the primordial Caribbean Hut where each element performs its own function. The hearth is raised on a log platform that serves as groundwork, a bamboo framework comprises a roof and its structural support, while the lattice mats provide the enclosure for the hut.¹ At the Great Exhibition, Semper was also fascinated with new developments in industrial technology, resulting in his publication *Wissenschaft, Industrie und Kunst (Science, industry, and art)* in 1851. Although he noted the disadvantages of industrialization as a production of “excess of means” that devalued the traditional practice of art, he also saw it as a potential ground for explorations of novel materials and forms: “But for Semper - in vivid contrast to Ruskin this ‘disintegration’ of the existing art types was not to be mourned. In fact, it revealed a way out of the current situation of replicating ‘borrowed or stolen’ motives by allowing ‘something good and new’ to emerge.”² Another influential theoretical work by Semper came through his two volumes of *Der Stil in den Technischen und Tektonischen Unsten oder Praktische Asthetik (Style in the Technical and Tectonic Arts, Or, Practical Aesthetics, 1860-3 and 1866)*³. He compares the enjoyment of nature to the enjoyment of art, and he believes this delight in nature is what architecture should draw upon: “...the rhythmical sequence of space and time movements, [wreaths], a string of pearls, scrolls, round dances, the rhythmic tones attending them, the beat of the oar, and so on. These are the beginnings out of which *music* and *architecture* grew, the two highest purely cosmic (non-imitative) arts...”⁴ Semper brings a metaphysical dimension to architecture that appeals to human consciousness and is free from the rationality of the industrialized world. As Frampton describes it, he “grounded his theory of architecture in a phenomenal element having strong social and spiritual connotations.”⁵ This was a perspective that pursued a path, distinct from those of his contemporaries Viollet-Le-Duc in France and John Ruskin in England.

1 Mallgrave, *Modern architectural theory : a historical survey, 1673-1968*, 134.

2 Ibid., 134.135.

3 A third volume was planned but never written.

4 Semper, *Style in the Technical and Tectonic Arts, Or, Practical Aesthetics*, 82.

5 Frampton, *Labour Work and Architecture*, 97.

Eugène-Emmanuel Viollet-le-Duc (1814-1879)

While in the German architectural scene, Semper was taking a dominant role in influencing architectural theory, in France, Eugène-Emmanuel Viollet-Le-Duc was struggling to gain acceptance and it was not until later in his career that his texts gained a stronger significance. In contrast with the teachings of the Neoclassical architecture of the world famous École des Beaux Arts, young Viollet-Le-Duc decided not to attend the school and instead learned architecture through apprenticeship and travelling around France and Italy (including Sicily, which was then ruled by Spain). In a few years, Viollet-Le-Duc found himself among the forerunners in the French preservation movement working on churches from the medieval period, including the Cathedral of Notre Dame in Paris, which was in need of restoration after the French Revolution. Fascinated with Gothic architecture, Viollet-Le-Duc wrote about the discoveries he made while working on these buildings, praising the efficient structural composition that was derived from the Master builders' thorough understanding of the material and the forces it carried. His early writings were met with much criticism for his rationale for French architects to return to the Gothic style. The criticisms motivated him to refine his position in later years, not calling for "the resurrection of the Middle Ages but rather the understanding and assimilation of its principles into contemporary artistic efforts."⁶ One such principle was "that materials be employed in accordance with their qualities and that these qualities be indicated by the form they are given".⁷ His later theories continue on the functionalist path and further relate to the industrial age. In his lectures of 1866-68, Viollet-le-Duc promotes the use of iron as a way to move forward. Again, faced with criticism, the architect responded with a series of drawings of how iron together with masonry can be elegantly incorporated into contemporary architecture. Viollet-le-Duc stressed the necessity for architects to embrace technological advancement and strive for efficient use of material and labour in construction. Although the structural rationalism of Viollet-le-Duc did not generate as much interest at the time, it influenced his student Paul Philippe Cret who wrote the essay "The Architect as Collaborator of the Engineer"⁸. As the title suggests, he encouraged the architect to collaborate with the engineer in order to gain more control over the structural expression of a building and thus arrive at a more meaningful form. This theory also served as a strong foundation for Cret's student Louis Kahn: "For Kahn, as for Cret and Le Corbusier, the engineer was seen as having a unique role to play in the development of architectural form"⁹. Shifting the focus from

Fig.6: Plate From the Twelfth Lecture, *Entretiens sur l'Architecture*, Eugène-Emmanuel Viollet-le-Duc, (1858-72).

6 Mallgrave, *Modern architectural theory : a historical survey*, 1673-1968, 127.

7 Viollet-le-Duc qtd. in Mallgrave, *Modern Architectural Theory : a Historical Survey*, 1673-1968, 127.

8 Frampton, *Labour Work and Architecture*, 170.

9 Ibid., 170.

structural rationalism, Eugene Viollet-le-Duc's well known later work titled *Russian art, its Origin, its Constructive elements, its Apogee, its Future* (1877) analyzed the elements of Russian architecture and explored the possibilities of using traditional forms and material resources local to the area. He believed that such an approach could serve as a source of inspiration for architectural design and a way to revive a lost culture. Throughout his professional career, Viollet-le-Duc consistently saw value in looking to traditional methods of construction and harvesting the knowledge that accumulated over years of experience - the empirical knowledge of traditional craft and construction techniques. He saw beauty in efficiency and functionality of forms that resulted from the iterative process of working with materials and experimenting with their properties. He also understood the necessity of adapting to the fast growing demands of industrial society and acknowledged the new possibilities that technological advancement could bring to architecture. The idea of the architect as collaborator also relates to the idea of the medieval-master builder who with his expert knowledge of structure assumed the combined roles of engineer and architect.

Throughout his career Eugène-Emmanuel Viollet-le-Duc had to defend his views against attacks from all sides¹⁰. He stood behind his ideals yet acknowledged the critique that was directed at him. His French contemporary Henri Labrouste was in a similar situation when he argued that architecture should not serve to express ideals of beauty but the social aspirations of the people inhabiting it, supporting his argument with his paper that demonstrated how one of the temples in Paestum was in reality a public building.¹¹ Labrouste withstood a series of attacks from the French Academy and perhaps influenced the views of Viollet-le-Duc - another "veteran of standoffs"¹², who appreciated Henri Labrouste's published drawings of Paestum, describing them as "quite simply a revolution on a few elephant folio sheets of paper."¹³

John Ruskin (1819-1900)

If Gothic architecture had a profound effect on the functionalist theories of Viollet-le-Duc, to John Ruskin it was other qualities of the Gothic legacy that shaped his argument against the effects of the industrialized world. John Ruskin was not an architect but a well known art critic in England who analyzed the Gothic through a more personal and emotional lens based on his own careful studies and experiences of medieval works. With no background in architectural theory or the contemporary architectural discourse John Ruskin offered a unique perspective with his publication of *The Seven Lamps of Architecture* in 1849. The seven lamps – Sacrifice, Truth, Power, Beauty, Life,

Fig.7: PLATE XIV - Sculpture from the Cathedral of Rouen, Lamp of Life, *The Seven Lamps of Architecture*, John Ruskin.

¹⁰ Viollet-le-Duc was attacked by both Saint-Simonians and the supporters of the École des Beaux Arts.

¹¹ Eco. *History of Beauty*, 364.

¹² Bergdoll, *Historiography*, 25.

¹³ Viollet-le-Duc qtd. in Bergdoll, *Historiography*, 25.

Memory, and Obedience are described by Ruskin as “large principles of right which are applicable to every stage and style.”¹⁴ John Ruskin viewed architecture as an art form with a duty to serve man and through its appearance “[contribute] to his mental health, power, and pleasure.”¹⁵ With this position, Ruskin took an ethical stance, where ornament was used as a central argument that distinguished a work of architecture from a mere building. Harry F. Mallgrave describes the meaning of Ruskin's Lamps and how they should be manifested in a work of architecture according to Ruskin.

*Sacrifice prompts the architect to offer up precious things, be they fine materials or labor. Truth, which “forgives no insult, and endures no stain,” demands the absence of falsehoods, be they structural, the painting of one material to represent another, or the use of machine-made ornaments. Power is the expression of human imagination exercised on a breadth of surface or quantity of shadow. Beauty derives from nature and follows from the use of natural decorative motifs in keeping with the system that nature itself employs. Life insists on the human impression with which we endow materials, and memory pays homage to the historical. Obedience prescribes not the invention of a new style but the use of “some style,” that is, a generally accepted stylistic framework within which the architect can exercise imagination.*¹⁶

Taking the same position as his contemporary Karl Marx who wrote *The Communist Manifesto* in 1848 and undoubtedly influenced his thinking, Ruskin criticized the impacts of industrialization and argued against the enslavement of the worker by the new phenomenon of mass-production. John Ruskin saw value and honour in ornament's difficulty and its requirement of strenuous work and maintained in *The Lamp of Life* that craftsmen should make ornaments that give them pleasure and satisfaction from doing their job and argued against the falsehood of materials:

*...but at all events, one thing we have in our power - the doing without machine ornament and cast-iron work. All the stamped metals, and artificial stones, and imitation woods and bronzes...They will not make one of us happier or wiser - they will extend neither pride of judgement nor the privilege of enjoyment. They will only make us shallower in our understandings, colder in our hearts, and feebler in our wits.*¹⁷

Following the publication of his book, Ruskin went on a trip to Venice to carefully analyze and document the details of Byzantine and Gothic buildings, which he compiled into one of the most influential critical works of the 19th century, titled *The Stones of Venice* (three volumes, 1851–3). Through his studies, Ruskin was able to attain knowledge of an expert in this matter and argue convincingly for the supremacy of Gothic architecture over the Renaissance. In comparison to the five

Fig.8: Plate from John Ruskin, *The Stones of Venice*. (London, 1851–3).

“comparing a rusticated Renaissance wall and impost and a highly polychrome walls segment from the cathedral at Pistoia”

-Harry F. Mallgrave

¹⁴ Ruskin qtd. in Mallgrave, *Modern Architectural theory : a Historical Survey*, 1673–1968, 120.

¹⁵ Ibid., 120.

¹⁶ Mallgrave, *Modern Architectural theory: a Historical Survey*, 1673–1968, 120.

¹⁷ Ruskin, *The Seven Lamps of Architecture*, 122.

basic orders of classical architecture Ruskin points out that any Gothic cathedral contains at least fifty: “the worst of them better than the best of the Greek ones, and all new.”¹⁸ The second volume, titled “The Nature of Gothic” eventually played a key role in establishing the groundwork and serving as the manifesto for the Arts and Crafts Movement led by William Morris¹⁹. There, Ruskin continues his argument for the expressive and emotive character of Gothic ornament which was executed by craftsmen who found pleasure and delight in their work. He saw the evidence of life in Gothic ornament that spoke of workers’ happiness that in his opinion was absent from the “servile” nature of Greek and Renaissance architecture. “The essay opens with the premise that Gothic architecture possesses not only a formal vocabulary but also a living soul, that is, an animate character exploiting the picturesque attributes of savageness, changefulness, naturalism, grotesqueness, rigidity, and reduction.”²⁰

Influence in the 20th Century: Vernacular Modernism and High Modernism

The three contemporaries that participated in the theoretical debate of the 19th century held distinct perspectives, which although mostly standing in conflict with each other also shared some views in common. Perhaps, the most obvious, is their unanimous opposition to the neoclassical style that dominated the architectural scene. Laugier’s principles of the one and only valid pedimented typology was disputed by Semper who took an anthropological approach to establishing the new elements of architecture. Both Semper and Ruskin considered the ethical dimension of architecture, and the responsibility to the people who inhabit the space, relating their theories to the role of craftsmanship and man’s connection with nature. At the same time Viollet-le-Duc shared his affinity for Gothic Architecture and truth to materials with Ruskin while his aspiration for developing a new style out of the possibilities brought by the industrial age were shared with Semper. All of these theories continued to influence architecture in the 20th century when the Modern movement eventually split into conflicting ideologies that can be described as Vernacular Modernism and High Modernism or The International Style²¹. The structural functionalism of Viollet-le-Duc is thought to have influenced the development of The International Style, which is associated with the purist forms and metaphors of the machine-age. While it deals with aesthetic principles of architecture, it has little consideration for local conditions and context. Such an approach was expressed in the MoMA exhibition, of 1932, titled “Modern Architecture:

18 Ruskin qtd. in Mallgrave, *Modern Architectural Theory : a Historical Survey, 1673-1968*, 122.

19 Mallgrave, *Modern Architectural Theory : a Historical Survey, 1673-1968*, 122.

20 Ibid., 122.

21 Umbach Michael, and Huppau, Bernd Ed. *Vernacular Modernism*. 16.

International Exhibition”, after which modernity became mostly identified through The International Style. However, the ideas of Vernacular Modernism which were stemming from the Arts & Crafts movement are a big part of that period. In Vernacular Modernism, the notion of particularity of place is more important, where architecture takes a vernacular approach with a focus on craftsmanship and makes a shift from machine-centered to man-centered. These ideas began to be noticed in the late 1930s, with MoMa exhibitions of works by Frank Lloyd Wright and Alvar Aalto, both presented to the public in 1938. This other side of modernism, also described as soft modernism (as opposed to the hard modernism of The International Style) was also resuscitated in the second half of the twentieth century by architectural theorists who advocated taking a phenomenological approach to architecture as form of resistance to placelessness and Postmodernism.²²

The theories of the 19th century can be re-evaluated in the present context, when we find ourselves facing the same questions as we did two centuries ago. Perhaps through revisiting these influential texts, the answer can be found to the paradoxical question of “how to become modern and return to sources”²³ that was reiterated by Kenneth Frampton and first put forward by Paul Ricoeur in his critique of consumerist culture - the culture that resulted from the great advancements of mankind but also brought the “creative nucleus of great civilizations and great cultures” of the past to a state of extinction.²⁴

22 Refer to the next chapter “Martin Heidegger and Phenomenology in Architecture”

23 Ricoeur qtd. in Frampton, *Critical Regionalism Revisited*, 25.

24 Ibid., 25.

Fig.9: *Heidegger's
Hut.*

*The Hut in The
Black Forest where
Heidegger spent over
five decades working
on his many famous
writings*

3. Martin Heidegger and Phenomenology in Architecture

Martin Heidegger

In 1951, Martin Heidegger delivered a lecture in Darmstadt, that challenged the procedure of architectural practices and criticized the persistent technocratic approach used in the creation of built environments. He put forward theories on existentialism, emphasizing the importance of human experience, and spoke of a phenomenological appreciation that offers ways to articulate the meaning of our existence and strengthen a sense of being in the world. As word spread, the lecture was published as an essay entitled “Building Dwelling Thinking”, was translated into multiple languages, and continues to inspire prominent thinkers today. Although insightful and revolutionary, Heidegger’s body of work cannot be approached without cautionary criticism as it bears strong ties to extreme nationalist views and the “Blood and Soil” propaganda of the Nazi regime in Germany. The fact of Heidegger’s temporary involvement with the Nazi party¹ cannot and should not be ignored. Neither should the work that influenced prominent thinkers in architectural theory and served as the source of inspiration to many recognized practitioners be completely dismissed due to his politics. Without letting down a guard of criticism toward Heidegger’s romanticized ideals of rural life and unfavourable views on technology one can draw inspiration from his work that has brought a distinct perspective to the realm of architectural theory and practice. Heidegger’s essays presented in the 1950s such as “The Thing” (1950), “Building Dwelling Thinking” (1951) and “...Poetically, Man dwells...” (1951) are particularly significant for their relation to Architecture.

1 Sharr, *Heidegger for Architects*, 1.

The Thing

Writing on The Thing and Object, Heidegger introduces a thought that is distinct from the traditional philosophy of Plato and Aristotle, for whom thinking was based on the concept of seeing rather than experiencing the materiality and physicality of objects. In “The Thing” he writes: “That is why Plato, who conceives of the presence of what is present in terms of the outward appearance, had no more understanding of the nature of the thing than did Aristotle and all subsequent thinkers.”² Heidegger distinguishes The Thing from an Object by implying that it holds physical and intellectual connection to humans through its material qualities and how it participates in their everyday life. To Heidegger an object possesses visual and formal qualities bearing no significant attachment to an observer and the “daily practicalities of use.”³ “To him, it was the practicalities of everyday life which bring humans into contact – physical and intellectual-with the paraphernalia of life.”⁴ In an architectural context this concept is important when perceiving a building or a site, as The Thing, as something that intertwines with people’s daily lives rather than a strictly visual object distanced from the inhabitants around it.

The Fourfold

Heidegger introduces Earth, Sky, Mortals and Divinities as the four basic conditions of existence, that constitute The Fourfold. The Fourfold is something that surrounds us and it “precedes anything that is present”⁵, bringing meaning to our existence and appreciation of our personal qualities. This understanding of existence is distinct from logical thinking and is more intuitive. The Fourfold is a personal term that the philosopher uses to describe his existence based on what surrounds him. This approach can be judged as far too withdrawn from the realities of our contemporary society that is more and more concentrated on the urban setting immersed in technological and scientific advancements. As Adam Sharr explains Heidegger’s reasoning in this respect is that it is our current technocratic understanding of existence that is withdrawn rather than his. In connection to The Fourfold, Heidegger insists that things that surround us and participate in our daily lives embody the four preconditions of existence and reflect them back to the people that interact with them thus helping to make sense of the world. Similarly to “The Thing”, in “Building Dwelling Thinking” Heidegger brings up The Fourfold as the conditions in which we experience buildings and how buildings are capable of embodying these conditions as well.

2 Heidegger qtd. in Sharr, *Heidegger for Architects*, 29.

3 Sharr, *Heidegger for Architects*, 30.

4 Ibid., 30

5 Heidegger qtd. in Sharr, *Heidegger for Architects*, 32.

Building Dwelling Thinking

The omission of commas in the essay's title *Building Dwelling Thinking* is purposeful, Heidegger wants to emphasize the unity in *Building Dwelling Thinking*⁶ - notions that are closely linked and occur simultaneously rather than something following one after the other. The philosopher finds the primary connection between building and dwelling in the etymology of the words. He further emphasizes the relationship between building and nurturing, and through etymology argues that building and dwelling are also at the core of being. Heidegger demonstrates that the activity of building, dwelling, nurturing and being are all interrelated and were perceived as the same at the time the language was forming. Heidegger brings to our attention the innate meaning of Building and Dwelling, that both as activities and words have been lost in our contemporary understanding.⁷ The philosopher then further establishes that the "conjoined activity of building and dwelling is thinking; the acts are associated together as a kind of extra-verbal philosophy."⁸ Not just through etymology but also through rhetorical questioning, examples and other techniques Heidegger makes persuasive arguments to establish these links.

Although Heidegger provides examples through hypothetical situations, real life occurrences can also demonstrate the unity of *Building Dwelling Thinking* described by the philosopher. One particular such case is presented by the Soviet/Russian Artist and Architect Alexander Brodsky, who speaks of the settings he encountered in his childhood that influenced his life's work⁹. Although Brodsky does not mention the philosopher, a close relationship to Heidegger's notion of *Building Dwelling Thinking* becomes apparent through his accounts. In his lecture, the architect describes the setting of Russian villages near Moscow, the typical *Dachas* that everybody can recognize there - none are the same, all have a certain character and stories that are visible through repairs and additions to the houses. He then brings up the time in the early 1960s when these houses were demolished and people forcefully displaced into newly constructed *Panellised Buildings* (the term used in Russia that refers to the cheaply constructed buildings made from prefabricated wall panels). As Brodsky explains, this is when the tragedy happened that was epitomized through alcoholism and criminal behaviour, a total degradation of the community as a result of not being prepared to live in such conditions. In particular, the older generations, who had been so accustomed to leading a rural life, were profoundly dismayed by the situation; assembling on the bench in front of the entrance, dressed up in their

Fig.10: A Typical *Dacha* Under Moscow, Brodsky, A. This typology is gradually disappearing from the area.

Fig.11: Panellised Housing. Brodsky, A. Poorly constructed buildings where people were displaced after the demolition of villages near Moscow.

6 Sharr, *Heidegger for Architects*, 36.

7 Ibid., 41.

8 Ibid., 70.

9 Brodsky, Lecture of Architect Alexander Brodsky.

village clothes they would mourn and recount the 'good old times'. Experiencing this hardship of a new unfamiliar life, they found a way out: a piece of non-flat land buried in densely growing trees and sloping into a ravine with a river. This land that has been deemed useless for any kind of municipal developments has turned into a place for these people to build a parallel life, a place to be, to nurture, build and dwell. The displaced villagers lived and worked in the Panellised Housing area and escaped into the forest in their spare time to build a different home for themselves where they could dwell. Eventually the landscape turned into a small town, with streets, intersections and little squares that considered the slope of the ravine in its planning. Those people came to build, cultivate gardens, even raise animals at times. Essentially this life has become a true embodiment of Heidegger's Building Dwelling Thinking, a notion that these new dwellers have come to realize on their own in the pursuit of meaning and content in their lives. For materials, they used sheet metal salvaged from old garages, wooden fences, and other scrap they could find, perhaps even steal, in the area. The combination of various materials, colours, simple shapes, and the absence of any sort of aesthetic aspiration, especially impressed the architect. He finds in the dwellings some extremely elegant compositions, that came together by chance; even the ways the villagers thought of preventing their locks from rusting – wrapping them with a piece of cloth or polyethylene, brings up a certain poetic quality. To Alexander Brodsky this is the architecture, that has been influencing him unconsciously throughout childhood and more consciously in his adult life.

Fig.12: Vernacular Revival
Architecture near Moscow.
Brodsky, A.

Place

The notion of place introduced by Heidegger is integral to fully understanding Building Dwelling Thinking. In contrast to space, which can be understood in terms of mathematical dimensions, place is defined through human experience. An identification of place may be thought of in accordance with its relationship to the surroundings: the four pre-existing conditions: Earth, Sky, Mortals and Divinities. Certain choices are made and a place becomes defined when a building is located in a landscape. More places are identified as other buildings are added next to the first one, then a street after a street is formed, later composing a village, a town and then a city. The village described by Brodsky, or some other cities, especially the unplanned ones, contain a large number of place identifications within their layouts. There is no logic or system involved in identifying a place, the activity is largely “subjective, tentative, shifting and contingent”.¹⁰ A place is identified intellectually to reach harmony with the Fourfold and can be identified physically through a building, thus reflecting the existence of the identifier. From this follows that a building stands for human presence.

Specifics of place and the lives of the inhabitants are inextricably involved in shaping a building. In a symbiotic relationship, the building in turn shapes the life of its inhabitants and the place where it is situated. Constructed from locally found materials, fruits of the earth, the building is constantly being transformed through the use of its inhabitants and adapts to their dwelling habits. The form and the details of the building reflect the life of these individuals, their values, character and beliefs.

...poetically, Man dwells...

Heidegger borrows the title for his text ‘...poetically, Man dwells...’ from the phrase in Friedrich Hölderlin’s poem and analyzes the meaning of being able to dwell poetically. He links poetry and dwelling through *poiesis*, the Greek word for making. He believed that building and dwelling are poetic processes in the way that both of them strive to make sense of existence. In Heidegger’s understanding, poetry is not limited to words, but through its roots in making can be extended to building and dwelling as well as other acts of human making throughout history. The connection to *poiesis* in the context of architecture is also explored by Kenneth Frampton in his interpretation of Tectonics as poetic manifestation of structure.¹¹

Fig.13: Town Built by the Displaced Villagers. Brodsky, A.

¹⁰ Sharr, *Heidegger for Architects*, 54.

¹¹ Refer to the next chapter “Critical Regionalism, Tectonics, and Craftsmanship”.

Place-making and Phenomenology in Architecture

In Heidegger's view, architecture was taking a consumerist approach, preoccupied with aesthetics and construction management more than with understanding the inhabitants and their needs. Despite Heidegger's negative outlook towards a type of architectural practice that stood in the way of the unity of Building Dwelling Thinking, a large number of architectural theorists and practitioners were influenced by his philosophy. In reaction to some of the failures within the technocratic approach of the modernist era, Christian Norberg-Schulz introduced Heidegger to an english-speaking audience and brought phenomenology specifically into an architectural context through his book titled *Genius Loci: Towards a Phenomenology of Architecture* (1980). There, he emphasizes the notion of place-making, stating that "Architecture means to visualize the 'genius loci', and the task of the architect is to create meaningful places, whereby he helps man to dwell."¹² Referring to architects such as Alvar Aalto, Frank Lloyd Wright, Louis Kahn, and Paolo Portoghesi among others, Norberg-Schulz provides examples in his book of works from the Modern period which in his view were able to express this position. Influenced by modernist ideology but also noticing some of its flaws and the alienating environments they have caused, these architects sought for a way to address some of its problems. Although each architect's approach varies, their work is generally expressed through light, materiality, and form and is concerned with human experience. Responding to the specifics of the site, it often displays interest in vernacular architecture, craftsmanship and local traditions as well as influences from the traditions of other cultures. These and some other architects of the Modern period shared an attitude towards generating more humane architecture, commonly described as 'soft' modernism or vernacular modernism. A similar position to Norberg-Schulz was taken by Colin St. John Wilson some fifteen years later when he wrote *The Other Tradition of Modern Architecture* (1995) as a way to encourage a Heideggerian position on dwelling and place. He similarly listed examples of architects of the modern period who have successfully accomplished this task including Alvar Aalto once again, as well as Erik Gunnar Asplund, Hugo Häring and many others.

Peter Zumthor is one of the contemporary practitioners who in his attempt to create meaningful places looks towards the principles established by 'soft' modernist architects as well as consciously applying concepts from Heidegger's philosophy. Relying on both traditional and more contemporary references Zumthor

uses architectural elements, material and light to reconstruct desired atmospheres through which to invoke certain associations and memories.

Influenced by Martin Heidegger and Edmund Husserl¹³ Maurice Merleau-Ponty was another phenomenological philosopher who wrote on the importance of perception, body, and human sensory experience.⁽¹⁹⁴⁵⁾ His theories were further developed within an architectural context by architect and theorist Juhani Pallasmaa. Steven Holl is one of the contemporary architects who has placed Merleau-Ponty's and Juhani Pallasmaa's theories on perception and multisensory experience at the core of his approach to architectural design.

Contemporary theorist Alberto Perez-Gomez alludes to phenomenology as a way to overcome the problems presented by the "rational utopias" of Modern architecture where the "point of departure is once again the sphere of perception, the ultimate origin of existential meaning"¹⁴ In his later work, he writes about the ethical responsibility of architects to address the problems of humanity through the approach that takes its roots in the concept of phenomenology and Heidegger's notion of dwelling poetically. "Like literature and film, architecture finds its ethical praxis in its poetic and critical ability to address the questions that truly matter for our humanity in culturally specific terms, revealing enigmas behind everyday events and objects"¹⁵. The potential of architecture to evoke associations and ascribe meaning to places has also been elaborated by Dalibor Vesely in his writings on communicative space and the power of representation. Heidegger's philosophy is also known to have influenced Kenneth Frampton's discussions on Critical Regionalism and Tectonics which revolve around such established notions as 'Place', 'The Fourfold', and 'The Thing'.

Heidegger's philosophy remains controversial, as it continues to be judged for its ultraconservative views, and the hints of Nazi ideology in the desire for authenticity at the cost of exclusion of others. Although not without its limitations, his thinking serves as a valid primary source in understanding phenomenology and its connection to architecture that has inspired many subsequent thinkers. Those who remained vigilant and aware of the challenges his philosophy posed, were able to produce influential texts untainted by the nationalistic connotations that characterized Heidegger's writings. A proper understanding of these texts however, requires at least some level of familiarity with Heidegger's terminology and way of thinking.

13 Martin Heidegger's teacher, Edmund Husserl was a German philosopher who developed phenomenology as a philosophical movement. Refer to Husserl's "Inaugural Lecture at Freiburg im Breisgau". (1917).

14 Perez-Gomez, *Architecture and the Crisis of Modern Science*, 325.

15 Perez-Gomez, "The Space of Architecture", 205.

Fig.14: Tectonics Diagram.

Tectonics

4. Critical Regionalism, Tectonics, and Craftsmanship

Rather than join in a recapitulation of avant-gardist tropes or enter into historicist pastiche or into the superfluous proliferation of sculptural gestures - all of which have an arbitrary dimension to the degree that they are based in neither structure nor in construction - we may return instead to the structural unit as the irreducible essence of architectural form.¹

Critical Regionalism

As a way to resist placelessness, Kenneth Frampton advocates for locally rooted architecture, one that evolves from a particular milieu yet also contains a universal element that keeps up with the innovative developments of contemporary society. In his argument for Critical Regionalism², similar to Tzonis and Lefaivre who describe the movement as “a more developed form of regionalism” he warns against succumbing to the simple-minded Populist expressions and makes a clear distinction between Critical Regionalism and Populism, which he also calls sentimental Regionalism. In order to maintain “a high level of critical self-consciousness” Kenneth Frampton suggests finding inspiration “in such things as the range and quality of the local light, or in a *tectonic* derived from a peculiar structural mode, or in a topography of a given site.”³ In his later publications, the 1990 essay “Rappel à l'ordre: The Case for the Tectonic” and in his book *Studies in Tectonic Culture: The poetics of Construction in Nineteenth and Twentieth Century Architecture* (1995), Frampton attempts to reground his argument for place-specific architecture through his theory of Tectonics

1 Frampton, “Rappel à l'ordre The Case for the Tectonic” in *Labour Work and Architecture*, 92.

2 The term coined by Alex Tzonis and Liliane Lefaivre in “The Grid and the Pathway” (1981).

3 Frampton, “Towards a Critical Regionalism” in *Labour Work and Architecture*, 21.

with references to the works of Gottfried Semper.⁴ Literary critic Fredric Jameson, who pointed out the limitations in the concept of Critical Regionalism - where the absence of a unifying style leads to a building that resembles the postmodernist idea of the decorated shed - distinguishes Kenneth Frampton's approach as a more "formal alternative" that is "framed by the tripartite values of the tactile, the tectonic and the telluric".⁵ By grounding his theory of Critical Regionalism in Tectonics, Kenneth Frampton is able to steer away from the visual and representational category, which is what Fredric Jameson declares as the "fundamental innovation of the aesthetic of Critical Regionalism."⁶

Tectonics

Etymology and Meaning

The term *tectonic* originates from the Greek word *tekton* which refers to carpenter or builder. A similar relation of tectonics to the craft of carpentry is also found in the Sanskrit language and Vedic Poetry. In Homer, *Tectonic* refers to the art of construction and is given a poetic connotation in Sappho's poem "where *tekton*, the carpenter, assumes the role of a poet" ⁷. A notion of making that is less specific to carpentry and more generic is developed in the fifth century B.C. relating to the Greek word *poiesis* - the act of making. Eventually the role of the *tekton* emerges into a wider range of responsibilities of *architekton*, the master builder, where *archi* refers to a person of authority.

The Greek word *tekne* or *techne* is generally translated as "art" or "craft". However, Heidegger writes that "To the Greeks *techne* means neither art nor handicraft but rather: to make something appear, within what is present, as this or that, in this way or that way."⁸ This concept of *techne*, as 'making something appear' bears a strong connection to the current understanding of tectonics in its link to *poiesis*. When Kenneth Frampton talks about tectonics, he is "not alluding to mechanical revelation of construction but rather to a potentially poetic manifestation of structure in the original Greek sense of *poiesis* as an act of making and revealing."⁹

From this follows that tectonics can be described as the poetics of construction, which distinguishes it from the mechanics of construction and from structure. These differences can be well understood through Eduard F. Sekler's definition of the three terms: structure, construction and tectonics. Structure is an

4 Frampton,, "Critical Regionalism Revisited", 26.

5 Jameson, "The Constraints of Postmodernism (Extract)", 238.

6 Ibid., 238.

7 Frampton, *Studies in Tectonic Culture*, 3.

8 Heidegger, "Building, Dwelling, Thinking", 103.

9 Frampton, *Labour Work and Architecture*, 92.

abstract term that describes a system that is used to deal with the forces at work, such as post-and-lintel, a dome, or an arch. Construction, then, represents the compositional characteristics of such a system, which includes the materials used and the methods by which they are connected to one another. When structure is implemented through construction, it is the expressive qualities of the forces at play and the resultant formal composition that affect us. Eduard Sekler terms these expressive qualities of relation of form to force as tectonics. Similar to Frampton's reference to poesis as revealing, Sekler relates tectonic to the act of "making visible."¹⁰ What the architect makes visible through tectonics, is the "intensified kind of experience of reality which is the artist's domain - in our case the experience of forces related to forms in a building."¹¹ This acknowledgement of expressive qualities within tectonic elements that evoke an emotional response relates to 19th century German theories on the concept of *Einfühlung*. The term is generally translated into English as Empathy and was coined by Robert Vischer in an attempt to answer the question of how certain artistic forms activate an emotional response reflected in the nervous system. Literally meaning "feeling into", *Einfühlung* was introduced by Vischer to describe how our nervous system can simulate an object or physical environment during the perceptual process.¹² Art historian Heinrich Wölfflin expanded on the concept within the discussion of architecture and tectonics in his dissertation of 1886 where "he recognized tectonics as the particular manifestation of empathy in the field of architecture".¹³ This approach was moving away from purely figurative perception and towards the physiological and emotional realms of engagement with the world, requiring corporeal, rather than conceptual or intellectual involvement. This notion of our empathetic participation when experiencing architecture is also analogous to Frampton's description of ontological aspects of tectonic form¹⁴ in his discussion of Gottfried Semper's theories of tectonics.

The Ontological and Representational Tectonic

The study of tectonics in the context of architecture was initiated by Karl Botticher in his work *The Tectonic of Hellenes* of 1843-52 and was continued by Gottfried Semper in the same year in his essay "The Four Elements of Architecture". Tectonics was further elaborated by Semper in the unfinished work - titled *Style in the Technical and Tectonic Arts, Or, Practical Aesthetics*, (1860- 1866)¹⁵.

¹⁰ Paul Klee quoted in Sekler, "Structure, Construction, Tectonics", 92.

¹¹ Sekler, "Structure, Construction, Tectonics", p.92

¹² Mallgrave, *Architecture and Embodiment : The Implications of the New Sciences and Humanities for Design*, 123.

¹³ Sekler, "Structure, Construction, Tectonics", 91.

¹⁴ Mallgrave. "Foreword" in *Studies in Tectonic Culture*, X.

¹⁵ Refer to Ch. 2.

Frampton understands the *tectonic object* - as one that appears in two modes: the *representational* and *ontological* tectonic, which he parallels with Semper's distinction of structural-symbolic (the *representational* nature of the hearth and the infill wall) and structural-technical (the *ontological* nature of earthwork, frame and roof). Kenneth Frampton points out this difference between the two modes, between "the skin" and "the core", and further finds ontological significance in Semper's classification of building crafts into the *tectonics* of the frame and the *stereotomics* of compressive mass.¹⁶ To the first category Semper ascribes frameworks that could be comprised of wood, bamboo, wattle and basketwork, while the second category encompasses materials of compressive strength such as brick, rock, stone, rammed earth and reinforced concrete. The two opposed modes of construction, one requiring light materials of tensile strength and the other relying on heavy materials with compressive qualities, are representative of the opposition between the aerial and the massive, the light and the dark, the sky and the earth. Frampton notes that "It is characteristic of our secular age that we should overlook the cosmic associations evoked by these dialogically opposed modes of construction; that is to say the affinity of the frame for the immateriality of sky and the propensity of mass form not only to gravitate toward earth but also to dissolve in its substance."¹⁷ When he speaks of the oppositeness of the sky and the earth, he indirectly evokes the Heideggerian concept of the Fourfold, the pre-existing conditions that help us reaffirm our existence and thus constitute the experiential limits of our lives. Through Frampton's description of ontological aspects of tectonics a parallel is drawn between the aforementioned definition of tectonics as the revelation of the play of forces and our empathetic participation in the experience of reality.

The Joint as Tectonic Element

It is in part - the negotiation between these two modes (tectonic and stereotomic) that constitutes the poetics of construction, and brings the emphasis on the joint as the integral tectonic element. Through his study on tectonics Gottfried Semper connected textile production to the basis for all civilization, characterizing the knot as the earliest structural artifact. Recognizing the etymological connection between the knot and the joint (literally translated from German as 'the binding'), Semper established the joint as the "ultimate constituent of the art of building"¹⁸. In his discussion on the ontological condition found in the oppositeness within the two modes of construction, Kenneth Frampton recalls Semper's "privileging the joint as the primordial tectonic element, as the fundamental nexus around which

¹⁶ Frampton, *Labour Work and Architecture*, 95.

¹⁷ Frampton, *Studies in Tectonic Culture*, 7.

¹⁸ Frampton, *Labour Work and Architecture*, 98.

building comes into being....[implying] that fundamental syntactical transition may be expressed as one passes from *stereotomic* base to *tectonic* frame, and that such transitions constitute the very essence of architecture“¹⁹. As Kennerth Frampton points out, the work of Carlo Scarpa exemplifies such a condition where the joint embodies ontological values and in Heidegger’s understanding, perceives of itself as *the thing* and not *an object*.²⁰

Detail and Craftsmanship

In more ways than one, craftsmanship and tectonics relate closely to each other. Apart from the etymological connection through the Greek word *tekne*, the characteristic pertaining to tectonics - both empathetic experience of architecture and the joint as the point of ontological condensation - speaks of the same attributes as those of craftsmanship, and is next to impossible to achieve without its knowledge and use.

In the analogy of *architecture parlante* (“speaking architecture”), introduced by French theoreticians, details are understood as words composing a sentence that are used to give character and soul to a building.²¹ In the context of tectonics, a joint is firstly associated with a detail at a larger scale of structural unit, however a joint can encompass a wider range of architectural elements that do not necessarily deal with structure. In such architecture that is invested in tectonics and craftsmanship, a joint essentially takes the role of a detail. As Frascari writes “Details are then a direct result of the multifold reality of functions in architecture. They are the mediate or immediate expressions of the structure and the use of buildings.”²²

Engineer Peter Rice - once said that “it is the expressiveness of the jointing which humanizes structures and gives them their friendly feel.”²³ Understanding how to work with material and detailing connections of structural components or transitions from one material to another is crucial in creating architecture that is meaningful and that appeals to human consciousness. Such architecture requires a strong basis in craftsmanship. While, craftsmanship can be defined differently, depending on the context, generally it involves a high level of skill and knowledge of working with tools and materials, which is acquired through incessant practice. “...craft entails working in a particular medium, which has its own characteristics to be understood and respected; the crucial feeling for and mastery of that medium is

Fig.15: Windows at Gipsoteca Canoviana, Carlo Scarpa.

19 Ibid., 98.

20 Ibid., 95.

21 Frascari, “Tell-the-Tale-Detail”, 3.

22 Ibid., 2.

23 Peter Rice qtd in Weston, *Materials, Form and Architecture*, 148.

Fig.16: Railings in the Castelveccchio Museum protecting the glass opening, Carlo Scarpa.

only arrived at through patient repetition, closely attentive to those characteristics.”²⁴ It is important to keep in mind that craftsmanship is a learning and thinking process, where new techniques are developed. Traditionally this knowledge was acquired over years of experience and has been passed on through generations. Prior to the Renaissance, craftsmanship in architecture involved practice and experimentation with tools and the intrinsic qualities of materials to find ways to achieve greater heights and broader spans, as is evident in the construction of medieval Gothic churches. Craftsmanship of architectural details, specifically the joints, both structural and transitional, involves a similar exploration to achieve the required expressive qualities. In many cases, using the knowledge of traditional crafts accumulated over multiple generations, and applying it to contemporary architectural context can be valid means of achieving a more meaningful architectural expression that speaks to users on a more intimate level.

Carlo Scarpa’s work involves exploration of numerous possibilities of junctions and joints between materials in the most expressive ways, all of which require both an extraordinary knowledge of craft and a close relationship with craftsmen involved in the work. This approach is what gives significance to Carlo Scarpa’s architecture, where “Each detail tells us the story of its placing of its making and of its dimensioning... The details of Scarpa’s architecture solve not only practical functions, but also historical, social, and individual functions.”²⁵

At the Gipsoteca Canoviana, Carlo Scarpa turned the glass windows inside the room at its corners thus eliminating the connection between the two walls and the ceiling. A corner, usually the darkest place in a room, has been transformed into a gentle source of daylight washing the interior walls without touching the sculptures. Strengthening the contrast and texture of the displayed sculptures in the gallery space, he visually separated them from the white-painted wall. Marco Frascari describes this move as a learned commentary, where Scarpa was able to challenge the convention that asks for the background walls of a collection of gypsum casts to be tinted and not painted white. He pays close attention to designing such details, considering carefully how the various materials meet and how they are attached and supported, every time thinking about what message is sent by doing so. For example, in the Castelveccchio museum he designed the rails that protect the glazed opening specifically to make them appear fragile (ref. to Fig. 16). As the wooden rails dangle in the air from the metal rings attached to the steel posts, they intimate a cautionary atmosphere around the opening. Much can be said about the details designed by the architect, where each

²⁴ Buchanan, “Construction and Composition, Concept Versus Craft,” 187.

²⁵ Frascari, “Tell-the-Tale-Detail”, 7.

exemplifies his knowledge of craftsmanship, combining in one project, local trades, the influences from outside the region and modern materials and techniques.

In addition to having deep cultural, symbolic, and historical connotations, where their origin, use, and locality play a critical role, detail and craftsmanship have control over another crucial aspect of perception of space that appeals to our psychological and emotional engagement. This aspect is the experience of space using our physical body and its multiple sensory faculties, which is referred to as corporeal experience.

Corporeal Experience

Writing about the necessary task of architecture to enhance man's sense of being in the world by appealing to the multiple senses of an inhabitant, Juhani Pallasmaa resorts to the use of detail and craftsmanship as a the necessary tools to achieve this. He criticizes the inhumanity within the machine aesthetic of Modern architecture resulting in "imbalance in our sensory system"²⁶ and emphasizes the importance of appealing to multiple senses of the human body. He states that "the passage of time: light, shadow and transparency; color phenomena, texture, material and detail all participate in the complete experience of architecture"²⁷ The choice of material and the details of its assembly are therefore critical components in the creation of architecture that strives to appeal to the senses, as it encompasses properties of texture, color, detail and transparency as well as responding to the phenomena of light and shadow. This also includes various materials that have the ability to transform in response to the surrounding environment, through seasonal changes and their use over time.

A similar statement of importance in considering corporeal experience in architecture is expressed by architect Tadao Ando in reference to the Japanese concept of the *Shintai*, which describes the body's dynamic relationship with the world where one perceives of their own body's state in reference to the state of the environment with which it interacts, such as recognizing that one's own body is warm and soft when touching something cold and hard. Ando writes that "Man articulates the world through his body. Man is not a dualistic being in whom spirit and the flesh are essentially distinct, but a real corporeal being active in a world."²⁸

Through careful consideration of materials and architectural details, Alvar Aalto, as with the concept of the *Shintai* stimulates the body to respond to

Fig.17: Säynätsalo
Town Hall Stairway,
Alvar Aalto.

²⁶ Pallasmaa, "Questions of Perception", 41.

²⁷ Ibid., 41.

²⁸ Tadao Ando qtd. in Frampton, *Studies in Tectonic Culture*, 11.

Fig.18: Säynätsalo
Town Hall Council
Chamber Ceiling,
Alvar Aalto.

its environment appealing to multiple senses and building layers of meaning into his architecture. In Säynätsalo Town Hall, Aalto contrasts the tactile and visual experiences by controlling the atmosphere of different spaces and emphasizing a sense of entry. The heaviness of brick walls and stair treads are contrasted with the council chamber, where a sense of enclosure of the dim narrow stairway disappears as one enters the unusually tall and brightly lit room. An atmosphere of lightness emerges, as the floor surface changes from rough brick to softer polished wood. At the same time, gazing upward one cannot help but assign a human quality to Aalto's unique butterfly trusses that in their tectonic expression appear to joyously and with ease support the sloping roof overhead.

Radical Tectonics

The use of tectonics and craftsmanship brings attention to other senses helping to construct a fully embodied experience and stands in contrast to the strictly visual culture and homogeneity present in contemporary architecture. Such an approach acts as a point of resistance around which Kenneth Frampton bases his theory of Critical Regionalism. With the emphasis on tectonics and craftsmanship another understanding of experiencing architecture emerges, one that differs from the traditional reading of a perspectival image and which Annette LeCuyer describes as fragmented and topographical. She includes works by Enric Miralles, Gunther Behnisch, Mecanoo, and Patkau Architects in her anthology of contemporary architects who have demonstrated a renewed interest in tectonics. LeCuyer terms their approach as 'Radical Tectonic' and describes the nature of their work.

A corollary of rejecting the ideal is that, as a building becomes topographical, it reads less clearly as a figural whole and more as fragments in a field of forces. The disembodiment of the building may be achieved in a number of ways: finite systems of order are replaced by open-ended and changeable systems; the monolithic gives way to the multilayered; and homogeneity is superseded by differentiation. As figure dissolves into field, the buildings are comprehended less through fixed perspective and more through the unfolding, internalized experience of the body moving through space. The architectural promenade is emphasized tectonically as the locus of heightened bodily experience. Although perspective no longer orders perception, the eye continues to play a crucial role. The view is fragmented, simultaneously focusing near and far or assembling spatial sequences as a series of partial glimpses. In addition to the visual, much importance in this work is placed upon the tactile. The construction palettes of these buildings are rich and varied, with materials used as much for their sensate qualities as for economy or utility. Like the brutalist affinity for the power of raw material, the juxtaposition of rough and smooth, heavy and light, figured and plain makes the bodily experience of the buildings more direct and more complex, supplanting objectivity with empathy.²⁹

The description provided by Annette LeCuyer relates to the idea of interpreting and making architecture through fragments and can be useful in establishing it as an approach to bringing meaning into architecture through emphasis on tectonics, detail and craftsmanship as well as encompassing the principles of Critical Regionalism that take into account the specific nature of the site. The idea of fragments in architecture has also been explored by other theorists, namely phenomenologist Dalibor Vesely who has written on the metaphorical power of fragment, which will be further discussed in the next chapter.

*"It is in the situational structure of Cubist space that the topography of familiar settings meets the fragment in its metaphorical role....If the common ground of things is space, it is not a space which can be understood through geometry or as a formal structure, but as a living structure in which the metaphorical power of fragment plays a decisive role"*¹

1 Vesely, "The Rehabilitation of Fragment", 339.

Fig.19: Still Life With
Chair Caning, Pablo
Picasso, 1912.

5. Fragments

“Through a situational approach – where elements are combined thematically in a topography of meaning – architecture ceases to be a neutral instrumental system and can begin to resume its traditional role as the concrete embodiment of certain typical, stable settings or situations. In this way, tradition can be fruitfully reinterpreted in a contemporary idiom.”¹

In architecture, fragments can come in the form of tectonic expressions, details, materials, or formal compositions at various scales to recall memories and bring associations by alluding to settings that attempt to make places more meaningful and expressive in character. Fragments can also be applied to spatial layouts, that break away from a formal grid structure in a floor plan and introduce variation and intricacy.

Synthetic Cubism and Le Corbusier

One way to illustrate the concept of fragments would be in reference to the early twentieth-century aspirations of synthetic-cubist artists who turned away from perspectival representation and developed an approach that appeals to human consciousness and evokes aspects of direct embodied experience. The use of fragments in cubist compositions is purposeful, as they attempt to articulate a certain world view. As in Picasso’s *Still Life with Chair Caning* (1912) a Parisian cafe table, some bits of a newspaper and a piece of fruit are fragmented in the cubist collage where their relationship forms a whole and a setting emerges that brings attention and meaning to everyday life experiences such as having a breakfast in a Paris Café. This is the situationist approach that Dagmar Motycka Weston describes in her essay “Le Corbusier and the restorative fragment at the Swiss Pavillion”. She also describes fragments in surrealist art, where the subconscious and the dream

Fig.20: *Objets à Réaction Poétique, Le Corbusier.*

¹ Weston, “Le Corbusier and the Restorative Fragment at the Swiss Pavillion”, 174.

atmosphere are evoked by injecting disparate fragments into a new context, such as in the works of Giorgio de Chirico. These are called positive fragments that are capable of “restoring a rich thematic field to the work of art” by “importing residues of their original worlds into the image.”² Dalibor Vesely’s essay on the fragment of modern culture titled “Architecture and the Ambiguity of the Fragment” serves as the basis for Weston’s interpretation of fragments and her reading of Le Corbusier’s work. She notes the ‘*collagiste* sensibility’ that was present in his work from the beginning of his career, including his paintings, his writing and work as editor, as well as architecture. Le Corbusier’s paintings that follow the cubist technique of layering objects and meanings, similarly contain fragments that construe thematic relationships and add a dimension of reality. Fragments are also present in Le Corbusier’s late 1920s collection of *objets à réaction poétique* (*objects of a poetic reaction*) that served to allude to spatial and temporal qualities that provoke the imagination. Le Corbusier himself described the cosmic conditions that manifested in his collection: “These natural fragments, these things battered by the elements, collected on the shore ... manifesting physical laws, wear, erosion, rapture etc. possess not only plastic qualities, but also an extraordinary poetic potential.”³ In the case of the Swiss Pavilion Weston describes the ‘collageist sensibility’ that is present in the building’s forms and materials, such as the “primitivist curved rubble wall...recalling the vernacular stone architecture and even

Fig. 21: *The Swiss Pavilion: View of Stone Refectory Wall with Trees.*

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- 2 Weston, “Le Corbusier and the Restorative Fragment at the Swiss Pavillion”, 175.
 3 Le Corbusier qtd. in “Le Corbusier and the Restorative Fragment at the Swiss Pavillion”, 191.

the rocky landscapes of Switzerland.”⁴ Unlike the typical architecture of the purist buildings, the materiality and the architectural language of the pavilion reflects the poetic expression of the *objets à réaction poétique* that does not attempt to withstand the currency of time but rather reflects the temporal changes and weathering that are inseparable from the concept of human existence. A fragmented approach is also evident in the spatial structure of the pavilion as well as the objects displayed in the niches and shelves within the rooms.

John Soane and Picturesque Landscape Theory

Dagmar M. Weston described positive fragments that can be found in the art and architecture of the 20th century. Dalibor Vesely also has written about the ambiguity of fragments, in the sense that fragments can be both positive and negative. In “Soane’s Spaces and the Matter of Fragmentation” Robin Middleton describes this concept of ambiguity:

*Fragments may be constructed in both negative and positive ways: as remnants of achievements and a plenitude that is irrevocably lost, or as elements of restorative power that can provide symbolic and poetic meaning to newly constructed wholes.*⁵

In Soane’s work the ambiguity is noted by Middleton in the bird’s eye view drawing of the Bank Of England which “looks like a piece of a ruin...but is in fact a depiction of the entire bank being constructed”⁶. Middleton also calls Soane’s house an “artificial ruin” where he has collected objects that had no real value at the time but carried an associational value to the architect. The artifacts were consciously collected and assembled into compositions by Soane. Taken out of their original context like the objects in the cubist, dadaist, and surrealist paintings they “provide a new metaphorical and poetic wholeness for the fulfilment of life.”⁷ John Soane also gave significance to details and thought of them as fragments - parts that contribute to the understanding of the whole: “Too much attention can not be given to produce a distinct Character in every building, not only in great features, but in minor detail likewise; even a moulding, however diminutive, contributes to increase or lessen the Character of the assemblage of which it forms a part”⁸.

It is Middleton’s conviction that Soane was, like the artists of the 20th century, trying to rebel against the established modes of thinking and making. This can also be noted in the interior spaces of Soane’s architecture, where the classical

Fig.22: Painting (close-up) of John Soane’s Bank of England under construction, Joseph Gandy, 1830.

Fig.23: Sir John Soane’s Museum, London, UK.

⁴ Weston, “Le Corbusier and the Restorative Fragment at the Swiss Pavillion”, 180.

⁵ Middleton, “Soane’s Spaces and the Matter of Fragmentation”, 35.

⁶ Ibid. 35.

⁷ Ibid. 35.

⁸ John Soane qtd. in Frascari, “Tell-the-Tale-Detail”, 3.

wholeness ceases to exist and the formal structure is subverted to make spaces relate to each other rather than completely follow a structured rectilinear grid. In some instances walls follow diagonal configurations to open up certain views, curves are introduced to larger spaces that diminish the sense of enclosure, and corridors are laid out in a labyrinthine fashion to create unexpected turns and lighting effects, thus evoking a sense of wonder in a visitor who follows the meandering path.

When inside, the interruptive and irregular nature of Soane's interiors hinders any kind of holistic understanding of how the spaces are arranged. To explain this departure from Classical principles, Middleton suggests the influence of picturesque landscape theory. The ideas of the picturesque came from the Orient and became a characteristic common in Romantic landscape paintings in Europe, with scenes characterized by roughness, sudden variation, and irregularity. The notion of temples and follies hidden among trees, rocks and hillsides came later as inspiration for the landscape design of English Gardens. The term Picturesque was more accurately formulated in the 1794 *Essay on the Picturesque* by Uvedale Price who positioned picturesqueness in between beauty and sublimity, where it can be combined with either one of the other two qualities. Whereas Beauty is characterized by smoothness, uniformity, and little variety or intricacy, the Picturesque tends to possess qualities almost diametrically opposite. If there is variation in Beauty, it is gradual, and not sudden or abrupt as it is with the Picturesque. With reference to Edmund Burke's philosophical arguments on the Sublime and Beautiful⁹, Price

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Price. "Essay on Picturesque", 275.

Fig.24: *Landscape with Ascanius Shooting the Stag of Sylvia*, Claude Lorrain, 1682.

"A temple or palace of Grecian architecture in its perfect entire state, and its surface and colour smooth and even, either in painting or reality, is beautiful; in ruin it is picturesque...."

1

Price. *Essay on the Picturesque*. Ch. I

explains that if Beauty excites passions such as love and complacency and the Sublime produces astonishment, then in his opinion the effect of the Picturesque is curiosity. Speaking of moments where the Picturesque is combined with either the Beautiful or Sublime he writes on how to distinguish the nature of the Picturesque:

Where characters, however distinct in their nature, are perpetually mixed together in such various degrees and manners, it is not always easy to draw the exact line of separation: I think, however, we may conclude, that where an object, or a set of objects, is without smoothness or grandeur, but from its intricacy, its sudden and irregular deviations, its variety of forms, tints, and lights and shadows, is interesting to a cultivated eye, it is simply picturesque;¹⁰

The theory of the Picturesque offered a novel way of characterizing perception to include multiple sensory qualities in addition to the visual and capturing the effects of time, weather and light. It is likely that these theories, if not serving as a catalyst, at least provided some theoretical framework to John Soane's explorations in the design and layout of interior spaces.

Fragments in Works of Architecture

Similar to Soane, Kenneth Frampton sees the influence of picturesque landscape theory in Scarpa's work where the architect incorporates a series of fragments into an architectural promenade.¹¹ Relating to Heidegger's concept of the "object as the thing in itself"¹², Frampton suggests that Scarpa uses the joint as the focus of intensity, which thereby constitutes a fragment. The series of fragments

¹⁰ Ibid, 275.

¹¹ Frampton, "Notes on the Fragmentary Architecture of Carlo Scarpa", 367.

¹² Ibid., 367.

Fig.25: The Castelvécchio Museum, Carlo Scarpa.

Fig.26: Fragments in Villa Mairea:

A: Branch-shaped metal door handle

B: Finnish Fireplace.

C: Forest-like screen and steel column wrapped in rattan

in Scarpa's work comprise the experience of architecture as the movement of a body through space. The encountered fragments form a narrative or a setting that, such as in the case of Soane, is not predicated on a perspectival image or classical formal structure. Carlo Scarpa's work in many instances "assumes the character of montage"¹³, which comes through in several ways. For example, in the articulation between old and new, where certain parts of the past are revealed and contrasted with the modern. He also uses a variety of materials to compose one detail; even a combination of different woods and metals can be found intensified in one handrail, with some of the materials then repeated in other parts of the building. Scarpa incorporates symbols, such as the Vesica Piscis diagram, within structural compositions and ornamentation and constantly brings Venetian themes into his designs, be it through craft, symbols, or components of the city fabric. Similarly he introduces other influences such as Japanese craft and gardens, or looks to Mark Rothko's paintings for colour compositions. The fragments Scarpa brings into his buildings are both local and universal.

The ambiguity of positive and negative fragments described by Middleton can be exemplified in the Castelvecchio Museum's deconstructed roof structure that turns into a canopy across from the ruins of the medieval fortifications: "This deconstructed canopy, sustained by a twin, timber ridge beam bearing at one end on the castle wall, would also evoke a moment petrified in time, suspended, as it were, between a ruin and a building under construction..."¹⁴

The concept of fragments collaged into a representation of a whole setting is also described by Juhani Pallasma when he writes about the mental power of fragments. The image that arises is gradually constructed from fragments of memory as a "painted Cubist picture emerges from detached visual motifs."¹⁵ The power of a fragment lies in its ability to summon a whole setting in front of us.

*"In medieval illustrations and Renaissance paintings architectural settings are often depicted as a mere edge of a wall or a window opening, but the isolated fragment suffices to conjure up the experience of a complete constructed setting..John Soane and Alvar Aalto have taken advantage of this emotional power of the architectural fragment."*¹⁶

Through the use of fragments in Villa Mairea, Alvar Aalto is able to immerse the visitor into a traditional Finnish home amidst the forest without resorting to

¹³ Ibid., 367.

¹⁴ Ibid., 377.

¹⁵ Pallasma. "Space, Place, Memory and Imagination: The Temporal Dimension of Existential Space". 191.

¹⁶ Ibid, 191.

historicist formal expressions. He incorporates fragments, such as the Finnish fire place, a metal door handle shaped to form a branch (alluding to the branch handles attached to doors on traditional Finnish saunas) and the wood screen by the staircase resembling a forest. These fragments also work together to form a complete experience.

An arrangement of fragments can also be noted in contemporary architecture. In the Muskoka Boathouse, Shim Sutcliffe Architects combine vernacular construction techniques with references to details and tectonic expressions of architects from the Modern period. The traditional cottage-like forms of the region are reflected in the roof structure and the timber walls are assembled with traditional log-cabin methods. References to Scarpa can be found in the revealed roof structure and the use of double columns, while cruciform steel columns allude to Mies' Barcelona Pavillion. The columns are wrapped in wood, which is held together by rope, a method commonly used in First Nations cultures to hold structural components together, which was also explored by Alvar Aalto in Villa Mairea. The practice of wrapping cold steel in warmer materials that are more pleasant to touch is also borrowed from the Finnish architect. The fragments come together as a whole to compose architecture that feels local and familiar to the area yet incorporates a universal component by referencing the works of prominent architects making the connection to the world outside the region.

Fragmentation in architectural design can be viewed in the form of collage or montage that constructs a world, a setting, or experience from a variety of parts. These parts are fragments that may belong to a different context, but are purposely selected for their metaphorical potential to compose a communicative space. This approach can be used to create meaningful places that bring associations and familiarity to people that often get lost in the alienating world. The fragmented nature of laying out spaces can also prove to be useful in making places less structured and more experiential, evoking multiple senses and a feeling of curiosity, such as in the concept of architectural promenade or picturesque landscapes, where paths, spaces and views are unexpectedly discovered and add to a fully embodied experience of architecture.

Fig.27: Muskoka Boathouse, Shim Sutcliffe Architects, 1999.

6. Questioning the Power of Reason: Summary of the Theory and Introduction to the Project

The historicity of the evolution of Western architecture during the past two centuries is useful in highlighting the influence of the shifting world view ignited by philosophical arguments within the realm of metaphysics and epistemology. It elucidates the influential battle between faith and reason that continued through the post-Enlightenment era. In the eighteenth century the power of reason, the study of nature and the scientific method were thought to be essential to understanding reality. Rational scientific explanations superseded the supernatural explanations provided by religion and mysticism that were widely accepted during the Medieval period. Enlightenment philosophy brought a radical shift to the way of thinking about reality and human knowledge, with influential figures such as Isaac Newton and John Locke placing empiricism and rational thought at the forefront of intellectual developments that led to modernization. In the Introduction to *Architecture and the Crisis of Modern Science* (1983) Alberto Pérez-Gómez accuses the Enlightenment period of the functionalization of architectural theory with existential meaning removed from its core and supplanted by rationalism and efficiency. Though evidently correct in this regard, Pérez-Gómez's position that "this inversion of priorities that originated in the scientific and philosophical speculations of the seventeenth century has never, at a popular level, been corrected"¹, does not give a fair mention to a large body of theoretical work within the last two centuries that has attempted to address this issue. Some of these works and their influences toward the end of the twentieth century were brought to attention in the above chapters as a way to establish a theoretical basis for addressing contemporary problems in architecture.

¹ Pérez-Gómez, *Architecture and the Crisis of Modern Science*, 6.

The nineteenth century architectural theories of the three contemporaries introduced in Chapter 2 of this thesis came as a reaction to Neoclassicism and the technological progress that was brought by the Enlightenment. Gottfried Semper's contribution to the metaphysical dimension of architectural theory has been overlooked by many. Pérez-Gómez criticized Semper for categorizing architecture into functional elements, calling his theory reductionist and prescriptive in character and stating that he only subtly introduced psychological, sociological and aesthetic variables.² Eugène-Emmanuel Viollet-Le-Duc also should not be seen as a purely functionalist architect simply fascinated by the technological advancement as he is sometimes portrayed. He understood that architecture is not a purely constructional practice and tried to reconcile both tradition and technology in his approach to architectural design with an emphasis on structure. Out of the three contemporaries, John Ruskin was the most resistant to the rationalist approach, technological progress and commodification that resulted from the Enlightenment and stressed the importance in architectural ornament that appeals to emotion, and that contains a high level of craftsmanship and meaning.

Martin Heidegger along with the other German philosophers that influenced him, such as Kant, Hegel and Husserl, made a large contribution to philosophical thought and architectural theory in taking the focus away from Reason. Instead, Heidegger called toward exploring feelings and emotion, revealing the world as not a collection of functional objects but Things encoded with deep meanings that help us orient ourselves within it.

The theories introduced here stand behind some of the practical applications of the twentieth century, such as the avant-gardist attempts of the Arts and Crafts Movement and the many architectural works of the Modern period that broke apart from the technocratic ideologies of the International Style. These nineteenth and early twentieth century theoretical and practical works that tried to resist the rational approach of modernization were influential to the development of the more recent architectural theories that are described in the chapter "Critical Regionalism, Tectonics and Craftsmanship".

The notion of *Fragments* is introduced as a method through which these ideas can be made manifest in an architectural project. It is a distinct understanding of perception of space that can be used as an approach within the design process. The ideas that formulate the concept of *Fragments*: "the situational structure of

Cubist space”³ and the Picturesque Landscape theory act as a counter-method to the architectural theory of functionalism and efficiency stemming from the Enlightenment and the Modern period. It works in contrast to the rational approach based on proportion and perspectival imagery and brings focus towards the experience of the body moving through space with emphasis on the poetics of construction, materiality, sensory experience, and details that express craftsmanship, meaning, and emotion. Similar to Fredric Jameson’s description of Frampton’s theory of Critical Regionalism, the theory of Fragments is interwoven with “the tectonic, the tactile, and the telluric”⁴ elements.

To develop this approach into an architectural project, a site, described in the next chapter, is chosen that is the epitome of the conflict between the rational and the poetic, urbanization and wilderness, flat and irregular, mechanical, efficient, logical and cultivating, picturesque, spontaneous. The ongoing battle is especially evident in the way the existing building and landscape have been transformed by the community over time. And even the governing structure of the existing programs on the site, the casual “management” by the community members, is in conflict with the strictly prescriptive rules coming from the city. The existing building itself follows a machine logic, centering around structural and economic efficiency. As much as it adheres to the building code and fire regulations it does not account for humans as participants of *Lebenswelt* (Lifeworld) - the dynamic world in which they dwell. Like many other buildings born of the Modern condition and the outcomes of urbanization with the need for efficiency, this building “[embodies] the values of technology rather than [trying] to establish a meaningful framework for man’s finite existence”⁵.

The rich context of the site, the existing picturesque landscape set within an urban city grid and the living structure of the community with its various programs will serve as the foundation for a project that will aim to become an exemplary approach to placemaking and open up more possibilities to the community rather than hindering it from reaching its full potential.

3 Vesely, “The Rehabilitation of Fragment”, 339.

4 Jameson, “The Constraints of Postmodernism (Extract)”, 238.

5 Pérez-Gómez, *Architecture and the Crisis of Modern Science*, 7.

Fig.28: Historical Map Overlay Study. Garrison Creek and its Relationship to Dufferin Grove Park.

7. Thesis Project Part I - Site and Program

... we have the nostalgics who try to fix, preserve and sometimes even reproduce the appearance of an architecture of the past, without the slightest confidence in the living forces of our time. But in the margins luckily exists also a movement of thought which is seeking to rediscover the importance of the site and its history, for the transformation and creation of new places.¹

Pierre Von Meiss talks of the site as a place that is always linked to human history, it is likely already a place in the country or in the town prior to our decision to intervene with it. As architects we have the ability to destroy, reinforce, or transform a place. Von Meiss urges us to “observe it carefully and study its history before designing; it is our duty and our opportunity, because, in its origin, its formal structure and its meanings, we find the most powerful stimulants and the most enriching material for design...”² This approach is encouraged in contrast to the prevalent practice in architectural production of obeying the laws of the real estate market rather than responding to the specific character of the site. It aligns with Kenneth Frampton's theory of Critical Regionalism, where in the fifth point of an Architecture of Resistance he speaks of site responsive design as a way of addressing *placelessness* - the ubiquitous condition of the built environment and the critique that is also brought forward in this thesis.

Since consideration of the site is an integral component of place-making, the selection of the site for the thesis project is bound by its proximity and accessibility to allow a thorough exploration, both through its physical assessment and the research of historical documents. Following this rationale, the selection of the site was restricted to the City of Toronto. It was also acknowledged that Toronto faces the issue of

1 Rossi, *The Architecture of the City* paraphrased in von Meiss, *Elements of Architecture: From Form to Place*, 139.

2 Ibid, 143.

Fig.29: Toronto's Watersheds Map.

Fig.30: Toronto's Original Watercourses and Bodies of Water.

Fig.31: Toronto's Watercourses and Bodies of Water in 2008.

placelessness as a city that has been greatly affected by the wave of modernism and its tabula rasa approach during industrialization. As a way to approach the search for an appropriate site, the first step was to establish a characteristic that distinguishes Toronto from other places and constitutes its regional identity.

Toronto's Ravines

"Toronto's site is formed by water"³. The protective harbour and the existing water routes played a key role in providing a safe place for the formation of the Town of York in 1793, later becoming the capital of Upper Canada. The bedrock that underlies Toronto and acts as a stable base for the numerous highrises is comprised of shale and limestone that was formed from the deposits in the subtropical sea c.448 million years ago. The succession of glacial formations and retreats of the past 2 million years contributed to further deposits of sand, clay and fossils on top of the bedrock. This complex history of geological events has contributed to the formation of raw materials for stone and brick from which the city was primarily constructed prior to WWII. The last ice advance some 13,000 years ago and its withdrawal 500 years later has formed the geographical landscape of Toronto and the drainage pattern of its streams. Toronto's ravines were carved out by melted ice-water as it drained from the Oak Ridges Moraine into glacial Lake Iroquois together with the subsequent drainage of the lake itself thousands of years later. The rivers that formed as a result, were used as navigation routes and a source of water by the First Nations and the early European settlers more than 200 years ago. The water channels within the ravines connected land resources to the town and contributed to its formation, as previously mentioned. The ravines eroded by the water have also exposed thousands of years of history and life embedded within the layers of sedimentary deposits. The ridged landscape that resulted from the advancement of the ice sheets, the ravines carved by the melting ice, and the now exposed shoreline of ancient lake Iroquois all reflect the unique geographical features of the City of Toronto and its greater areas.

Although Toronto's topography is generally perceived as flat, it is actually carved out by ravines that played a significant role in the formation of the city. For the early Europeans, the rivers and creeks meant money. Over 100 mills proliferated along the city's ravines to support the numerous water-powered industries that facilitated the growth of surrounding communities and brought more people into the city. This is also where the exploitation of the rivers started, as mills were carved into sensitive river-valley ecosystems, dams were created and river courses altered to generate more power. Eventually the water-mill industries went into decline, with deforestation and

3 Freeman, "Formed and Shaped by water: Toronto's Early Landscape," 26-41.

the use of other sources of power, such as coal-fired steam engines and electricity. From the 1850s, Toronto became a large coal-burning city and this is when the ravines suffered once again, as they became the convenient dumping grounds for waste disposal, with “houses, apartment buildings, parks and schools ... constructed on their filled remains.”⁴ This was largely forgotten by the city, until the creeks were brought back to mind in 2001, when high levels of toxins were discovered in the soil of a schoolyard and toxic water was noticed seeping through into the Humber River.⁵ Storms serve as another reminder of the creeks that were polluted, combined with sewage and then buried in pipes. Although measures were taken after the devastating effects of Hurricane Hazel in 1954, which took down neighbourhoods located in the floodplains along the rivers, flooding remains a serious problem due to how the creeks were treated during the construction of the city.

Prior to man-made interventions during the city's development, the creeks that formed the ravines participated in the natural cycle of water. The largest of the watersheds that pass through the City of Toronto are serviced by the Humber, Don, and Rouge Rivers. While these rivers remain exposed and continue to flow through the city landscape, a number of creeks were enclosed in sewer pipes and buried below ground as a result of urbanization over the course of the last century. Today the creeks are contaminated with surface water runoff and many are combined with household and commercial sewage. During heavy storms the combined sewer exceeds the capacity of the water treatment chamber, resulting in an overflow of untreated water into the lake and intensely polluting the beaches lining the Toronto shoreline. The Toronto Region and Conservation Authority has added the category “Waterfront Zone” to its watershed map to describe the tracts of land along the lakeshore that comprise 18% of the city's land mass. “These tracts don't drain into any of the big rivers, and they now have little, if any, surface water of their own. These are the historical drainages of Toronto's lost rivers.”⁶ The networks of parks and curved streets- the former river banks unaltered by the rectilinear city grid are the remnants of the lost rivers that once captured the history and unique character of Toronto. As discovered by architects James Brown & Kim Storey they compose a fundamental quality unique to this city.⁷

4 Anderson, “The Dustbins of History: Waste Disposal in Toronto's Ravines and Valleys”, 74.

5 Ibid., 74.

6 Hardwicke & Reeves, “Shapeshifter: Toronto's changing Watersheds, Streams and Shorelines.” 55.

7 Refer to Brown, Storey and Pommer. *Rain Water in the Urban Landscape: Garrison Creek Demonstration Project*.

Historically, citizens of Toronto related closely to its ravines, especially the older generations who have witnessed some of their disappearance and have seen the environment change around them. Maggie Helwig summarizes our strange relationship with the ravines where we exploit their resources, mindlessly destroy some of them and then attempt to bring them back to life. “We have not completely filled them in or built over them, but neither have we openly shaped the city to their demands. We live with our sunken rivers in a quiet unspoken collaboration, changing their courses sometimes, dumping things out of sight, but letting them continue, sometimes going back to them, cleaning up, trying to erase some of our presence.”⁸ She also writes of the socio-cultural influence that Toronto’s ravines have had on its citizens. In reference to Toronto’s literature, she brings up the city’s most iconic imagery, such as the fall of the nun from the Bloor Viaduct in Michael Ondaatje’s *In the Skin of a Lion*. Bringing the focus to the ravines, she writes that: “it may be that the true meaning of that scene resides not in the vaulting bridge but in the space beneath it, over which the characters hang suspended.”⁹ Concluding that “any novel that wants to be a Toronto novel has to reckon with the ravines”¹⁰, she also brings up Margaret Atwood’s *Cat’s Eye* and Dionne Brand’s *What We All Long For*. Robert Fulford similarly cites numerous examples of Toronto novels where the city with its ravines comes to life, often as yet another character that is impressed on the lives of the novels’ protagonists. One might expect that holding the characteristics of wilderness and landscape, ravines should have also become the subject of painters, yet as Fulford notes, Canadian painters looked to the North for a picturesque setting, and it is the context that distinguishes the ravines., The juxtaposition of wilderness with the urban setting: “the sudden and shocking contrast of ordered street life and disordered nature”¹¹ is what makes them so intriguing, and what motivated Canadian photographer Steven Evans to capture them in his 1995 exhibition *Deep Into the City* (refer to Fig. 31).

The existing ravines and the ones that have disappeared, yet left a trace on the landscape, are undoubtedly integral to the lives of the citizens of Toronto. If previously Toronto’s identity could have been associated with destroying everything in its path for the sake of progress, its attitude begins to take a more ecological direction towards conservation and restoration, realizing the devastating impacts of its own actions and the need for its citizens to be reconnected with nature. This is evident in the ambitious slogan “A City Within a Park” visible on the signage indicating the

8 Helwig, “Downward”, 179.

9 Ibid., 179.

10 Ibid., 179.

11 Fulford, “The Invention of Toronto: A city Defined by its Artists.”

Fig.32: Photograph
from the exhibition
Deep Into the City by
Steven Evans.

names of the city's parks at their entrance, as the city prides itself on the amount of parks, open spaces, trails, playgrounds and sports fields. Citizens and community activists have expressed perhaps a more genuine desire to restore the creeks and the history that has been buried with them that has been pressing the city into action. The evidence to support this is the historical documentation, publications and community actions that have been exposed during this research on the buried creeks of Toronto.¹²

Through this research into the historical formation of the city and the characteristics that identify it as a specific place to its citizens, it was discovered that the ravines are integral to the city landscape that represents Toronto's regional identity. The creeks that were buried during the city's development contain historical and cultural value that helped people in the surrounding communities orient themselves and associate their lives with places that the creeks had formed. The burial of these creeks is the direct evidence of placelessness that has been visited upon communities during the last century of severe growth of cities and the technocratic approach that was employed to accommodate them. Considering that this thesis is involved with place-making it was decided to daylight a buried creek as a first step towards reinforcing a sense of place in the community and the city overall. Castle Frank Brook, Taddle Creek, Garrison Creek, and some of the creeks' tributaries with the variety of parks and public spaces that lie above them have been considered as possible locations. The selection was narrowed down by looking into the context of the sites and possible program proposals that would suit the interests of this thesis, where the use of craftsmanship, tectonics, and regionalism can be best explored in the pursuit of poetic approach to place-making.

¹² Refer also to the transcript of Don Dialogue Remarks by Jason Ramsay-Brown from May 25th, 2016 for the list of initiatives by the city and community groups.

Fig.33: Dufferin Grove Park, South from Gladstone Ave, 1914.

Fig.34: Dufferin Grove Park with Community Garden and Sandpit Playground, 1917.

Fig.35: Dufferin Grove Park Survey, 1913.

Garrison Creek

The western edge of the City of Toronto was once defined by Garrison Creek, which emptied its waters into Lake Ontario near Fort York. By the 1880's the creek was so polluted, that it had to be buried in a 10 foot diameter brick sewer. At the time Mayor Arthur Radcliffe Boswell described the creek as "nothing more than an open sewer"¹³ that was threatening the health of the citizens. Its burial was also justified by the ability to drain the northern and western parts of Toronto, as well as by the increase in property values around the ravine. The green continuous landscape above the Garrison Creek sewer was used to attract more real estate buyers to Toronto until in the 1930's the mindset of the politicians took a different turn. The definitive image of Toronto as a city among the ravines seemed no longer viable in counteracting the benefits of the ravines' potential for a close-at-hand garbage dump that could be also levelled off and sold as property. The majority of the ravine landscape was obliterated as a result of this attitude. Some major urban parks such as Christie Pits, Bickford Vale, Trinity Bellwoods and Dufferin Grove along with curving streets like Crawford, Heydon and St Anne's are the anomalies found amidst the imposed flat land and rectilinear city grid that serve as evidence of the once cherished Garrison Creek Ravine.

Dufferin Grove Park: Existing Condition and Use

Dufferin Grove Park, located on the east side of Dufferin Street and one block south of Bloor Street partially lies on the bank of Denison Creek, a tributary of Garrison Creek. The remnants of the ravine are visible in the valley formed at the western portion of the park. Most of the creek, however, is buried below Dufferin Mall located across from the park, the site occupied by Dufferin Racetrack until 1951. Nevertheless the slope of the river's east bank remains imprinted in the landscape and gives the park its unique character. In the 1990's the park was highly underused and mostly served its neighbours as "a shortcut to get to the mall"¹⁴. Dufferin Grove Park was transformed through the activism of Jutta Mason, who dedicated much of her personal time to make it into what she once described as, a "community centre without walls"¹⁵. Since then, the park has been regarded as one of the most successful and community oriented parks in the city, with other parks striving to follow its example.

¹³ Cook, "Burying the Garrison Creek: A History".

¹⁴ Jutta Mason qtd. in Schecter, "Where to Park it this Summer".

¹⁵ Ibid.

The transformation started with the Dufferin Mall donation to the park's community as a peace offering after facing strong opposition from the neighbours to their condo development proposal in the area. The proposal did not go through, but the donation led to creating a list of simple things that the neighbours wanted to have in the park, such as the large sandpit playground and bonfire space near the ice rink. Friends of Dufferin Grove Park, an informal collective that resulted from Jutta Mason's efforts, looked to ideas from the early-twentieth century "playground movement". Published works on bringing communities together, such as *Practical Conduct of Play* and *The Great Good Place* were behind the many initiatives that occurred in the park. By observing people and how they use the space and paying attention to small details, Jutta Mason was able to make significant changes and incorporate activities for different age groups to create a sense of community within the park. The rink house was transformed to include one big multi-purpose room that could be enjoyed by the elderly, teenagers and families with small children at the same time. It was achieved with the removal of a concrete block wall between change rooms, creating an observation window from the office and eye-level windows that look out into the rink. Those changes were followed by including a wood stove with safety iron fence for drying clothes, the Zamboni cafe, a kitchen to prepare snacks and a better lighting system. Vandalism and stealing was no longer an issue, and the formerly single-use rink house took on new roles that Jutta Mason described in her handbook:

People came into the rink house and sat down in the big room with their friends, talking and drinking hot chocolate and slowly getting their skates on. Out on the ice, they played shinny hockey for hours and then they got hungry, and went back inside and ate mini-pizzas or soup, and drank coffee. Parents sat in front of the woodstove with their children, reading them storybooks. The old men played card games for hours...Sometimes musicians brought their instruments, using the echo-y concrete blocks to good effect. There was enough room to fit in a farmers' market eventually, when it was too cold to have it outside along the path. On those days, the Zamboni parked out on the basketball court, to make room for more farmers in the garage...In spring, summer, and fall, the clubhouse became a staging area for dance festivals, outdoor theatre, and cultural events.¹⁶

Fig.36: Dufferin Grove Park Activity Map with "Jane's Walk" Stations, May 2010.

The ice rink is also used as a skateboard park and a staging area for other park activities, such as the Thursday farmer's market. The market area extends west and south of the Rink House where two community bake ovens with vegetable gardens and picnic tables are located. To the east of the gardens are basketball court, soccer field and baseball diamond. This area is also used for Clay and Paper Theatre performances. The theatre stages plays, festivals, parades and other events in and

around the park throughout the year. The Park Field House nearby is used for storage and also a workshop for the papier-mache puppets to involve the community and provide additional “eyes on the street”. South of the sports fields is the children’s area with a playground, a sand pit, a wading pool, and Cob courtyard wall with composting toilet building and hand washing station. Close to the centre is a small Reflexology Footpath built in memory of Jenna K. Morrison, a yoga instructor who was loved by the community and died in a tragic bicycle accident. South of the memorial is a volleyball net and campfire circle. The west portion of the park along Dufferin street is not as intensively programmed and is mostly used as a resting and picnic area, with the exception of a small garden dedicated to the buried Garrison Creek. A small Savannah garden is located north of the ice rink and is completely separated from the rest of the park.

Starting with practically an empty park and a shoe-box building, Dufferin Grove Park neighborhood activists, used the few resources they had to grow a rich community. However this unstructured way of community involvement - informal, spontaneous and flexible - goes against city policies. Although supportive at first, the city decided to take a different approach and run the park by their rules. Reluctant to work with the people who worked hard to build this community, the city began to impose its bureaucratic structure, destroying the self-governing and self-sustainable nature of the life that evolved within the park.^{17, 18}

¹⁷ Porter, “Bureaucratic Meddling puts Park’s Magic at Risk”.
¹⁸ Bilton, “The Defriending of Dufferin Grove Park”.

Fig.37: Dufferin Grove Park Ravine Landscape, Looking South. (Left).

Fig.38: Dufferin Grove Park Ravine Landscape, Looking East. (Right).

Dufferin Grove Park Community Hub as Thesis Project

Dufferin Grove park is a delicate site that requires an architectural intervention to accommodate the needs of the growing community and minimize the conflict between the city staff and the active patrons of the park. A site of this nature demands a thorough understanding of the cultural context and how it is used by its regular visitors. Through an architectural intervention Dufferin Grove, as a model city park, has the potential to be the park that is associated with Toronto's identity . There, people of different social classes and cultural backgrounds mix, bond and make memories. It is also the place where the old relationship between the urban landscape and the historic rivers can be brought back to life.

It becomes evident through this site that it is the practicalities of everyday life that make this place significant to its users and require architectural attention. Understanding how people use and interact with their environment and catering to their needs is especially relevant, when considering the experience of space through multiple senses and paying special attention to the craftsmanship of details. With the aim of strengthening the existing qualities of the site and preserving the established concept of a "community centre without walls", a thoughtful approach is required to accentuate the relationship between interior and exterior spaces. These spaces have to be designed for flexible use and have the capability to be transformed by the community to accommodate their needs, such as the farmer's market, a community dinner or theatre performance space. These requirements lead to expressing architecture through tectonic elements that accommodate with the oppositeness of enclosed and open, built and natural, earth and sky. The tectonic expression and craftsmanship are to take guidance from regional qualities of the site, such as topography, history, and culture to form the specific character of this project and reaffirm the sense of place and community. These principles of critical regionalism, tectonics and craftsmanship, will guide the process of making fragments that would work together to compose a meaningful setting, a place with an established identity and a home to the community. The Dufferin Grove Park already has fragments of its own. They are the outdoor baking oven, the Savannah garden, the narrow trench in the children's sandpit, the memorial garden to Garrison Creek and many more. Both, existing and new fragments can be used as positive elements that make spaces more meaningful, bring associations to familiar environments, invoke memories and help people understand themselves in the context of their surroundings.

Program and Site Context

The existing program within the park with the Rink House was also carefully examined, to understand the needs of the community. After studying the existing program through site visits, consultation with community activist Jutta Mason, and reading about the documented history of the use of the Ice Rink Club House and the park¹⁹, a few key elements of the program layout and relationship were established:

- The existing program would have to expand to include a small performance and gathering space and a lot of additional storage. It would also have to support more visitors and avoid the current conflict with the service area.
- A multipurpose space is required to include a skate changing area, a café, seating area with tables for the elderly, and a nursery area for parents with children. The space should also include a wood-fired oven with warm-up and clothes-drying area.
- The building(s) should have enough flexible space to accommodate the farmer's market in winter.
- A view to the skating rink must be provided from the multipurpose room for parents to keep an eye on the children.
- Service areas with staff personnel should be distributed to have unobstructed views to public areas to keep an eye on the visitors and ensure that the area is safe.
- Outdoor area with tables and outdoor farmer's market has to be provided with a connection to the kitchen.
- A close connection has to be established with the existing outdoor activities: ice-rink/skate-board park, basketball court, food gardens, outdoor baking ovens with cafe tables and the market: by providing seating, overhead shelter, lighting, landscape and circulation.
- Spaces have to be designed for flexible use during different seasons.

Fig.39: Existing Ice Rink Club House Plan.
Scale: 1:250. The plan shows how building use was transformed by the community.

Fig.40: *Dufferin Grove Park Site Context.*

Main Roads
Park Paths

Subway Stop
Bus/Streetcar Stop

Fig.41: Dufferin Grove
Park Site Context
Close-up.

Fig.42: Site Context
Image Documentation
 - Built Structures:

A. Ice Rink House with
 Farmer's Market

B. Ice Rink House Facade
 Facing the Ice Rink

C. Ice Rink House
 - Interior

D. Outdoor Bake Oven
 (one of two)

E. Field House used for
 Theatre Workshop/
 Storage

F. Firewood Storage

G. Catholic School
 bordering the park

H. Residential Homes
 bordering the park

I. Cobb Wall Structure
 at the south-east end of
 the park

J. Apartment Building
 Next to the Park

K. Mall Multilevel
 Parking Across Dufferin
 Street

L. South Entrance to the
 Mall

Fig.43: Site Context
Image Documentation
- Landscape:

A. Community Garden

B. Savannah Garden

C. Ice Rink/
Skateboard Park

D. Wooden picnic tables

E. Fire pit

F. Basketball Court

G. Reflexology Foot Path
Memorial

H. Boulders

I. Garrison Creek
Memorial Garden

J. Building Debris

K. Wooden Steps

L. Wooden Fence

Fig.44: Initial Design
Explorations: Scale
Model. 1:100.

8. Thesis Project Part II - Initial Design Explorations

Introducing Fragments and Architectural Promenade

Fragments of the past

The existing site has a pronounced ravine landscape that gives the park its picturesque and unique quality. For more than a century, water has not run through these lands; only in winter, a section of the park was flooded with water to be used as a skating rink by the kids that would run to the park after school¹. It was decided to preserve a part of the ravine the way it was and introduce water to only a portion of the park to bring fragments of different points in history - when the creek was used by the First Nations and the way the ravine looked when the area around it was becoming more settled as it remains today. Since using the pond itself as a skating rink is not an option due to safety concerns it was decided to bring the pleasure skating area close to the pond in order to imitate this setting. To introduce the water into the park and keep the sloping banks of the landscape, the existing ravine was excavated further and the extra soil was piled up to create a barrier to prevent the water from entering the south portion of the ravine. Several programming layouts were then explored that would work with this modified landscape, keeping in mind also the same relationships that were established in the previous study of the program requirements.

Architectural Promenade

The first consideration was to incorporate the programs into the circulation through the park, so that people who are taking a shortcut through the park are led in

¹ Patterson, Cynthia et al. *Bloor-Dufferin in Pictures*. 23.

to experience the space. A building with a space for a theatre workshop, storage and small performances is imbedded into the landscape near the well-established shortcut path to the mall, which runs on a diagonal to the centre of the park. The rest of the program continues on the other side of the pond, which is connected by the bridge. This part of the layout is kept the same in each of the options because the theatre does require a close relationship to other programs but can take advantage of being part of the walking experience and the secluded location close to the water.

Fig.45: Four Layout Options Exploring Possible Program Layouts. Refer to **Appendix C** for more detailed diagrams.

Fragments of Experience - design exploration through sketching

Working with the concept of fragments, the project considers the experiential quality of the site and takes a more detailed approach. Using sketches as a method of design exploration, separate instances along the path are developed as fragments that add to the overall experience. This approach deals with experiencing architecture through multiple senses and brings meaning and emotion by applying theories of tectonics, craftsmanship and regionalism. In an attempt to establish the human connection with nature, where both structural and symbolic elements are considered, the fragments are interpreted through the detail of the joint and groundwork that serve to express the relationship between earth and sky and the participant. The topography of the site and the materials that hold historical and cultural connection to the region guide the process of creating these fragments that speak of identity and particularity of place.

Fig.46: Sketches Exploring Visual Sequences through Site: The Bridge, Steps to the Pond, The Walkway and The Bake Oven. Refer to **Appendix C** for a more detailed description.

Tectonics - material and structural exploration through models

The model shows the initial tectonic exploration, where the exact footprint, form, and location of the building on the site is not finalized but it incorporates the structural vocabulary that is guided by the regional context and the nature of the program. The walkway with the glass overhang maintains a strong relationship to the outdoor activities, such as the skating area. The elevation on one side of the building assumes the character of flexible space where large multi-panel doors can be placed between the large column spans to create a space that can easily transition to the outdoor environment.

On the opposite side the double rafter serves as the connector between the square timber post and the top chord of the second rafter. This detail reveals the connection and forces transferring between the different members and brings attention to the transition between the roof and the vertical wall.

The standing seam metal roof on one side refers the barn roofs that are common in the Southern Ontario region, while the wall and roof on the other side of the building is covered with wood shingles in accord with the natural landscape of trees next to it. At the same time, the elongated footprint of the building with openings for ventilation and light, as well as the likely possibility of a fireplace and a variety of programs within the flexible space, references the spatial structure of Iroquois Longhouses.

The traditional wood-frame construction method of the region is incorporated into the structural vocabulary. Round logs are used as posts on one side, which support the roof rafter, and work together to resemble a tree-like structure. The rope wrapped around the column refers to the First Nations traditions of using the rope to connect structural elements, but here it takes a more decorative character that through its weathering references the passing of time and use of the building. The nautical rope is also a fragment, that together with the round post, the boardwalk, and the reflecting water pool next to it forms a setting of being on a pier close to water.

Fig.47: Photographs of the Scale Model Exploring the Tectonic Frame and Material.

1. Elevation facing the ice rink
2. Top view
3. Cross-section view
4. Corner view, with shingle roof and wall facing the park.

5. Rafter to rafter connection and rafter to column connection.

6. Looking inside, from below the canopy.

7. Round log post and rafter detail.

8. Canopy support detail, and transition of solid to light and transparent materials.

Working with Site Topography and Sketch Models

This step in the design process combines the ideas from the previous explorations of the site, the programmatic layouts, the sketches of experiences, and the frame model together in a more coherent design that guides towards the final outcome of this thesis project.

The site model is built to include the modified topography and water pond addition as per the decisions made during the earlier study of program layouts. From the study it was also concluded to follow the fourth layout option (ref. to Appendix C), where the majority of the program is aligned to the main ice rink, with one corner of the rink house building facing the pleasure skating area and the pond, while the other looks toward the market with the residential street and vehicle access. On the opposite side of the ice rink, bleachers are provided between the existing basketball court and the space for the Zamboni with the ice rink mechanical/electrical room and some additional storage space. While this schematic layout is very rigid in its floor plan, working with the physical site model allows the design to advance to the next stage, where the site context and its relationship to the programs within begin to contribute to the three-dimensional form of the building, which together with other factors informs its tectonic and material composition.

The floor plan consists of several programmatic components: skate rental, skate change area with lockers, washrooms, common seating area, kitchen and cafe with additional seating space. On one side the programs are aligned to the North-South circulation path alongside the main ice rink as in the schematic layout, but on the other side a more irregular arrangement arises from different factors. At this point the rational order of the street grid is no longer the dominant force, and more complex geometries evolve from the systems of different order, the topography and foliage of the site, climate and orientation to the sun, the established circulation paths as well as patterns of social behavior that were previously observed.

Fig.48: Photographs of the Site Model with the Two Iterations (Top View).

(the existing trees are not shown for clarity but their location was accounted for during the design process.

1. left: first iteration
2. right: second iteration

The first decision was to limit the views towards the heavy vehicle traffic on Dufferin Street with the mall and multilevel parking on its other side while providing a clear visual connection to the skating area. To achieve this, massive load bearing walls were placed on the western facade that would also protect from the prevailing western winds of the region. The walls move in and out, following the contours of the site and location of the existing trees. As the walls move out, unobstructed views are established through the glazed facade towards the south where the pleasure skating area is located and the warming rays of the sun can be taken advantage of. The heaviness of the wall is further counteracted by the clerestories above, pointing to the lightness of the roof supported by the wooden frame. Tiny window openings reminiscent of those in Le Corbusier's Notre-Dame-du-Haut at Ronchamp are also embedded into the heavy wall for the same effect - to make the wall less imposing to pedestrians on the other side, but also to allow additional light in and with the glow of the setting sun remind the visitors of their surroundings and locate them in the world acknowledging the time and place of their existence.

On the east side, along the straight walkway next to the ice rink, the roof rests on a large continuous beam. The beam acts as a hinge that joins the irregularity of the natural landscape with the rational order of the grid and thus articulates through a tectonic expression the circulation spine of the building. The height of the spaces is also dependent on the programs within, and so their function is reflected in the roofscape of the fragmented building. The variety in heights is not so obvious in a model of this scale, but this concept will further be explored in a later stage of the design. In this scheme, the beam is supported by columns that are in some cases placed at angles to allow larger spans and more flexibility between the indoor and outdoor spaces.

Fig.49: Photographs of the First Iteration.
Left to Right, Top to Bottom:

1. north east corner,
2. west elevation facing Dufferin street.
3. south-west corner.
4. south-east corner.

The second iteration of the sketch model is similar to the first one, but it incorporates more angles into the floor plan in an attempt to blend in more with the surrounding landscape. Another difference is the fireplace with the large chimney - visible from the outside at various view points it serves as the central component to the common area space and becomes an integral part of the building. The large continuous beam is still present in this design, but an alternative support structure for the beam is explored. The beam also takes upon itself the additional function of carrying a gutter that collects water from the roof and drains it into the landscaped area in the centre of the pleasure skating rink, which in summer turns into a reflecting pool. On the north side the beam also continues past the interior boundaries of the building and serves to partially support the roof shelter of the outdoor farmer's market.

The small performance space across the pond requires a return to this approach of working with the site topography and exploring different ideas through physical models. The theatre stage is sheltered in the slope that is located close to the path branching off from the sidewalk. Some informal seating is dispersed on the hill surrounding the stage on the other side that acts as a small amphitheatre. The roof of the stage and the stage itself, while aligning with the bridge on one side, opens up towards the south east on the other to expand its reach to the audience. As a result the sloping structure of the stage roof becomes more complex and recalls the roofscape of the main rink house on the other side of the pond. The roof then also acts as a landscape feature jutting out from the top of the hill near the walkway.

This approach of working with the physical site model provides a starting point for developing some of the key ideas for this thesis project. From this stage the design is further developed through computer modelling, where the building is worked out in plan and section at a larger scale. Later, some key details are put together to develop a vocabulary that can be used in designing the other components on the site where the concept of fragments is further explored through the use of tectonics and craftsmanship.

Fig.50: Photographs of the Second Iteration.

1. east elevation
2. north-east corner - market
3. west elevation facing Dufferin street
4. south-west corner

Fig.51: Photographs of the Theatre Stage Models.

Left:

1. South-west corner -
bird's eye view from Dufferin
Street.

2. South-east corner - view from
the park.

3. Larger scale model, exploring
the roof composition of the
stage.

Fig.53: Close-up of
the Pleasure Skating
Ice Rink Water
Feature.

Fig.52: South-West
Corner: View from
Pleasure Skating Ice
Rink.

9. Thesis Project Part III - Final Design

Making Fragments

Some key design elements established during the schematic explorations are worked out at a more comprehensive level at this stage. Once certain tectonic elements of the main building are resolved in a greater detail, they are reapplied to other programmatic components on the site. A vocabulary of details and materials is established that guides the tectonic expression of the overall project starting with the rink house and moving on to the outdoor components: the farmer's market, the bleachers and the outdoor performance space with the bridge. Fragments of one component reappear in the other as the same details are applied and adapted to fit a different context. Symbolic fragments of familiar settings are also brought in through the use of material and detail. Using fragments as a design approach consists not only of working out the details and applying certain materials, but also treating each program element as a fragment that expresses its own character yet at the same time can be read as a part of the whole.

The Rink House

The main Rink House encloses within it a variety of programs that can be thought of as fragments attached to one main circulation route along the hockey rink. This arrangement, established during the schematic stage, continues to develop in the more finalized design. The atmosphere of these programs is controlled with the material palette, spatial layout and roof shape and height, resulting in a composition where the building contains multiple entrances that can be approached from different directions, such that its formal expression changes depending on the viewpoint of the observer, alluding to the concept of the picturesque through its irregular, asymmetric and unpredictable form guided by the program and the surrounding landscape.

Fig.54: Site-Plan.**Fig.55:** Site-Plan
Close-up.
(Next Page)

1. Ice Rink House

A. Skate-Rental

B. Skate Change with lockers

C. Washrooms

D. Office

E. Fireplace Lounge

F. Kitchen & Cafe

G Storage

2. Outdoor Market

3. Outdoor Bake Oven

4. Zamboni Garage

5. Compressor Room

6. Ice Rink Electrical Room

7. Storage

8. Outdoor Stage

9. Existing Basketball Court

10. Main Ice Rink

11. Pleasure Skating/
Reflecting Pond

12. Community Gardens

DUFFERIN PARK AVE

3.

2.

12.

7.

7.

6.

4.

5.

10.

E.

1.

D.

C.

B.

A.

9.

11.

12.

Skate Change and Rental

The south end of the rink house is dedicated to the skate change area to allow easy access to the two skating rinks. Skate rental and sharpening space is provided with a service window facing towards the pleasure skating area to the south. The service personnel have an open view towards the change area to keep an eye on the crowd. The roof lowers as it reaches the skate rental area, but opens up in the skate change locker space, culminating at the lounge near the small fireplace. The interior program is also reflected through the application of materials. To protect the skates, the floor surface transitions from polished concrete to cork tiles, and as it reaches the small lounge near the fireplace, to hardwood. The load bearing brick, which supports the majority of the building on the west side, is interrupted by a rammed-earth wall, again to reflect the different use of space. This transition to the rammed-earth wall is repeated in the main part of the building by the larger lounge space next to the main fireplace.

Central Fireplace Lounge and Circulation

To the north of the skate-change area, are the washrooms with drinking fountains, and here the roof slopes down once again to respond to the nature of the program. Next to the washrooms on the north side, is a small office space for administrative staff. While enclosed by the same roof as the washrooms, the office has a view towards the large open space with the double-sided fireplace, the main entrance from the hockey rink, and the kitchen beyond. With the fireplace aligned to the centerline of the ice rink, this space assumes the role of the central area of the

Fig.56: Interior: Skate Change and Rental Area.

Fig.57: Outside the Rental Service Window, Dufferin Street Beyond.

Fig.58: Interior: Fireplace to the Left and Vestibule Serving the Ice Rink on the Right, Kitchen Beyond. (Looking north, from the walkway next to the office).

1. Gutter Detail

3. Canopy Support

5. Rafter Connection

2. Roof assembly

4. Lamp Post Base

6. Column Base Bench

Fig.59: Detail 1.

This detail describes the connection of the main roof to the large Glulam beam that carries the gutter. This assembly keeps the roof edge level, while the beam is sloped at 1% to facilitate the drainage of water. The beam is supported by Glulam columns that are spread out depending on the load from the roof. The base of the column acts as a bench in the skate change area and along the hallway. The canopy is attached to the other side of the beam, and is supported by the lamp posts lining the exterior walkway.

building. The fireplace is embedded in the large load bearing brick wall which juts out of the roof and supports the rafters on each side. The wall splits the large space into two functions; one side relates to leisure and family space, while the other faces the north-south circulation route and entrance towards the ice rink. While the wall acts as a barrier to give a sense of seclusion, the two large openings on either side of the fireplace, maintain the visual and physical connection between the two spaces. This area of the building is also similar to an intersection of two main streets where the circulation flow comes from four directions. There are two main entrances located across from each other: one brings people from the nearby bus-stop or parking spaces near the north-west street corner, while the other serves the visitors coming from the residential area, the main ice rink and the sheltered walkway along the building. Perpendicular to this axis is the main circulation flow that directs people in from the skate change and washroom area to the south and the cafe and market area to the north. The fireplace, which is located in the middle of this intersection, becomes a place for people to meet and interact. The area to the west side of the fireplace has a clear glazed wall to receive sunlight from the south and establish views towards the pleasure skating area and the rest of the park. Next to the rammed-earth wall is the children's nursery area with some reading spaces provided in the nooks with book-cases. Following the ideas from the schematic stage, deep-set windows with tapered openings, similar to those in Le Corbusier's chapel at Ronchamp are placed within the rammed-earth wall. A display case is positioned next to the vestibule by the reading nooks to showcase a map-model of Toronto's lost rivers and ravines as a reference to the map drawn on the wall of the current rink house.

Fig.60: Interior: The West Side of the Fireplace.

(Looking North towards the second entrance vestibule).

Fig.61: Detail 2.

Inset windows and rafter to rammed-earth wall connection.

The windows are distributed between the grid created by the vertical load lines from the rafters carrying the roof above and are arranged to work with the seating and the book shelves. While the horizontal windows serve the people sitting next to the wall, the vertically oriented windows provide views to accommodate different eye-level heights for people standing next to it. On the interior side the wooden sill is attached to wood blocking in a way to create a reveal between the wall and the sill.

The rafters above are set into the metal plates that are embedded into the rammed earth wall. At the top, two metal pins are put through the metal plate and rafter to secure it place.

1. Window Interior Sill

3. Clerestory detail

2. Window Exterior Sill

4. Rafter to wall connection

Fig.62: Lounge Seating on the West Side of the Fireplace.
A Small library and nursery area next to the rammed earth wall.

Fig.63: Cross Section Through the Fireplace, Looking South.

Fig.64: Close-up of the Walkway with Canopy.

Fig.65: Close-up of the
Fireplace Lounge.

Kitchen with Café and Dining Space

To the north of the main fireplace is the last fragment of the rink house, accommodating a kitchen with storage, service counter and seating space with tables. The mezzanine above houses a mechanical room and overflow-space for larger events or additional activities. The structural walls (including the exterior) of the mechanical room and kitchen storage are composed of board-formed concrete to differentiate this functional use from the rest of the building. Since the mezzanine space is not anticipated to be heavily used, access is provided via a stair sheltered under a canopy and behind a screen on the exterior of the building. The kitchen is another important component for this site that will replace the two kitchens that have been added to the existing building and are used extensively by the community to service the visitors, prepare community dinners, make dough for the bread ovens and cook other meals sold at the farmer's market. Instead of having two separate kitchens for the café and the market, this kitchen is located in such a way as to function efficiently for both purposes. North and east walls of this portion of the building contain folding glass wall systems to create a flexible environment that can easily transition to the outdoor activities. Patio furniture can be moved outside on the paved surface and food can be carried in and out effortlessly between the indoor and outdoor spaces. This idea comes from the current use of the Zamboni garage for this purpose, where the convenience of the automatic garage door creates a transitional space between the kitchen inside the garage and the market on the outside.

In this portion of the building the roof steps up once more where it connects to the section of the beam where it reaches the highest point of its slope. The top ridge of the roof is also raised slightly to provide enough headroom for the mezzanine. The main west side entrance is located here, at the tallest section of the entire rink-house. Borrowing tectonic motifs from the market structure, a canopy is placed on the exterior to provide shelter at the entrance.

Fig.66: Interior:
Kitchen with Service
Counter and Cafeteria
Space, Outdoor
Market Beyond.
(Looking North).

Fig.67: North
Entrance to the
Kitchen and Dining
Space. Looking South.

Fig.68: West Entrance
with Canopy.

Outdoor Structures

Farmer's Market

At the north end of the park, a pedestrian path connects the residential neighbourhood to Dufferin Park Ave leading to the busy Dufferin Street corner across from the mall. The outdoor market structure occupies the space between the path and the ice rink with the roof extending over the large Glulam beam to provide some shelter by the outdoor baking oven on the other side of the boarded walkway. The market structure follows the ideas from the previous schematic explorations and brings in fragments of the canopy and lamp post detail that was established for the main building. The structural detail of the market roof deck also takes inspiration from the structure designed for the small bridge over the water (ref. to the following pages). The canopy of the market is supported by steel angles formed into cruciform columns that carry the steel girders above. Running perpendicular, Glulam beams are connected to the girders with cable cross-bracing to stiffen the roof deck structure. This market structure is merged with the canopy and lamp-post detail, which provides lighting for the pedestrian path on the north side. The layout of the market invites people in from different circulation paths and allows the market to continue into the park if more space is required. The market tables also work with the steel support structure for the roof. Smaller steel angles are used to create the frame that attaches to the cruciform steel posts. A wooden surface attached to the top of the frame serves as a counter while mesh screens are put on the sides to create dividers. The tables can be disassembled and stored for winter or re-arranged to make more space if required.

Fig.69: North-West Corner, View from the North Bus Stop at Dufferin Street, (close-up).

Fig.70: North-West Corner, View from the North Bus Stop at Dufferin Street.

1. roof edge and gutter

2. Lamp post with canopy

3. roof support structure

4. market tables

5. Roof panels connection

6. Column Base

Fig.71: Detail 3.

The Market is a combination of steel and laminated timber structure that intersects with the large Glulam beam supporting the ice rink building.

The tables are arranged in a two-by-two meter grid with a four meter span between the major steel I-beam girders supported by the cruciform columns. The two meter overhang on the south side is supported by half of the column and the C-channel beam above. Wood boards are attached to provide shading and polycarbonate roof panels are clipped to the steel structure to protect from rain.

Zamboni Garage and Bleachers

The building on the east side of the rink and north of the existing basketball court contains outdoor storage and a Zamboni garage with mechanical and electrical rooms for the ice rink. The Glulam structural frame is expressed on the exterior with wood siding used for the in-fill walls. The frame supports the sloping roof which overhangs on the east side to provide shelter by the entrances and merges into the canopy held by the lamp posts on its west side above the bleachers.

The same materials are used for the bleachers as for the market. Steel angles make up the structural support, and metal mesh is used as a walking surface for the space between the seats and the stair. The seats themselves are finished with the wooden boards.

Another set of bleachers is provided to the south between the basketball court and the ice rink. These bleachers are shared between the two activities with one half facing the basketball court and the other the ice-rink.. The canopy above the bleachers is practically identical to the one used for the market, except that the structural support on the other side extends all the way to the ground instead of resting on the beam.

Fig.72: North East Corner. Market on the Left and Bleachers Beyond. Looking South.

1. Roof to canopy transition

3. Roof overhang support

5. Stair and bleachers

2. Basketball canopy top view

4. Lamp post base

6. Basketball canopy support at the base

Fig.73: Detail 4.
Bleachers

The detail shows the two different sets of bleachers sheltered by canopies that incorporate the lamp post detail into their support; similar to the market and the walkway canopy on the opposite side of the ice rink, but adjusted to fit the different contexts.

The bleachers are made up of modular components - two steps with seating to the side - that can be stacked to form larger sets. As shown here, the two different configurations are made up of the same modular components.

Outdoor Performance Space and the Bridge

The landscape of the park is slightly modified to accommodate the water pond. A slope is built up by the south bank of the pond near the road where a small stage with terraced seating is embedded as part of the earthwork. A bridge is placed to connect the theatre to the other side and introduce scenic views into the park. The stage accommodates small theatre and music performances. For the audience, amphitheatre type seating is created by terracing the grass and bracing it with Corten steel edge. Access to the pond is provided from the walkway between the stage and the seating (refer to Fig. 74). From there, the boardwalk along the water bank leads to the sidewalk at Dufferin Street. Following this path, one becomes submerged into a setting typical of Toronto's many ravines with bridges running overhead across the waterways. In winter, a glimpse of the mall is noticeable from between the tree branches as a reference to the partial view of the city when looking from the depth of Toronto's ravines (refer to Fig. 76).

The bridge structure connects to the theatre wall where the bridge transitions into the landscaped path on top of the slope. When crossing over the bridge, the undulating roof of the stage is seen emerging from the grassy hill. The roof steps as a symbolic reference to typical theatre arrangements with a stepping auditorium floor. A gutter, similar to the one at the rink house, is placed to collect the rainwater that is led down the slope of the roof. The roof also acts as a landscape feature where a ledge is provided for people to sit and relax near the bridge and have a close view of the roof detail. From here one can go down the concrete steps towards the stage with outdoor auditorium space or walk down the small hill to the other side.

Fig.74: Theatre Stage and Seating for the Audience.

Steps to the bridge on the side of the stage.

Fig.75: Outdoor
Theatre Stage. View
Towards the Stage
from the Boardwalk.

Fig.76: Theatre
Seating for the
Audience and Bridge
Beyond, (Close-up).

1. Posts holding the roof beam 3. Bridge structure from below 5. Guard rail connection
 2. Metal Roof Panels 4. Gutter overhang 6. Auditorium seating

Fig.77: Detail 5.
 Outdoor Stage and Bridge

The roof construction of the stage is comprised of rafters that step up by regular angle increments. Roof decking is attached between the rafters in separate segments, where identical metal panels with standing seams are put on top and locked in place to drain the water towards the gutter. Other transitions between materials are lined with metal flashing.

The bridge structure is made up of two steel I-beams connected perpendicularly by Glulam beams and made rigid with cross-bacing.

The Park's Edge

Defining the park's edge condition is crucial to establishing a dialogue between the park, its visitors and the concrete landscape that lies outside of it. Designing the edge of the park where it meets the busy street helps bring the park's identity into the urban realm and humanize the pedestrian environment intimidated by the heavy traffic and multilevel parking across the street. Several changes were made to accomplish this.

The walkways at the north and south corner of the park are widened to accommodate the pedestrians cutting through and to provide more space around the two bus stops. The two corners are defined with stone pavers and the bus shelters are redesigned to reflect the tectonic of the market and other structures on the site. The shelters also introduce more seating space for the large crowds that frequently collect there during rush hour. The sidewalk is widened and moved farther into the park behind the cedar trees that are planted in place of the existing sidewalk to block the traffic noise and the view of the alienating wall of the mall and parking all year round. The sidewalk transitions from hard concrete surface to boardwalk as it moves farther into the park, where openings are provided for the existing trees lining the park's edge. The boardwalk extends into the park in two areas. By the pond it runs parallel to the bridge and acts as a lookout point which also connects to the other paths in the park. The existing bike rental station is also located at this point. The wood deck then widens again to the south near the theatre entrance to lead the public from the busy intersection by the mall into the park towards the theatre with the bridge. Across from the main mall entrance, steps and ramp are provided to enter the park near the pedestrian crossing.

Fig.78: *The Bridge,
Looking West
Towards Dufferin
Street.*

*Standing on the path
along the water bank
with theatre stage to
the left.*

Fig.79: North Bus Stop, Looking East.

Fig.80: Look-out point by the pond, Looking South-East.

Fig.81: South Park Entrance, View from the Park towards the Existing Mall.

*Outdoor stage and
pedestrian bridge
above the pond.*

*Pedestrian Bridge and
pleasure skating area
by the pond.*

*Section through the
skate rental area.*

Fig.82: Longitudinal
Section through the
Ice-Rink house and
the Pond.

Section through the skate-change area with small fireplace beyond.

Section through the fireplace lounge next to the main circulation with the main west entrance beyond.

Section through the market structure with outdoor bake oven beyond.

Materials

“Natural materials – stone, brick and wood – allow the gaze to penetrate their surfaces and they enable us to become convinced of the veracity of matter. Natural material expresses its age and history as well as the tale of its birth and human use.”

Whether materials are characteristic of a specific region, require a certain level of craftsmanship, add to sensory experience or make a symbolic reference, if their choice is conscious, they can take on the role of fragments that create a specific setting and bring in references to places and experiences. The choice of materials in this project plays the role of fragments that work as a collage to create a certain atmosphere relating to the regional qualities of the site and responding to the cultural and social aspects of the program. As with Le Corbusier’s *objets à réaction poétique*, the materials for this project were chosen not simply for their physical qualities but for the poetic potential contained within.

Wood: Glue Laminated Timber, Wood Siding and Decking

With the exception of the load bearing walls, the structure of the rink house is predominantly made up of glue laminated timber. Most of the outdoor components also incorporate Glulam framing into their structure in combination with other structural materials. Additionally wood siding and decking is used as a finish material on both exterior and interior surfaces of the rink house and other structures on the site. The extensive use of wood in this project is explained by the strong ties Canadians hold to wood culture, which dates back to the history of Indigenous traditions as well as the first European settlers that brought a wide range of knowledge in wood construction from different regions. Until the turn of the 20th century, the architectural character of North America was mainly associated with wood construction. Supplied by the vast forests in the area, small cottages, barns, and boat sheds, and later, factories, warehouses and mills were proliferating amidst the far-reaching Canadian landscape. Though now becoming more rare, some of the historic wood structures such as log cabins, grain elevators, and covered bridges remain deeply embedded within the Canadian psyche.² Bringing wood into this project responds to the attachment that Canadians and many other cultures experience towards wood structures evoking nostalgic memories associated with such places and situations.

¹ Pallasmaa, “An Architecture of the Seven Senses”, 29.

² Taggart, Jim. *Toward a Culture of Wood Architecture*, 24.

Brick

In addition to the two fireplaces and the bake oven, brick is used for the construction of the majority of load bearing walls in the ice rink building. Just like wood, but on an even more local level, brick plays an important role in formulating the regional identity of the site. Much of historic Toronto was constructed of brick as this was a readily available raw material quarried right in the city. Don Valley Brickworks was well known throughout and outside the country for the high quality and the variety of shades of red and yellow brick it could produce. Yellow brick is also specific to this city as it is made from the 'blue clay' deposits abundant in lime that are found over most of southwestern Ontario. For this reason, polychromatic brick with predominantly yellow shades was used for this project as a way to reinforce the sense of Toronto's history and its distinct character.

Rammed Earth

Rammed earth is used to construct the two exterior load bearing walls on the west side of the building, located next to the seating areas by the two fireplaces. Although building with earth is not a local skill, it requires a readily available material that has been used since the beginning of human habitation and is becoming more popular today in addressing current sustainability concerns. Earth is more than just a building material; a strong relationship between human beings and earth was forming since the beginning of civilization. The existing cob structure built by the local community (located in the south-east corner of the park) demonstrates the value of this relationship that was recognized by the people participating in its construction and continues to be valued by the neighbourhood today. The existing cob structure is one of the reasons that led to the use of earth as a building material in this project. Rammed earth has been recently reintroduced into contemporary practice as a sustainable material that can reach high structural integrity, be durable and well insulated if required. Many regions across Canada, including Southern Ontario, now have skilled workers specialized in building with rammed earth. The relevance of rammed earth as a building material for this project is also found in its symbolic potential, where layers of compounded earth refer to the ravines eroded by the melting ice water, revealing thousands of years of history and life embedded within the layers of sedimentary deposits. Displaying a high level of craftsmanship and artistry from the workers, the sensory qualities of colour, texture, heaviness and the ability to retain warmth have also contributed to making this decision.

Zinc Metal Roof panels

Metal roofing has been in use for centuries and can be found in many historic buildings in Canada from churches to the now almost extinct wood barns. Since copper is mostly used for buildings of public significance, such as churches and government facilities, zinc was considered as a more appropriate choice for this modest program. It was also chosen for its sensory qualities - the warm grey surface that gently diffuses the light from the sky and blends into the atmosphere and the material's ability to amplify the soothing sound of rain. The 'white-noise' that masks the sudden loud sounds of the city immerses the visitor into a rural landscape setting and reinforces a sense of connection with nature. There are multiple sheltered locations on the exterior of the building where the sound of rain hitting the metal roof can be experienced. The sound of rain can also be heard inside the building when the large folding doors located next to the walkway under the canopy are put in the open position to make the building semi-enclosed.

Weathering Steel

Used mostly for gutter details and some of the bridge structure, weathering steel was mostly incorporated to recall some of the ravine setting, where human interventions into the wild sometimes comes in the form of pedestrian bridges that use weathering steel for their structure. Weathering steel also has poetic qualities as a material that clearly reflects the wear of time and weather, which is especially evident in objects dealing with water, such as the gutter details and the bridge.

Galvanized Steel (Painted)

Galvanized steel is used for the metal connection between Glulam members and some of the outdoor components that require a more slender structure. The steel used in the market area attempts to translate some of the qualities of Japanese architecture by using a slender frame and screen-like infill materials within a strict orthogonal grid. Painted steel makes the material feel more warm and inviting to touch, as well as complementary to the wood that is also incorporated as structural and finish material.

Concrete

In addition to the polished concrete floor inside the rink house building, concrete is also used for some structural support. Board-formed concrete is used for the loadbearing wall of the washrooms and kitchen inside the rink house, the exterior walls of the rink house that enclose the mechanical room with kitchen storage below, the walls of the theatre, the concrete structure supporting the steel deck of the bridge and the ledge of the planters lining the sidewalk. Those are places that require a load

bearing capacity but ask for a more modest expression than rammed earth or brick which would be too visually distracting and unnecessary for the nature of the program in those specific locations.

Glass and Polycarbonate Panel

Glass is used in the window wall along the east side and some views towards south, as well as the small windows in the rammed earth wall facing west. Polycarbonate panels are used for all the canopies and the market structure. The materials were chosen for their ability to protect from the outside elements without blocking the view or natural light. For this reason the placement of glass was strategic and responsive to the context of the site and program. Polycarbonate panels were used for the horizontal exterior surface for their diffusing quality and protection from harsh direct sunlight.

Cork Board

Cork Board floor tiles provide a finish surface in the skate change area that can be walked on in skates without damaging the blades. Its warmth and natural appeal was chosen over the typical industrial rubber surfaces that are commonly used for such purposes.

Fig.83: Photograph of
the Site Model, 1:300.

10. Conclusion

Adhering to Kenneth Frampton's theory of Critical Regionalism the project resists both, the populist artificial scenography of Postmodernism and the functional machine aesthetic of Modernism - the movements of the Twentieth century that embody the values of commodification and mass production. Emerging from its particular milieu, informed by the surrounding landscape, climate, orientation to the sun, existing program and social structure, as well as cultural and historical background, the Dufferin Grove Park project is rooted in its place. Bound by its specificity, it belongs solely to this site, yet simultaneously incorporates universal components through references to other architectural works and the use of technological innovations of the current global market. Fragments are applied as a place making strategy that, instead of relying strictly on the visual by means of a formal composition or kitschy facade treatment, encourages movement through space and engages multiple sensory faculties. An understanding of place emerges through a sequence of views, material compositions, tectonic expressions, material textures and sounds, evoking an empathetic experience of the surroundings as opposed to the sense of withdrawal one receives from observing a distant abstraction. Fragments are used as references to either familiar settings or other works of architecture but they also bring something novel and unique that comes from the specific context of the site. The final impression of the place is not fragmentary, however, in that it does not leave a perplexed feeling of disconnectedness. The fragments are tied by common threads - be it materials, formal composition, or construction - that guides the mind to automatically compose and register a holistic understanding of place.

Dufferin Grove Park was chosen as the site for its geological significance and the scenic landscape that is bound by the urban context and in tension with the hegemony of the growing city. In addition, the choice was inspired by the existing program instilled with a strong sense of community but limited in its capacity by inadequate and insufficient infrastructure. The site provided the much needed freedom to experiment in the transition from theoretical framework to the making of tangible ideas that were materialized in the project. Considering that Dufferin Grove is already known as a model city park for its richness in community programs, the ideas that were incorporated, such as the use of details, landscape treatment, and defining of the park's edge condition, can serve to provide a prototypical approach to the planning of numerous similar places in the city.

However, when thinking on a global scale, a critique comes forward that questions our ability to apply the theory in densely populated urban settings, as opposed to exercising architectural freedom in the expanse of pastoral landscapes left untouched amidst the city or on its periphery. Although it is more challenging to work in these conditions, it is possible. While there are more limitations with landscape treatment, a lot of attention can still be paid to thoughtfully designing the pedestrian realm that is closely connected to the natural environment. As indicated by Kenneth Frampton in "Technoscience and Environmental Culture: A Provisional Critique" (2001) landscape interventions (or "evocation of earthwork") are essential to mitigating the existing alienating environments within the urban core:

The alienating "non-place, urban realm" is already a ubiquitous condition covering vast areas of the continent and clearly there is little that can be done to humanize this ruinous situation except possibly the gradual application of fragmentary landscape interventions. This may be the most fundamental reason why landscape design is of greater cultural consequence today than the traditional environmental disciplines of architecture, planning, and urban design.²

Despite the difficulty of the situation, it does not mean there is nothing left for architectural professionals to do in the cities. Incorporating the theory of *Fragments* does not necessarily require a park setting or a large lot; a small site bound by demising walls can still provide numerous opportunities. In general, cities tend to have a rich history and character that can serve as inspiration to making locally relevant architecture. In many cases, such as when working with existing historical buildings, the challenges result in more creative solutions. A lot of freedom is also left to the tectonic expression and details of the interior, as well as the use of

1 Frampton qtd. in Hartoonian, "Critical Regionalism: Whatever Happened to Autonomy".

2 Frampton, "Technoscience and Environmental Culture: A Provisional Critique", 126.

poetic materials on the façade; materials that express the locality of the site through historical connection or by interacting with weather and light. A case in point is presented by the meticulous work of Carlo Scarpa which is set within a sensitive historical context and exhibits a dialogical relationship between old and new with eloquent employment of local crafts and materials, both traditional and modern. Keeping to these established design strategies while maintaining a critical judgement is crucial in not falling into the tendencies of Postmodern contextualism which meaninglessly imitate symbolic features of nearby buildings.

At the same time, this thesis resists the Neo-Avant Gardist tendencies of form-production that is devoid of any particular meaning. In contrast to focusing on the perception of space as a measured experience of an abstract Euclidean geometry the thesis takes a tectonic approach to placemaking that reinterprets space as lived experience. By inscribing architectural fragments into space it attempts to evoke memories and associations that appeal to human consciousness, encouraging people to relate to places and orient themselves in the world. This approach allows us to experience reality as “a highly articulated world in which even the smallest element could send reverberations through the continuum of preexisting references.”³ The theory of Critical Regionalism is applied as a framework that helps reinforce this positive meaning of fragmentation; as one that possesses the potential to create meaningful places. It was this understanding of the fragment, as having “restorative or symbolic meaning”⁴ that has been observed by Dalibor Vesely and that guided the development of this thesis:

*It is not difficult to recognize that fragmentation is one of the main characteristics of our modern predicament. There is a tendency to see fragmentation as a result of isolation and disintegration and thus as potential chaos. Yet we must also account for the fact that in so many areas of culture apparent fragmentation has played the opposite role, contributing to the formation of meaning and a sense of wholeness. We need think only of the works of Synthetic Cubism, Surrealism, and the art of collage or of similar tendencies and achievements in contemporary literature, poetry, music, and to some extent architecture.*⁵

As implied in the previous quote by Kenneth Frampton, current environmental concerns dealing with climate change, waste generation, resource depletion, and air and water pollution are some of the most central issues of today's world condition that are to a large extent the direct results of the nature of our built environment and the lifestyle that is led within it. This makes strategies of Critical

3 Dalibor Vesely, “The Rehabilitation of Fragment”, 323.

4 Ibid., 322..

5 Ibid., 318.

Regionalism even more relevant today, as they consider project location, layout and orientation as design factors that introduce passive design methods to heating, cooling and ventilating and allow to save on energy consumption over long-term use. In addition, the use of locally available materials, traditional construction techniques and local trades helps minimize the environmental impact during the construction process. Such an approach is frequently inspired from the traditions of vernacular architecture which demonstrates optimum solutions of resource efficient construction that were developed over years of direct experience and without reliance on technology for transportation and climate control. In addition to the conventional objective of environmentally conscious design, the approach established in this thesis addresses the cultural dimension of sustainability. Sustainable practices have been known to be largely dependent on technology where the quantitative aspects of energy performance did not translate to the qualitative aspects that are critical to an architectural project. Specifically, the issue of identity and understanding of architecture as a cultural project have been highly compromised. There is a common ground between regionalist and ecological approaches which offers a more critical basis to sustainable design, where social and community sustainability is seen as an imperative factor in reaching a truly sustainable design. Simon Guy and Graham Farmer, among other critics, have made this observation and expanded on what constitutes sustainable design in architecture where local and regional culture is a necessary component.⁶

The two centuries of architectural theory examined in this thesis can hardly be considered irrelevant as they thoroughly describe the historical and philosophical context that led to the Postmodern condition. The theory of Critical Regionalism is being continually revisited today in attempts to address the same issues that were elaborated by Kenneth Frampton and other critics more than three decades ago. In addition, this theory continues to be relevant because it encourages the use of contemporary technologies that reflect the progress of the global. As pointed out by architectural critic Gevork Hartoonian, Kenneth Frampton “wanted to establish a dialogical understanding of architecture in which the tactile and tectonic dimensions of the work ‘exhibit’ the impact of modernization on the culture of building of a given region.”⁷

6 McMinn and Polo, *41° to 66°: Regional Responses to Sustainable Architecture in Canada*, 5.

7 Hartoonian, “Critical Regionalism: Whatever Happened to Autonomy”.

The theories presented here are dependent on variable factors, including time, place, and technological developments; as such they are not prescriptive in nature. Keeping also in mind that there is always a considerable lag between theoretical discourse and application within any field, the ideas presented in this thesis remain pertinent to establishing a critical approach to solving contemporary issues in architecture and leave reasonable flexibility in application throughout the vicissitudes of coming years.

Appendix A

Photographs of Scale Models

Source: Author

*Photograph of the
three scale models
presented for the final
defence..*

*Photograph of the
outdoor theatre
model,
1:100.*

*Photographs of the
outdoor theatre model
at different angles,
1:100.*

*Next page:
Photographs of the
Site Model,
1:300.*

*Photographs of the
Sectional Model
through the main
fireplace, 1:100.*

*North End of the Rink
House next to the
Market.*

*North-West Corner
with the Outdoor
Market.*

*South End of the Rink
House next to the
Pleasure Skating Rink.*

*Site, Looking from
South-West.*

*Photographs of the
Site Model, 1:100.*

*Top:
West Elevation.*

*Bottom:
East Elevation.*

*Basketball Court
with the two ice-rinks
beyond.*

*Site, Looking from
South-East.*

Appendix B

Additional Drawings: Axonometric Views and Elevations

Source: Author

*Axonometric Drawing
of the Site:
North-West Corner.*

*North West Corner and main
entrance with canopy.*

*Basketball court with
bleachers.*

*Outdoor Theatre and
Bridge (west side).*

*Outdoor Theatre and
Bridge (east side).*

*South-East Corner
with pleasure skating
area.*

*Market structure
and ice rink with
mechanical room and
bleachers.*

*Axonometric Drawing
of the Site:
South-East Corner.*

Rink House East Elevation *Rink House South Elevation* *Rink House West Elevation* *Rink House North Elevation*

*Outdoor Theatre
South Elevation*

Appendix C

Preliminary Design Explorations

Source: Author

Proposed
Program and
Relationship
Analysis.

First Attempt

The first design attempt was modest in its program and location, where the new building shifted west onto the sloping ground, closer to the park entrance from the Dufferin Street sidewalk. The initial response was to take advantage of the existing topography and work with the sloping grade. Part of the multi-purpose space would slope up to create auditorium seating to be used for small performances but also to provide more seating with unobstructed views to the skating rink. The main skating rink was to remain at its existing location, while the pleasure skating rink was moved in place of the existing building to establish a visual connection with the new multipurpose space. As the building slopes up, it does so in the opposite direction to the sloping ground and opens up the space below, partially enclosed, the space is used by the kitchen that opens to the outdoor area sheltered by the building's overhang.

Although this approach was attempting to be more considerate of the existing landscape and the program within the park, it failed to translate the ideas of the thesis by limiting the design exploration to the existing program components of the site, logistics of access from the street, and a client with a modest budget. The design approach was changed to better integrate the project with the main concept of restoring the ravine landscape with water in the park. The idea of fragments was used as a design approach to reinterpret the project in the form of an architectural promenade where the focus was brought to the specific experience of the site. The logic of real life limitations was not abandoned completely but was put more to the background, as something that could be worked out in the later stages and that does not have to come in conflict with the design process.

South-West Corner of the proposed Club-House (approaching from Dufferin Street).

*North-West Corner of
the proposed Club-
House (approaching
from Dufferin Street).*

Section (N.T.S.)

Mezzanine Overhang

Ground Floor Plan (N.T.S.)

Program Layout
Option I

DUFFERIN PARK AVE.

DUFFERIN STREET

Program Layout
Option II

Program Layout
Option III

Program Layout
Option IV

The Bridge *Steps to the Pond* *Left:
The Walkway* *Right:
The Outdoor Bake
Oven*

1. The Bridge

Bridges are integral to our understanding of the ravine landscape of Toronto, they are the reminders of the busy life above the depth of the valley or the life below in the small creeks that run through the parks. The bridge here, is a fragment that contributes to the recreation of this ravine setting. The sketches explore the experience of crossing the bridge and looking out into the pond.

2. Steps to the Pond

Bringing a part of the skating area close to the pond recreates the setting of skating in the park the way it was done at Dufferin Grove a long time ago. The steps are leading down to the pond to bring people closer to the water and connect with nature. Across from the pond is the viewing deck that is accessed from the sidewalk. Behind the viewing platform and the sidewalk, trees are planted to include the pedestrians walking along the street into the park and separate them from the road and the mall parking lot on the other side. In summer, the skating rink turns into a reflecting pool and acts as a continuation of the water in the pond, reflecting the trees and the sky above.

3. The Walkway

The walkway connects the different programs dispersed through the site and acts as the boundary for the pleasure skating rink. This sketch shows the view walking along the Café building with the skating area on the right. The roof overhangs to shelter the walkway, where the thin metal rods provide the additional support and act as a spatial separation from the skating area. At the corner of the building a service window is provided from the café for the skaters to get a snack on the go. This view follows the layout of the second and third design options, where the diagonal grid structure merges with the grid parallel to the street, resulting in the partial view unravelling beyond. The kitchen building is visible with an overhead canopy door open to serve the café. When passing the corner, another view of the pond opens up to the left. One may go back to the park, or through the kitchen building where the other door is open to the market with the outdoor seating area and the baking ovens.

4. The Outdoor Bake Oven

"Ovens like ours were used in Portugal, Italy, Poland, Trinidad, Germany, Greece, Spain, Guyana, and rural Canada. Because ovens were so common and so much a centre of communal activity, many people have been told family stories about what was cooked in them, and they recognize the oven as something familiar."¹

This description of Dufferin Grove bake oven closely relates to Gottfried Semper's symbolic meaning of a hearth as the foundation of all social structures. The bake ovens already serve as fragments that contribute to the creation of sense of place and a connection to other cultures. Through this sketch a tectonic relationship emerges that seeks to reinforce this setting. The brick, which is a material characteristic of historic Toronto and still remains prominent in many neighborhoods of the city, is used to provide sturdy ground below the feet. The brick wraps up to form the walls of the bake oven, recalling the technique of Lewerentz and Aalto where the brick continues from the ground up to the wall. The bake oven is incorporated into the surrounding structure, which provides storage for firewood, racking system for bread trays, seating space and a covering overhead with support for lighting. In its composition the structure takes inspiration from Japanese screens, together with the brick it alludes to the settings in F.L. Wright homes which emit a cozy atmosphere of gatherings around a fireplace.

¹ Mason, *Dufferin Grove Park as a Neighbourhood Commons*.

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