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[S.P.A.] Sensory Phenomenological Architecture

By

Lawrence Sheung Chee Ng

A Design Thesis/Project

presented to Ryerson University

in partial fulfillment of the

requirements for the degree

Master of Architecture

Toronto, Ontario, Canada, 2009

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DECLARATION

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ABSTRACT

Can phenomenological architecture be simply described as:

$$\text{Phenomenological Architecture} = \text{Phenomenology} + \text{Architecture}$$

In the simplest terms, phenomenology is the interpretive study of human experiences. Any object, event, situation or experience that a person can see, hear, touch, smell, taste, feel, intuit, know, understand, or live through is a legitimate subject of phenomenological investigation.

Architecture is not only the physical form of the building we inhabit, but a place, memory and time in which we see, hear, touch, smell, taste, feel, intuit, know, understand and live. Therefore, architecture is a natural subject for phenomenological investigation.

As individuals, we immerse ourselves in the spaces we inhabit and form our own individual and unique experiences. By immersing ourselves in the spaces we inhabit, we interact with the form, textures and smells of the building which we are in. Can an inert thing such as a building help support the development of human beings' experiences; therefore help with his or her understanding of the world that they are physically in?

The concept of phenomenological architecture seeks to provide a balanced and holistic physical manifestation of explaining, describing and representing an architectural intention that places emphasis on the human experience. The human experience includes paying particular emphasis on some of the essentials which help develops an experience. Essentials such as bodily senses, memories, materiality and perception are examined. This therefore creates a focus by using architecture as a catalyst in creating human experiences.

In conclusion, phenomenology added with architecture does not fully explain phenomenological architecture, but it is how architecture works and helps encourage phenomena and experiences which creates pheomemological architecture.

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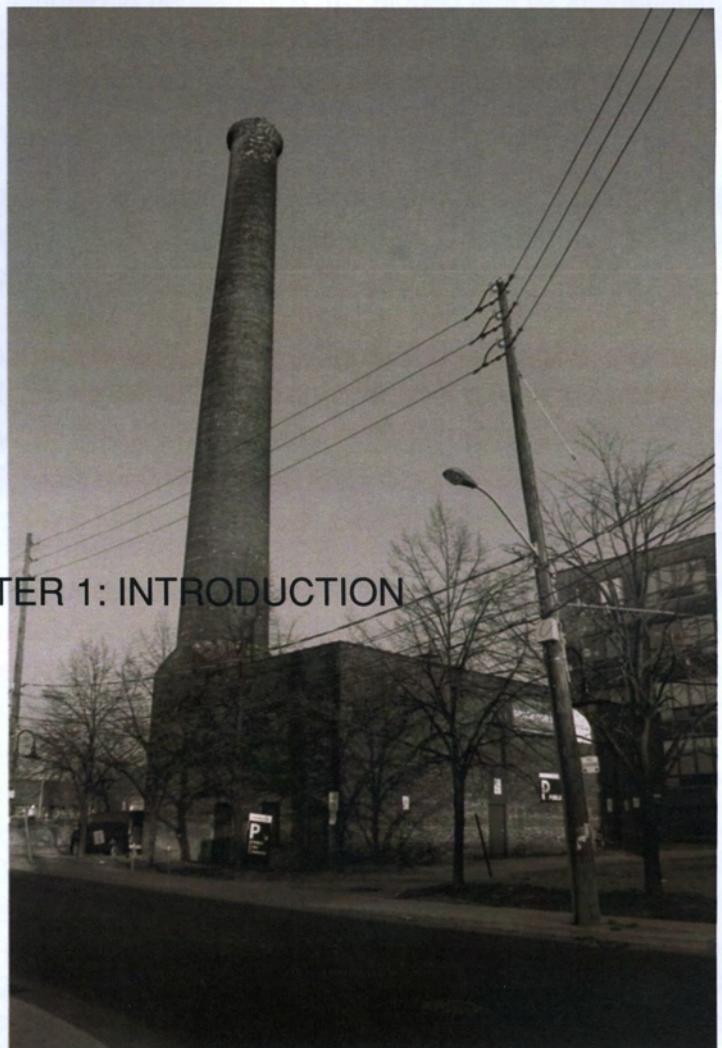
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CHAPTER 1: INTRODUCTION



i: Introduction to Phenomenological Architecture

The goal of architecture is to establish more than just a space which individuals inhabit. Architecture hopes to accomplish a sense of experience for the individuals who inhabit the space of a particular building, of a particular place. In order for it to have a strong sense of experience, design of particular places should consider both the concrete nature as well as the abstract notions of those experiencing the building. It is also the role of architecture to enhance sensory experiences so that people can feel a sense of belonging and integration within a space. Phenomenological architecture should be able to develop a place that can allow for social interaction within and around a given space, hence containing a possibility to house infinite experiences for an individual to discover.

By emphasizing a phenomenological approach to architectural design, a basic framework for which all architectural methodology, practices and teachings can take on a more holistic approach (Norberg-Schulz, 1977). This holistic approach indicates that not only the concrete and geometric aspect of architecture are dealt with, but all aspects within the tangible and the often less emphasized, intangible realm. This framework allows the focus of architectural design to not only work with the concrete nature of the physical world, but also the abstract notions which individuals cannot physically touch and see, but understand and know that is there. If both realms of the concrete and abstract can be balanced, then architecture with a strong experiential component can be achieved.

The interest in developing this approach towards architectural design stems from the 1970's, where the rate of development in the geometric and semantic sections in architecture were much greater than the phenomenological aspects. The discrepancy of development in these sections has led to architecture which is rich in geometry and efficiency - but less developed in supporting the human experiences and how an individual understands his or her world in which they are physically in.

Due to a diminished experiential component, architectural projects today are gradually shifting to more visually focused and ocular biased concepts (Perez-Gomez, Holl & Pallassmaa, 2003). With these ocular biased architectural design projects, clients/consumers are not given a precise expectation of the potential experiences within the design and instead are sold on the idea of *object* architecture. Object architecture is architecture constructed and designed based solely on the physical and concrete notions of architecture residing in the physical world. It does not account for the human phenomena and the experiences which can possibly happen within the physical world.

This has led to the possible lack of feeling and emotion in architectural design today as many are focused on the sense of sight and physical form only. There is also a lack and/or refusal to immerse clients in a manner that fully informs and allows them to experience their potential project as fully as possible. This includes the lack of displaying actual materials and details that would be used within the design itself. It also is when a designer forces the clients to view a building only in one specific way based on the designers understanding of the space and

ignoring the fact that each individual would have their own personal and unique understanding of the space.

By deciphering what aspects are important in creating experiences, one develops an approach to understanding the many different concepts involved in giving architecture the potential for human experience and phenomena to happen.

The three contexts when beginning to decipher and describe experience can be divided in the following categories:

- 1) *Personal Context*, which affects the personal interest, motivations and expectations of an individual;
- 2) *Social Context*, which affects the decision one must make to be alone or in a group and how other individuals can interact and *strongly influence* an individual;
- 3) *Physical Context*, which recognizes the artifacts and objects contained within a volume of a type of material such as air that provides the quality within a volume and hence the *feel* of the volume.

These contexts must be considered when determining the important aspects needed to facilitate the potential for an experience within a concrete nature to occur. One must realize that experiences need to have a mental aspect such as time, memory and personal sense but without a physical or social context to help develop these mental aspects, there is no place where these experiences can form.

Architecture today does not place emphasis on the flexibility of human experiences. Instead it has placed it on a completely rigid, tangible and object nature. One cannot however neglect the realization that humans do live in a physical world. For example, Norberg-Schulz (1977) within his methodology to design did not neglect geometry and semantics, as he developed his design methodology incorporating phenomenology. He instead approached every one of these topics together, with no aspect being more significant than any other. Hence intangible human experiences must be considered when providing the potential for experiences, but not be solely based on it. Therefore, the objective is to provide more emphasis on the essentials of human experiences which are flexible, as opposed to the physical context and form which is rigid.

If phenomenological architecture deals with the idea of providing a volume of air to facilitate the possible variety of experiences in a personal, social and physical context, then it also deals intimately with *the body, the body in space*, and the interactions between the two.

Phenomenological architecture effectively provides the flexibility and potential for human experiences to occur in a specific space. The following commonalities found within the literature review are essentials of the human experience to consider if one were to provide a space with the potential for phenomena and human experiences:

- 1) *Space v. Place*

- 2) *Memory & Time*
- 3) *The Em'bodyed' Experience*
- 4) *Perception Through Movement*
- 5) *Materiality*

Each of these aspects integrate and co-exist with each other to influence and facilitate each individual's infinite number of possible experiences. Each of these essentials of experience must be prevalent within the proposed architectural manifestation to allow it to be regarded as an architectural example which displays a strong potential to have a variety of phenomena and experiences within it.

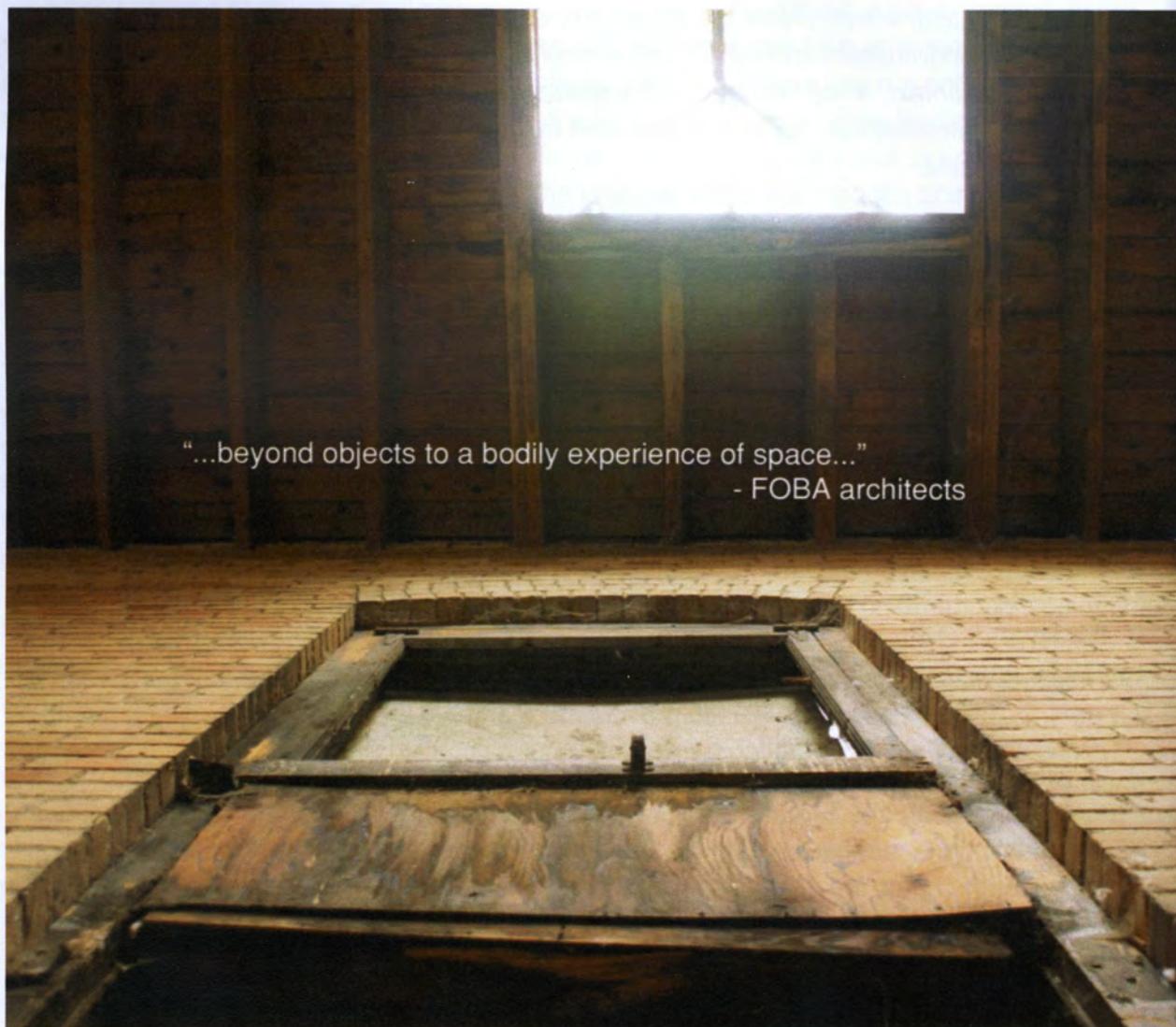
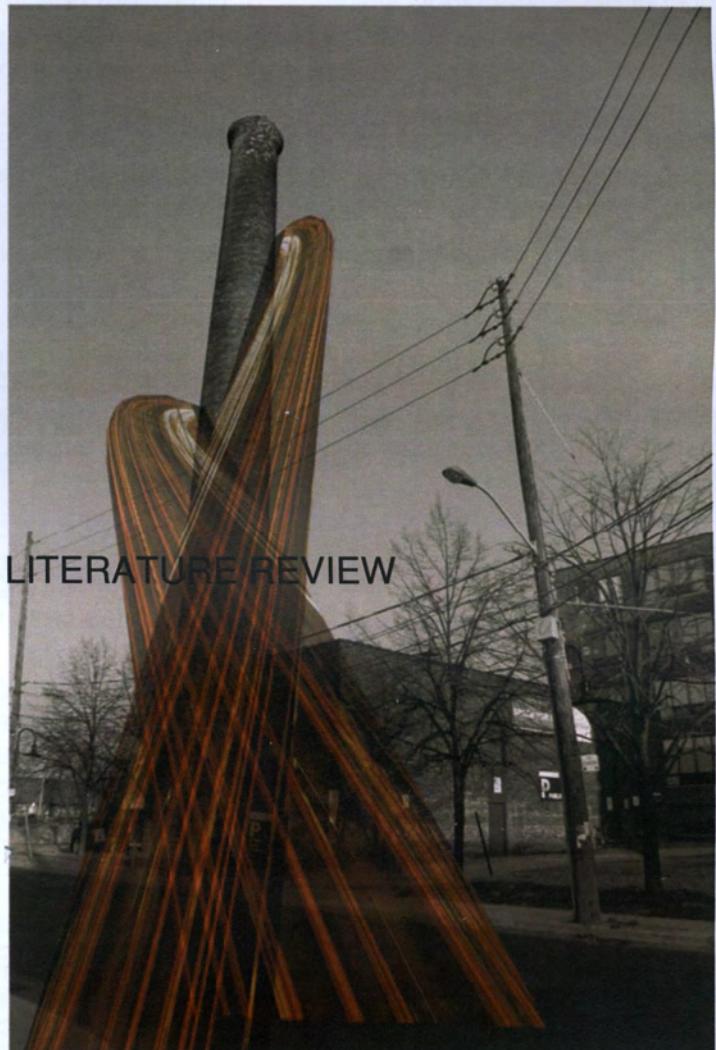


Figure 1.1 Interior of Boiler House with FOBA architects quote

CHAPTER 2: LITERATURE REVIEW



i. Maurice Merleau-Ponty / Edmund Husserl / Martin Heidegger

The Fathers of Phenomenology

Many people consider Edmund Husserl, Martin Heidegger and Maurice Merleau-Ponty the fathers of phenomenology. While Husserl and Heidegger began the discussion on the broad topic of phenomenology, Merleau-Ponty brought new insights towards this topic. Merleau-Ponty did not disregard the teachings of Husserl and Heidegger, he instead learned from them and delved deeper into the details of phenomena and experiences.

Based upon the philosophical interpretation of phenomenology from these scholars, commonalities can be drawn from them to help decipher the developed essentials needed for human experiences. Hence, the objective is to provide a basis for future concepts and ideas of experiential architecture.

Edmund Husserl

Edmund Husserl, defined phenomenology as a new method of inquiry based on the premise that reality consists of objects and events as they are perceived or understood in human consciousness and not anything independent of human consciousness (as cited in Klein and William, 1980).

Husserl stated that "because of its reflective, evidential, and descriptive approach to both encountering and objects as encountered, the beginning of phenomenology is sometimes characterized as *descriptive phenomenology*" (as cited in Klein and William, 1980, p. 10).

This description illustrates that a proper descriptive approach towards encountering any object is important when considering phenomena and experience for an individual who is encountering it. Husserl realized that every object can be described differently depending on how one approaches and encounters a particular object. Depending on how an individual would encounter an object in the physical world, the amount of ways to describe that singular object could be infinite.

Husserl only used this general description to introduce the concept of phenomenology, but he never intended for the description to end at that point. Subsequently philosophers in this field started to focus on particular aspects of phenomenology. These philosophers never lost focus on phenomenology as a whole but hoped to emphasize certain significant points, in particular aspects which guide their specific purpose and objective. An example of that how phenomenological architects attempt to apply a sense of experience within their design projects by creating a focus of translating and integrating the abstract notions of phenomenology to the concrete nature of architecture.

With all aspects of phenomenology incorporated together, the field would form a trunk and tree branch theory with each branch pertaining to different aspects of phenomena, and these branches are:

- 1) Subsection 1 *Realistic phenomenology*; This section focused on the topic of the universal essence of various sorts of matter and tried to deal with the question of what something really is within the physical world (Julian, 2009).
- 2) Subsection 2 *Constitutive phenomenology*; This section focused on suspending the status of conscious life. By putting a restriction on not allowing notions of what an object *should be*, than the object can be focused on what it is towards a particular individual, hence what 'it really is' for someone based on the specific time and memory for that individual (Julian, 2009).
- 3) Subsection 3 *Existential phenomenology*; This section is based on topics such as actions and conflicts. Hence this section focused on behaviors of individuals and the actions and reactions of individuals themselves. The section is more scientific than the others and deals closely with the human body (Julian, 2009).
- 4) Subsection 4 *Hermeneutical phenomenology*; This is the section that focused on the concepts that human existence and experiences are interpretative. Therefore, realizing that each individual's perception is unique and solely within that particular individual alone (Julian, 2009).

These branches together help define commonalities and components of the larger scope of phenomenology. Each type of phenomenology would not be more significant than the other, but each subsection would work and integrate together, hence providing a deeper understanding than the general description that Husserl gave to begin this discussion on phenomenology.

Phenomenology in architecture developed as an alternative to other dominant architectural movements such as Modernism and International Style. These traditional approaches focused on the geometric properties of architecture and lacked the element of phenomena and experience.

Phenomenological architecture encourages designers to not take an approach based on pure geometry, but to also include a consideration all actions performed within a space in order to determine the geometry of the design.

Therefore, instead of describing a space based on its function or physical geometric properties, the details of describing a space based on the actions and the potential behaviors which an individual can possibly experience within that particular place is emphasized.

With the recent development of globalization which lead to various forms of innovation such as the Internet, communication technologies and virtual realities, individuals today can also have experiences and phenomena through these new technologies. This is due to the fact that our individual experiences, as well as the individual's culture and social structure has made these innovations important to life and being today. Therefore, a fifth branch of phenomenology is starting to emerge and like many new developments and exploratory research, questions arises in the form of connections between not only the physical and mental realms now, but also an added connection to the virtual realm.



Figure 2.1 Site landscape artwork and Husserl quote

Important essentials of experience resulting from Husserl

- 1) The project develops a focus not into the entire concept of phenomenology, but to provide the *potential of phenomena and experience* within an architectural design
- 2) The factors of how a human body reacts within a particular space are extremely important within the design development; consequently behavioral-environmental studies were focused upon. This resulted in tests of how the body reacts to objects and how the *human senses* transfers concrete data towards abstract notions.
- 3) Attention was paid towards the *movement* and *perception* of both the perceiver and the one being perceived. By paying attention to movement within a space, actions within a space becomes a crucial part of the design development of a space.

Martin Heidegger

Heidegger was one of Husserl's students and as a student of Husserl, he further developed Husserl's philosophies by focusing on certain aspects of the topic of phenomenology. Heidegger's objective was to answer the question of *Being*. In his book *Being and Time*, Heidegger (1962) argues that to understand Being, one must first understand the human kind of being, *Dasein*, which translates into *being-there*.

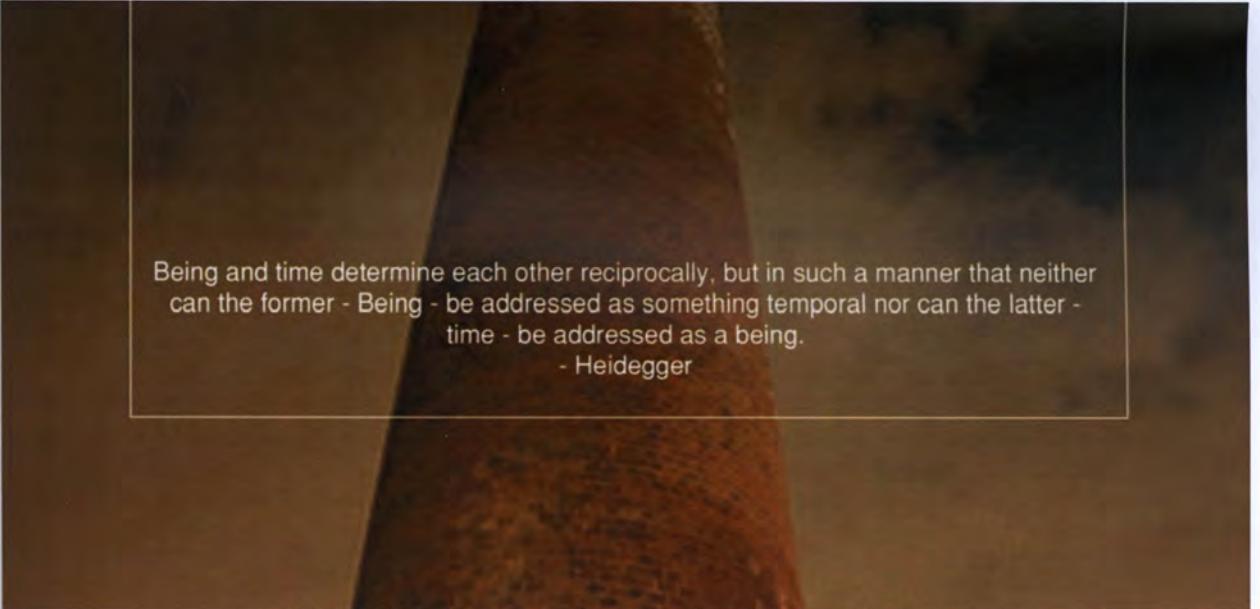
Heidegger (1962) argued that Husserl forgot in his teaching that modern philosophy had become concerned with the *ontic*, which translates into *beings*, and thus covers what makes such an understanding of beings possible. This meant that though Husserl could not bridge the concept of phenomenology into the physical world, Heidegger (1962) began his attempt of connecting the physical and the experiential.

As Heidegger developed his ideas of *being*, he realized that the abstract nature of *being* was not completely right due to the fact that as human beings, we still live in a concrete world and cannot completely neglect that fact. It is suggested that while we as individuals are all unique and therefore cannot have the same experiences, we still interact with each other in a concrete world and therefore are able to project portions of our experiences onto another human being or

object within the same concrete world. By giving these projections off to one another or by receiving them from another we gain understanding of the concrete world we are in.

Heidegger (1962) also starts the phenomenological discussion of some of the topics that are relevant in phenomenological architecture today, such as *memory* and *imagination*. He states that the *truth* is always both concealing and revealing and hence when one interpretation is opened up, other interpretations are necessarily closed off (Heidegger, 1962). In this sense, ontology is always provisional. Later on, Merleau-Ponty built his writings on this notion and referred to it as teachings that were subject-based and individualized.

Heidegger provided many similar aspects of phenomenology to Husserl's teachings such as the concepts involving memory and imagination of an individual and how these memories and experiences can shape an individual's life. What Heidegger did bring into the forefront was the concept that even though phenomena and experiences are in the realm of the abstract, that phenomena and experience cannot exist without a concrete context along with it.



Being and time determine each other reciprocally, but in such a manner that neither can the former - Being - be addressed as something temporal nor can the latter - time - be addressed as a being.
- Heidegger

Figure 2.2 Smokestack photography and Heidegger quote

Important essentials of experience resulting from Heidegger

- 1) Heidegger brought into light the conflict between the abstract notion of *space* and the concrete notion of *place*. The focus of the project was to neglect neither the abstract nor the concrete completely, but rather to design in a methodology where the abstract notions would form the concrete nature of place and vice versa.
- 2) *Time, memory* and *imagination* both hide as well as reveal something about an individual. Therefore, as one encounters a place and engages with the space, the individual projects past experiences of themselves onto the space in which they are trying to get a better understanding of.

Maurice Merleau-Ponty

Merleau-Ponty wrote about phenomenology in regards to the concept of perception and the ideas of subjectivity. Both are extremely relevant to the objectives and goals of achieving architecture with a strong experiential component. Maurice Merleau-Ponty (1995) describes architecture with a strong experiential component even without being consciously aware of it, "[space] is neither an object, nor a unification on the subjects part; it can neither be observed, since it is presupposed in every observation, nor seen to emerge from a continuing operation, since it is of its essence that it be already constituted, for thus it can, by its magic, confer its own spatial particularization upon the landscape without ever appearing itself" (p. 23).

Merleau-Ponty(1995) is describing that architecture is everything *and* nothing at the same time, and that architecture cannot be condensed and conceived from a single-point of view. This brings up the argument that each and every drawing of a plan, elevation or a building section ultimately is subjected to the point of view of that single designer or technologist.

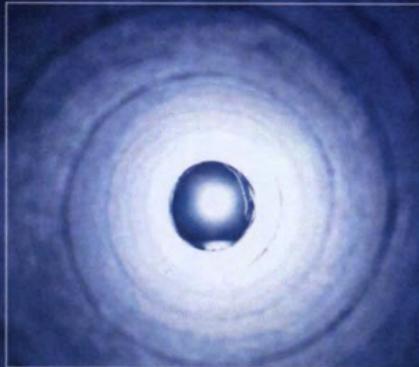
There is also another point of interest which stems from Merleau-Ponty argument between what a space is compared to a place. While a drawing can easily display and represent the *space* and its abstract nature it does not display the concrete nature of *place*.

Architecture therefore has developed a contemporary approach dealing with a physical experience of a building in regards to their sensory properties. Each individual physical perception of the same experience is unique.

From Merleau-Ponty's writings, many academics in the field of architecture have provided their own subjective outlook on his teachings, and applied and interpreted these teachings into various aspects of architecture such as overall design, methodology, detailing and materiality. Some of these interpretations included:

- 1) Julio Bermudez (2009), from the University of Utah, interpreted Merleau-Ponty's phenomenological proposition in the book *In the Flesh*, by applying some of it into his way of teaching at the University of Utah. Bermudez (2007), in his design studio courses proposed that when one designs architecture, one needs to replace the words *subject*, *object* and *aesthetics* with *perceiver*, *perceived*, and *co-operative act of unfolding phenomena* respectively. By doing this, Bermudez taught students an approach to designing by promoting feelings, emotions and experiences.
- 2) Academics such as Parcell (2009), who is an associate professor at Dalhousie University, has tried to eliminate the idea of designing *things* and replacing it with the idea of designing *actions*. In his essay *Architects since Birth*, he describes the idea of dealing with the engagement of space rather than, 1), the principles of form and 2) properties of the building.

In either case, changing the words of *subjects* and *objects* and changing them with descriptions such as the *perceiver* and the *perceived*, the focus of the design turns itself from creating a design based on the nature of objects to how visitors perceive that object.



All consciousness is perceptual...The perceived world is the always presupposed foundation of all rationality, all value and all existence.

- Merleau-Ponty

Figure 2.3 Paper towel roll photography and Merleau-Ponty quote

Important essentials of experience resulting from Merleau-Ponty

- 1) Merleau-Ponty, like Heidegger also brought into light the conflict between the abstract notion of *space* and the concrete notion of *place*. ↗
- 2) With descriptions based upon phenomena and experience rather than function and form, the *program layout* of the architectural manifestation is developed along the lines of the potential phenomena and experience within a place rather than its function. Placing an emphasis on designing a space in regards to its actions and perceptions helps subconsciously promote a design with experiential qualities rather than that of function and form.

ii. Carlo Scarpa / Alvar Aalto / Steven Holl / Peter Zumthor

While the above are examples based in the strictly philosophical realm, there are architects such as Peter Zumthor, Steven Holl, Carlo Scarpa and Alvar Aalto who try to apply the teachings of not only Mearleau-Ponty but also Husserl and Heidegger into their philosophies and methodologies when developing an architectural manifestation of phenomenology in the physical world. Some of these architects focus on creating a process or methodology in approaching design while other focus on how details and materiality can help enhance the potential for specific experiences to occur.

Leaders of Phenomenological Architecture

All architects should already have in mind the goal of providing human experience when they are designing, but few have emphasized and based their design philosophies on the essence of the human experience. Some successful architects who have achieved such a high degree are Carlo Scarpa, Alvar Aalto, Steven Holl and Peter Zumthor.

These successful architects all visually have different architectural styles, but each is still considered a leader of phenomenological architecture. While each approaches phenomenological architecture in different manners, there are still strong characteristics and commonalities each architect has developed to achieve the same objective: the goal of *human experiences*.

Carlo Scarpa



Figure 2.4 A collage of Carlo Scarpa's works displaying materials and details

Carlo Scarpa may not consider himself an architect working phenomenologically, but his philosophy and his particular interest in materials and details make him one.

Scarpa (2007) was considered a master of materials. His view of materials paved a way for the interesting use of materials in phenomenological architecture. He looked outside traditional uses of materials and was interested in the characteristics of materials and hence examined the possibilities and limitations of particular materials (Scarpa, 2007). With the examination of its possibilities and limitations, Scarpa (2007) then tried to find innovative ways to apply them in his designs.

With Scarpa's interest in materiality comes an equally great interest in the art of details. He distorts materials to achieve contradictory characteristics. Scarpa uses small details such as

doorknobs and particular steps to form pieces of a larger image as one *experiences* and goes through his buildings.



Figure 2.5 Detail of joints and drawings of Carlo Scarpa

Scarpa was probably unaware of it, but his design methodology of finding hidden qualities of materials and combining it with architectural thinking was phenomenological.

Important essentials of experience resulting from Scarpa

- 1) Scarpa paid particular emphasis on creating intricate details within his designs.

Alvar Aalto and Steven Holl



Figure 2.6 A collage of Alvar Aalto's works displaying furniture and details

Pallassmaa (2007) summarized Aalto's 1955 lecture in which he insisted the importance of design in regards to the formal expression of our lives. Through his architectural and furniture works, he displays the details of how he handles materials, light and space to achieve this expression within our lives (Pallassmaa, 2007).

While this lecture mainly showcases his architectural works, he also displayed personal paintings and sculptures. Pallassmaa (2007) claims that Aalto's paintings are part of his architectural process and methodology and that many of his sculptures are experiments that form the basis of details and forms in his architectural and furniture designs. Pallassmaa (2007) stated that Aalto's interesting, humanistic and intrinsic approach to design has led to small-scale creations such as patents of laminated bent-plywood furniture.

Alvar Aalto's attention to material and details was always about using them towards becoming an entire experience of the space he is designing for. A particular example was the Viipuri Library. Aalto designed the interior through the display of natural materials, warm colours, and

undulating lines in order to create a warm, welcoming and comfortable experience for visitors in hopes of encouraging them to stay at the library for longer periods of time. Aalto recognizes the fact that these materials play a large part into encouraging visitors to sit longer. Thus Aalto would not use these materials and colours where he wanted to draw visitors away from (Pallassmaa, 2007).

Steven Holl, one of the leading architectural designers today with a phenomenological approach to the design process, is publicly known for creating a watercolor painting every day when he wakes up. In the book *Steven Holl Watercolors*, Holl (2002) frames and displays three hundred and sixty-five personal watercolors that were the basis of many of his architectural designs and competitions. There were a few purposes behind Holl's reasoning: 1) artwork and painting can draw a feeling unlike no other presentation techniques, hence, if a certain mood wanted to be conveyed to clients, certain paintings and artwork can more effectively achieve this and 2) painting techniques can convey aspects such as light, shadow, colours and textures unlike traditional architectural forms of representation.



Figure 2.7 Steven Holl watercolour paintings

Holl (2002) describes his use of sculptural and light qualities in his watercolor paintings as necessary to the success of the painting itself. Due to the fact that light and sculptural characteristics are important to Holl's philosophy of design, he finds correlations between his watercolor paintings and techniques and his architecture.

The result of these watercolour paintings are similar to the drawings and representation of the design itself, but by using watercolour painting techniques, Holl effectively displays characteristics which are otherwise not shown or neglected through traditional representations such as;

- 1) How light would shine on a certain surface of the design. This therefore creates a gradation of colours which the watercolour technique can effectively represent.
- 2) By paying a particular attention to light, light and shadow were then emphasized within the design itself.
- 3) The texture of the watercolour painting paper gave a sense of the textures of the surface of the design. As well, the watercolour techniques done needed the watercolour paper to absorb and dry the watercolour paint. Hence, a particular focus to weathering and time through a design were regarded through the design itself.

In a field with developing technological working methods, Holl's design philosophy highly relies on the artistic and the resolute low-tech process of painting. Through the use of an inspirational and experiential process of painting, Holl was able to successfully translate experiences into his architectural manifestations otherwise not as effectively done through new forms of technology nor traditional forms of architectural representations.

Important essentials of experience resulting from Aalto and Holl

- 1) *Details and Materials* were closely examined to help convey phenomena, experiences and memories within a space. The objective was to examine and explore the design on a small scale. Each of the materials and details chosen within the design was intended to create a small portion of the complete design. When all the materials and details work together within the design, they complete the phenomena and experience for an individual.
- 2) *Traditional techniques of representation were used with unique adjustments* to help emphasize the experiential factor. Adjustments such as using actual material to develop drawings or providing watercolour techniques to convey light and shadow within a design.

Peter Zumthor

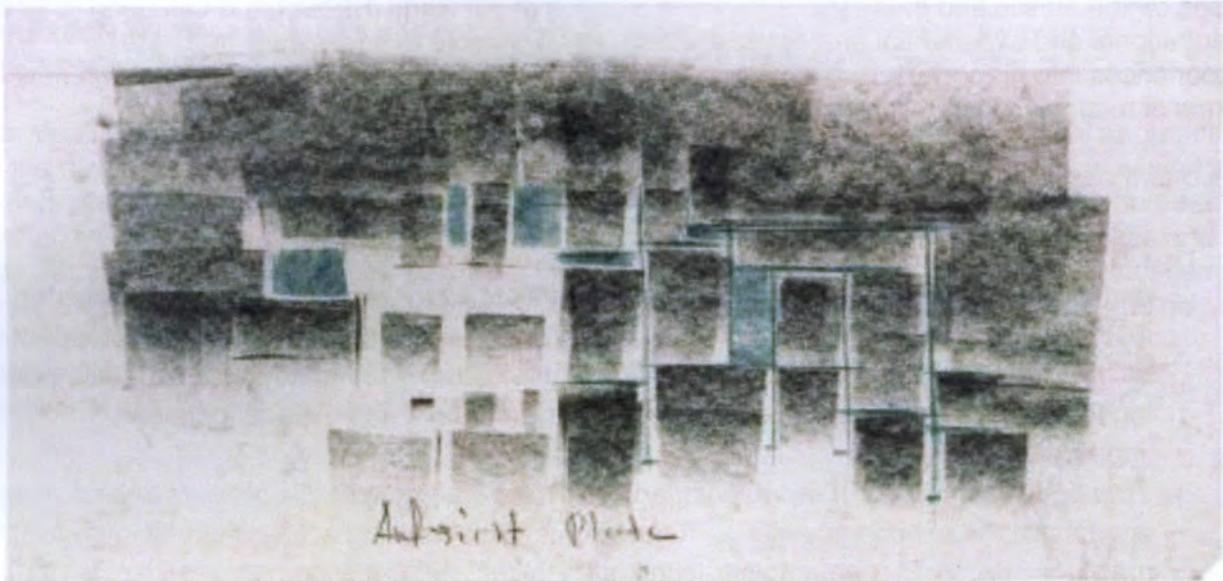


Figure 3.8 Zumthor's charcoal inspiration of Bath in Vals

Before one begins to talk about the Thermal Baths in Vals by Peter Zumthor as an architectural review, a general description of his methodologies and design firm's philosophies are needed. Zumthor's unique methodology when it comes to design assists in the outcome of the design itself. This begins with all design work from Zumthor's studio in Haldenstein, which all start from the premise of the physical, objective, and sensuous qualities of architecture (Zumthor, 2006).

Due to Zumthor's *experience-centric* belief, materials play an extensive role in his studio. Designs must be tangible. It must be *concrete things*, objects or installations. These installations are made of real material such as clay, stone, copper, steel, etc. In Zumthor's studio there are no conventional *models* but instead there are installations (Zumthor, *Thinking Architecture*, 2006). Instead of creating conventional models out of cardboard materials, Zumthor and his studio used the real materials the actual building would have been from.



Figure 2.9-2.11 Zumthor's use of materials for architectural representation



Figure 2.12-2.14 Zumthor's use of materials for architectural representation transferred onto his actual design

"The emphasis of the material world plays a significant role in the quality of human life exactly because human beings are always everywhere immersed in the worlds, which in part is physical. (Seamon and Mugerauer, 2007,1)."

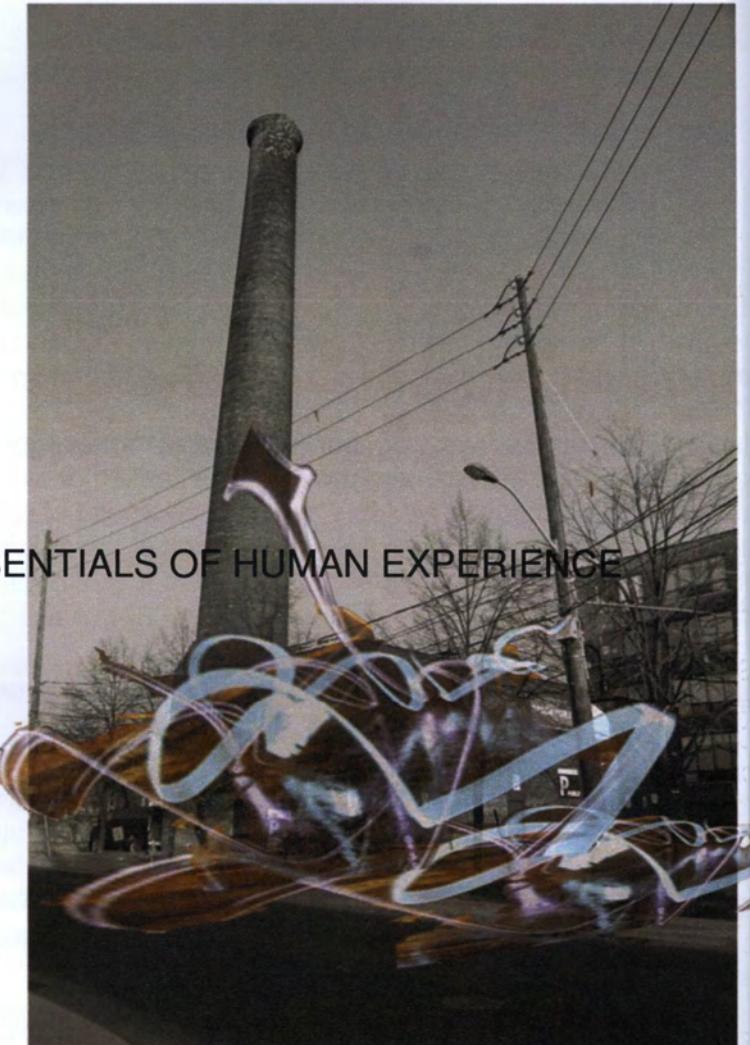
Seamon and Mugerauer (2007), who closely examined Zumthor's methodology of usage, viewed Zumthor as a facilitator between the tangible and the intangible through his uses of materials within the physical world. He manipulates them into being drivers for *experience*.

In *Thinking Architecture*, Zumthor (2006) does not overlook the importance of the choice of certain materials as these are the concrete items that ultimately dictate what an individual experiences. Materials provide a personal viewpoint of what experience one gets from an architectural piece. It houses not only the look of the building but also engages the viewer's senses. Peter Zumthor pays special attention to this detail of his design and understands that the choice and the layout of certain materials can alter one's architectural experience completely.

Important essentials of experience resulting from Zumthor

- 1) Instead of intricately designing with traditional model making materials, Zumthor's studio methodology of working with models and creating designs captured the essence of design through its true materials.
- 2) Zumthor realized the unbreakable connection between the tangible and intangible realm and thus tried to create a balance between the abstract and concrete factors of physical form and the experiential factor within human beings.

CHAPTER 3: THE ESSENTIALS OF HUMAN EXPERIENCE



[S.P.A.] Sensory Phenomenological Architecture
The Essentials of Human Experience and Meaning
Lawrence S.C. Ng

Recurring themes emerged from the examination of the literature review when one is interested in designing the space which places an emphasis on the experiential component. These aspects were then categorized and sectioned. The result of this created aspects to focus on when using an architectural manifestation as a driver for human experience.

The aspects which were focused on were:

- 1) *Space v. Place*
- 2) *Memory & Time*
- 3) *The Embodied Experience*
- 4) *Perception Through Movement*
- 5) *Materiality*

These aspects are interchangeable and integratable to help provide the infinite number of possible human experiences which one can have.

An existing architectural project (Thermal Bath in Vals) was first reviewed which incorporated these essentials of the human experiences effectively.

i: Space v. Place

In many everyday conversations, *space* and *place* are used interchangeably, but by distinguishing between the two, one will realize that there are fundamental differences between them.

Space is defined as an empty area that is usually bounded in some way between things or an area reserved for some particular purpose (Random House, 2009). Both of those definitions are Cartesian-oriented (position-oriented) and also object-oriented without a human or subjective component. By placing a thoughtful and carefully planned approach to space that is sensitive to the subjective and experiential aspect, one must create and design more than merely a space, but instead a sense of place.

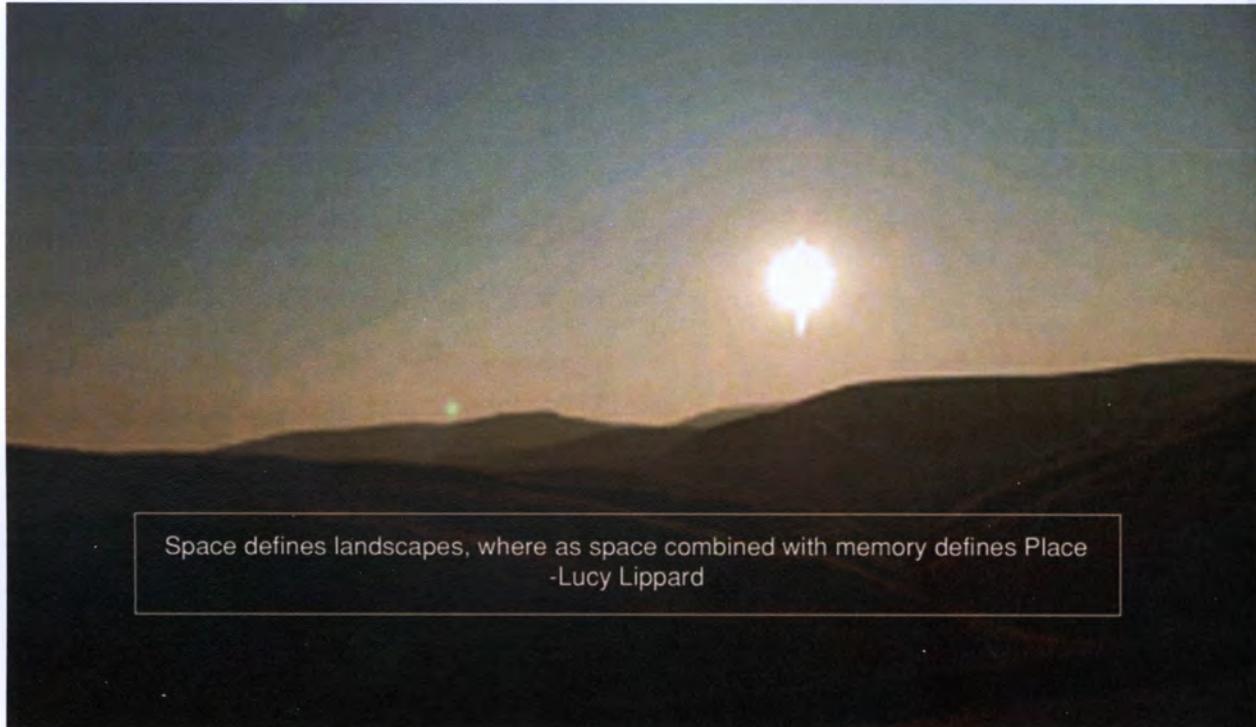
The phenomenological approach of space, or more commonly, *place*, is approached in a more subjective and experiential way that distinctively deals with the notions of memory, expectations, emotion, perceptions and overall *sense of place*.

Steele (1981) describes in his book, *The Sense of Place*, as being "not really about psychology, or the design of environments, but about the interaction between features of settings and features of the people who use them, with a particular look at the choices we make as users and how they affect our sense of place" (p. 12).

Steele also defines that *Sense of Place* is not limited to experiences the person is consciously aware of, but "it includes unnoticed influences, such as a consistent avoidance of doing certain things..." (p. 12). Steele realizes that people will behave differently in different contexts and that each individual will perceive one specific context differently.

The sense of place that is important here is more than just the design of a building itself, but also the subjective and intimate components. Tuan (2001) concurs that sense of place is important, however, he also agrees that one cannot neglect the use of an *object* to define the qualitative component (Tuan, 2001). He realizes concurrently that the objective of phenomenological architecture is incomplete without the concept of place but is also incomplete without the quantitative and physical location of space (Tuan, 2001).

While the definition of *place* is based on a space that has a subjective component to it, great places are naturally flexible, reactive and can have the potential for recollection and imaginative capabilities.



Space defines landscapes, whereas space combined with memory defines Place
-Lucy Lippard

Figure 2.1 Landscape and Lippard Quote

Important aspects of experience resulting from the essentials of Space v. Place

The focus on the essential qualities of *space* versus *place* resulted in an emphasis on the methodology within the design process. The concepts of space and place is therefore not oriented towards creating either a *space* or a *place* completely, but rather promote and focus on the experiential qualities of place and using it to help develop the geometric properties of space and vice versa. Hence, the focus was to use the concept of *space* to help form the concept of *place* and use the concept of *place* to form the concept of *space* as well.

The result therefore creates an equal balance of both the abstract notions of space and the concrete nature of place. Both ideas are positioned in a way to help each other and therefore space is not more important than place but also place is not more important than space.

ii: Time & Memory

Lippard (1998) defines place as space and memory. A question that arises is how one defines memory. Memory is the capability of remembering and retaining aspects and details of past events. Humans retain and recall these aspects for various personal reasons. Developing upon this notion, it can be visualized and represented as moments in an individual's life recorded in specific frames and images that can be recalled at any moment in time for an individual's needs and wants to help with their understanding of the concrete world they are in.

At the same time, these exact images are developed and detailed within our imagination when they are fused and combined within a recollection of other past images. A collage of these images form who we are as individuals and as a collective group.

Henri Bergson (2007) was a philosopher who developed concepts of memory and is also the author of the book *Matter and Memory*, in 2007. In this book he introduces two thoughts about the mechanisms of memory; memory of *habit* and memory of *imagination* (Bergson, 2007).

The memory of *habit* is described as a memory in which *images* are collected, recalled and detailed every time the exact or a similar situation occurs (Bergson, 2007). Bergson (2007) states that like a habit, this type of memory is stronger and clearer each time the particular memory occurs and much like the concept of exercise, these memories are stored and have the potential to be developed if that particular memory is activated again (Bergson, 2007). An example of this is driving home, the act is duplicated and could be done over again.

The memory of *imagination* is based on representation and expectation (Bergson, 2007). This type of memory only exists within our virtual world and cannot be physically duplicated (Bergson, 2007). The memory of remembering the smell of your grandmother's house when she was baking apple pie is an example of a memory of imagination. This type of memory could be as vivid and clear as driving home but could not be physically duplicated again.

Bergson (2007) regards memory as completely within the mental realm but recognizes that the drivers and triggers of memory are always within the physical and objective realm by explaining that "memory must be, in principle, a power absolutely independent of matter. Thus, it is only the role of physical elements to facilitate the manufacturing of past experiences in the brain" (p. 72).

While exact memories are impossible to be shared among a group of people but within that same group of individuals, each of them have the potential to have a similar memory which can be generated by a specific phenomenon common to the group. Therefore in *Memory and Matter*, all of Bergson's (2007) interpretations of memory has been based on a single individual and other types of memories are portrayed only as metaphors. These metaphors however are no less significant in creating an experience than the actual ones generated by an individual.

The concept of phenomenological architecture determines that *private* memories are as important and need to be considered not over, but along with, types of *public memories* such as cultures and social structures within society today. By creating an intimate balance between the two, *private* memories enhances and help form cultures and social structures and vice versa.

If memory is already created and ready to be recalled for personal gain how can one explain the birth and creation of that particular memory? Maurice Merleau-Ponty (1995) informs us that "[A]n object is a system of properties which present themselves to our various senses and which are united by an act of intellectual synthesis" (p. 88). It is through this synthesis that connections are continually reinterpreted to form our environments, culture, and our essential place and sense of being (Merleau-Ponty, 1995).

Merleau-Ponty (1995) suggests here that the human body and their senses are not only the connections between the physical world and the emotions we feel within our minds, but memories also interactively connect the physical and the mental realms as well.

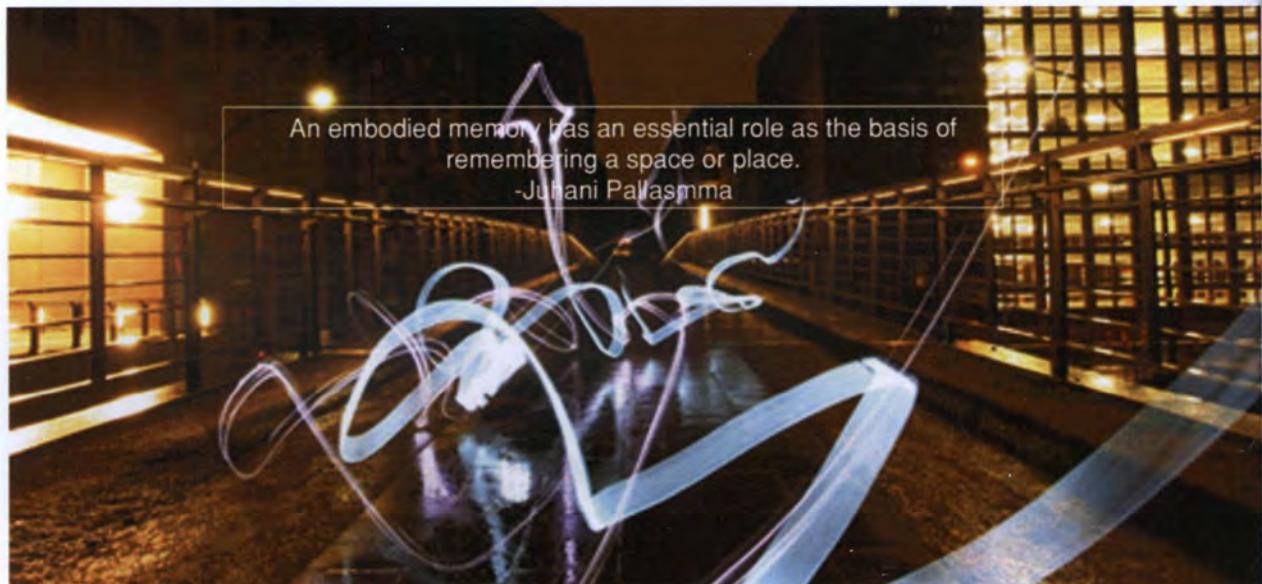


Figure 2.2 Phenomenological artwork and Pallasmaa quote

Important aspects of experience resulting from the essentials of Time and Memory

Memories may be individual and unique to every single person, but public types of memories otherwise known as culture and social structure can recall similar personal memories for an individual.

Hence, these forms of memories, culture and social structure help individuals to know and expect certain aspects of a space before even entering it. By recalling not only personal

memories, but cultural and social structures, they *already know what to do*. Therefore they know what they are about to sense even before the physical act of it happening in the concrete world.

By using an architectural manifestation as a driver to generate these types of memories, a design can predict a similar experience which a group of individuals can relate to from their personal private experiences

iii. The Em'bodied' Experience

As described in the previous section, memories are fragments and images of moments that could be recalled and triggered. Often, an individual's memories are not of a situation as a whole, due to complexity, but only of specific colours, textures, smells or sights that summarize the experience. When one consciously recalls a memory of habit or creates a memory of imagination, it is most likely accompanied by one or more human senses such as smell, touch, sound, sight and taste.

By remembering these specific colours, tastes, textures, smells and sights, they are often the triggers that activate and exercise these memories. In order to trigger these memories, the human body must also be able to readily accept these triggers. Similarly, as a collage of memories would develop and define a place, small details that involve the senses and emotions, are the basis for these memories. Hence, these small details are much like dots in a halftone image. When these dots are organized together and viewed from a distance, these dots are no longer dots, but parts of a complete picture.

Immanuel Kant (1999) described our knowledge of the outside world as being based on modes of perception and how we collect data to initiate our mode of perception. Pavel Gregoric (2007) in *Aristotle on the Common Senses*, classified our modes of perception through the direct connection to the human body with his *original five senses*: sight, hearing, touch, smell and taste. As the discussion of the human senses cannot escape the fact that it must be discussed scientifically and biologically, general knowledge of the senses were researched however the phenomenological aspect were also investigated. The phenomenological portion investigates these senses in a subjective manner which conveys how the physical senses can trigger a mental experience.

Vision

As the visual central center, the eye is a system that is developed behind a lens through which the individual perceives light and colours and is oval in shape. Located on the back of the eye are cells that are either rods or cones. The cone cells are sensitive to colour frequency and certain cone cells are triggered by certain colours. The rod cells are sensitive to light and based on the amount of light that passes the lens of the eye, certain rod cells would be stimulated (www.scientificpsychic.com, 2008).

Within the back of the eye is a transfer path as well, where all the stimulation the rod and cone cells acquire funnels into a pathway. This pathway is a route from the eye to the central nervous system. This area of the back of the eye is not sensitive to either light or colour and is often referred to as the *blind-spot* (www.scientificpsychic.com, 2008).

Physically, the eye creates a two-dimensional image onto the back of the eye for the transfer of an image to the nervous system, but due to the configuration of the human body, the two eyes work together to formulate and obtain information to help transform the two-dimensional image into a three-dimensional image (www.scientificpsychic.com, 2008).

Another interesting note about the configuration of the system of the eye and the human body is the fact that the concave nature of the eye lenses creates the two-dimensional image upside down on the back of the retina (back of the eye), and part of the image conversion is that the central nervous system innately flips the image created on the eye back to normal. (www.scientificpsychic.com , 2008).

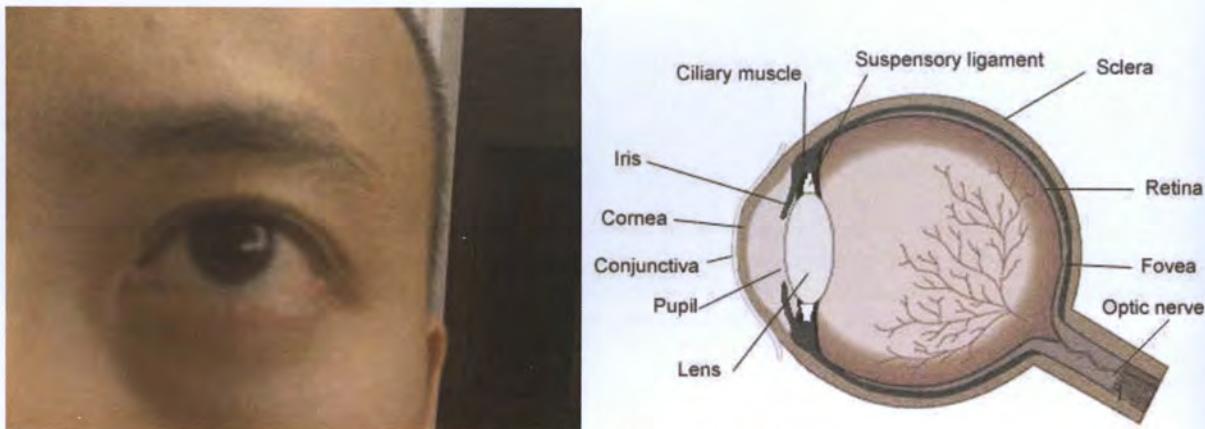


Figure 2.3: Physical visual sensing system

In a subjective aspect, sight and vision could be described through personal experiences and memories such as,

- An individual watches the sparkle of the sunlight peaking above a building, creating a dark silhouette above the building.
- A ray of light shines but disappears when it returns to darkness;

- c) The surprise element when a pitcher's mound is located in the sunlight and the batter's box is located in the shadow. The light sensitivity creates a difficulty in locating the pitch until it reaches the shadow;

Hearing

The ear is the system that is responsible for most of an individual's hearing. Through vibrations caused within the environment and transferred to the cone /funnel shaped organ (ear); which directs these vibrations down the main ear path. There is an inner ear that is a spiral-shaped organ with fibers that also collects and obtains the vibrations being drawn down the ear canal (www.scientificpsychic.com , 2008).

It is these two ear systems that collect and obtain information from the vibrations. Humans can hear from 16-20000 Hz. The type of sound an individual hears is dependent on the frequency (www.scientificpsychic.com , 2008).

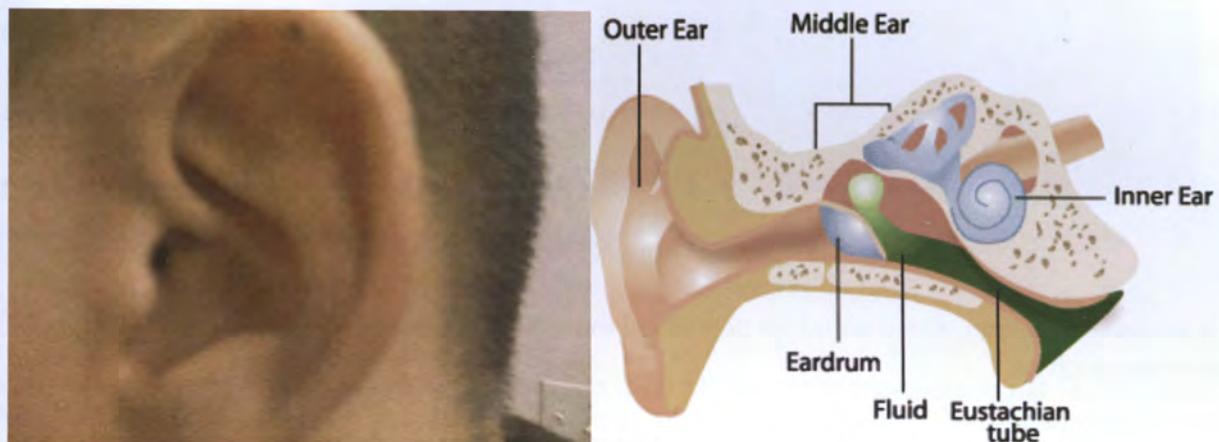


Figure 2.4: Physical auditory sensing system

In a subjective aspect, sound could be described through personal experiences and memories such as,

- The echo sound when one is in a cylindrical tunnel;
- The different sounds you hear with each step you take, such as the hollow sound of steel grates and the echoes when you step upon concrete and hard stone;
- The excitement that comes with hearing another individual call your name out from a floor or level above;

Smell

The nose organ is the system that is responsible for most of the smell sense. Smell is dictated by small vapours that attach and connect to the molecules and cells within the

nose to activate certain stimuli, creating a physical sense. The olfactory system transfers these physical senses. It is also the central location of the cell receptors that catch these vapors (www.scientificpsychic.com, 2008).

Research has simplified these receptors into seven categories. The seven categories are- camphor, musk, flower, mint, ether, acrid, and/or putrid. The combination of these seven components in various ways will create the infinite number of smells (www.scientificpsychic.com, 2008).

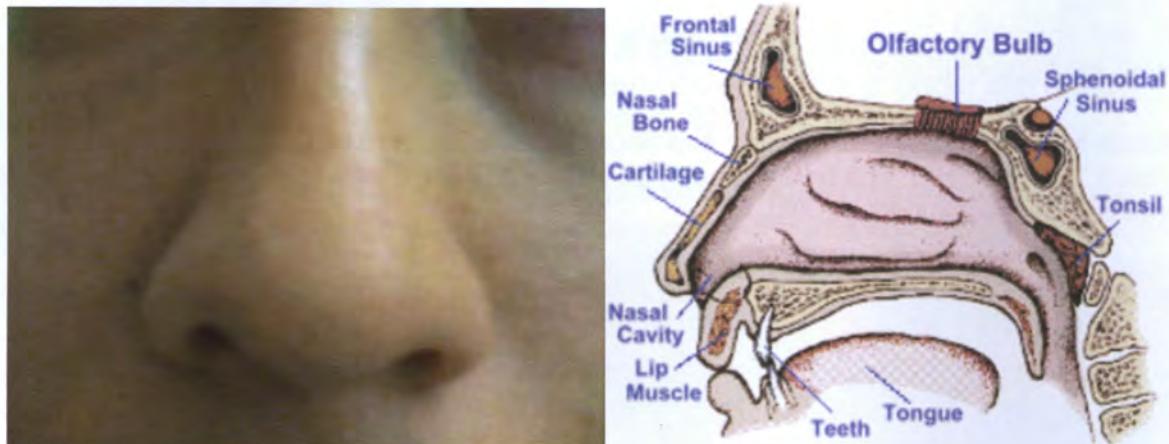


Figure 2.5: Physical smell system

In a subjective aspect, smell could be described through personal experiences and memories such as,

- The smell of cotton candy and roasted corn as one enters an amusement park;
- The smell of your grandmother's pies as she bakes them and the knowledge that they are almost done;
- The smell of the salt water when walking along the harbour front and automatically thinking of the fish in the harbour.

Taste

The physical taste sense is generally located in the mouth, mainly on the tongue though it can be located on the roof of the mouth and near the pharynx. Taste buds are receptors and are generally triggered by certain categories of taste that can be classified into four main groups: salty, sweet, bitter and sour. The combination of the taste buds triggered will form the combination of taste an individual will experience (www.scientificpsychic.com, 2008).

A recent study has also located specific taste buds that are triggered when an amino taste happens, and therefore there are also taste buds that are sensitive to amino acids (www.scientificpsychic.com , 2008).

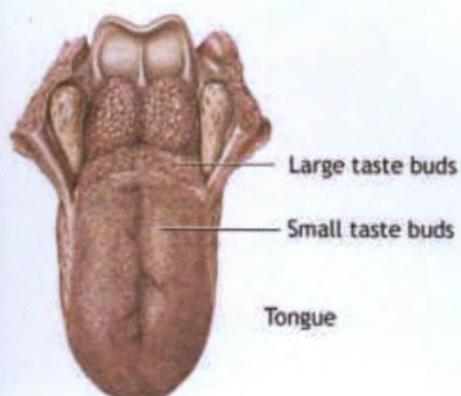


Figure 2.6: Physical taste system

In a subjective aspect, taste could be described through personal experiences and memories such as,

- The taste which makes an individual squeeze their face together when eating something extremely sour;
- When eating something extremely hot and spicy, it becomes physical heat and the individual starts to sweat.

Touch

In terms of location and size, the sense of touch is by far the most prevalent in the human body. The touch sensing system is located on the skin of the body. There are different amounts of nerve endings directly under the skin in different areas of the body which varies the amount an individual would feel. If there are more nerve endings under an area of the body, that area is more sensitive to touch (www.scientificpsychic.com, 2008).

By classification, the touch sense can be classified as four categories and much like the smell and taste sense, any combination of these senses will create the infinite number of perceptions an individual will experience. These senses are: cold, heat, contact, and/or pain (www.scientificpsychic.com, 2008).

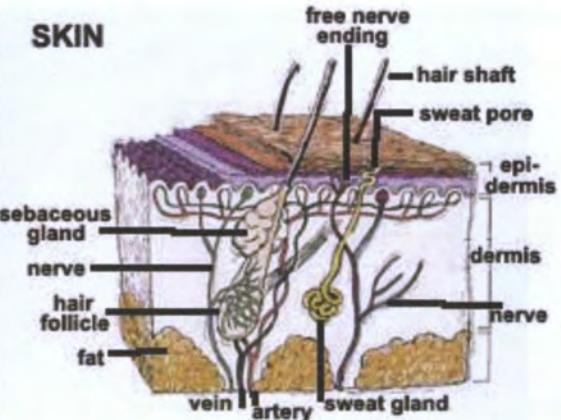


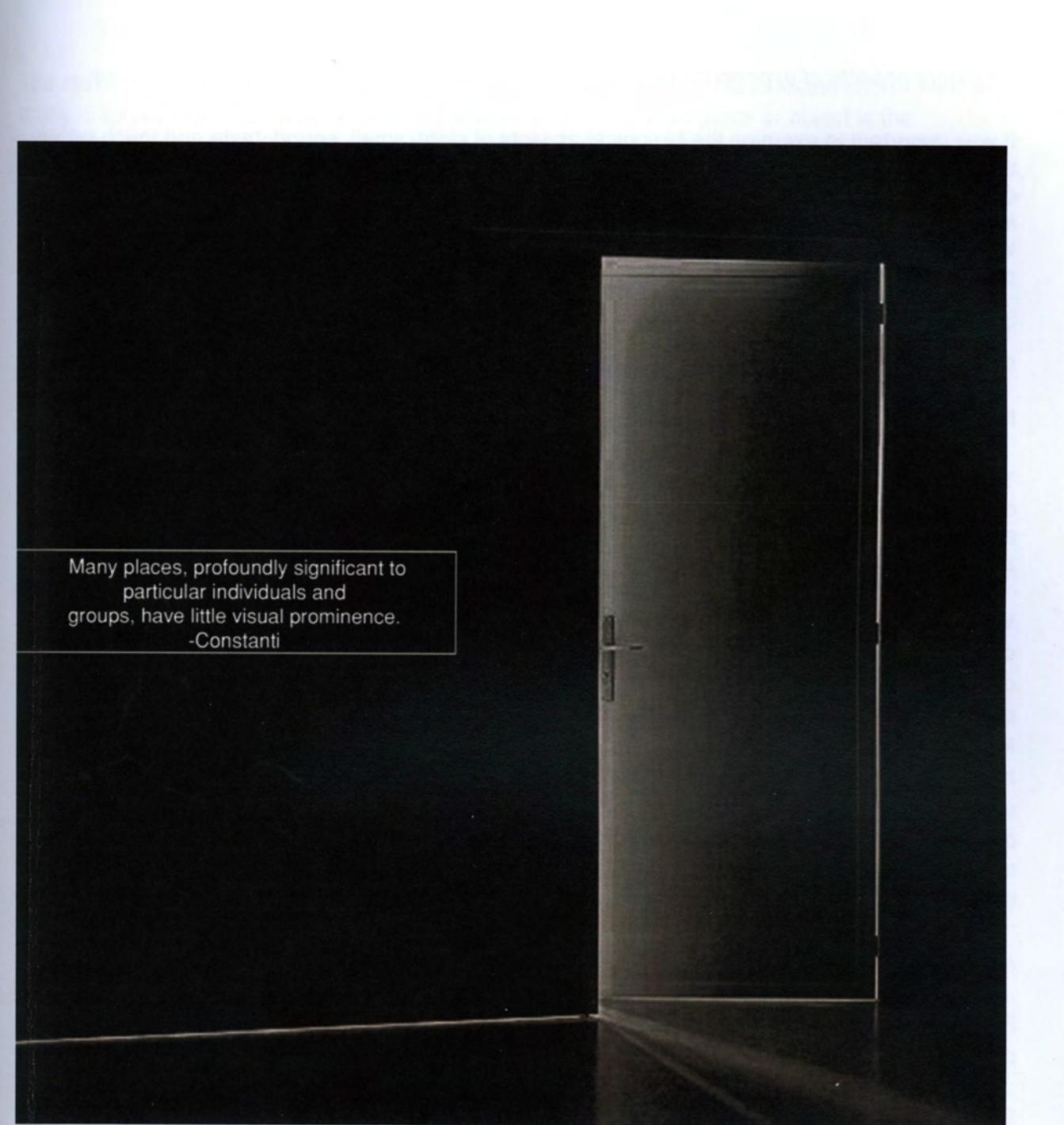
Figure 2.7: Physical touch system

In a subjective aspect, touch could be described through personal experiences and memories such as,

- The soft touch of fur and fabric which initiates a warm emotion when feeling the texture
- The cold and hard emotion one feels when coming into contact with a smooth piece of marble or stone
- The enhanced warm feeling one receives when natural sunlight shines on a material which already conveys a warm feeling such as wood.

By explaining the scientific concepts of the senses and understanding how each biological function works, one can better help manoeuvre the loopholes that are barriers to effectively achieving the subjective component in a physical and objective world.

Traditionally, architecture has dealt with the sense of sight. The culture is geared today towards the sense of vision, but Constanti (2009) describes vision as being much like a camera, "likely to disappoint us, revealing only a midget where we would find a giant" (p. 25). Through the development of phenomenology, the other senses are recognized as playing an important role in the creation of memories and collection of experiences to build a *sense of place*.



Many places, profoundly significant to particular individuals and groups, have little visual prominence.

-Constanti

Figure 2.8 Constanti quote

Important aspects of experience resulting from the essential of the em'bodied' experience

It was important to examine the biological aspects of sight, smell, sound, taste and touch within the human body to study how the concrete nature of the world can be sensed and how physical data can be collected from the human body. While each of these five original senses is important, each sense alone only gives a part of the entire experience of an individual. It is when these human senses work together that each sense provides a dot towards the entire picture.

This interaction and cross-referencing of all the senses are important into not only designing a particular space, but describing the complete experience of a space as well.

iv. Perception Through Movement

The study of the five original senses throughout history has led to the discovery and study of *additional* senses. Through time, there has been the discovery of more than three hundred senses, and groupings of senses but many of the newly discovered ones are in regards to the *physical movement* of the human body. (<http://www.americanhumanist.org>, 2009)

Within a Cartesian plane, movement is visually represented by two points and the line that is created between the two. Developing on this notion of movement, it can be delineated as the concurrent physical act of *moving* as well as *change in position*. The act of movement and the positional perception of a subject therefore is the basis of many of the newly discovered senses. Many of these new discoveries recognize that the human body is unlike stationary objects that human bodies have physical movements and various perceptions. The human body hence can unlock a gradation of similar feelings such as the feeling of adrenaline to the state of exhaustion or the subject viewed when moving slowly to a subject when moving fast. The gradation applies to perception as well as by the perception of an interacting subject can perceive something from below or above it.

Human Movement

Perez-Gomez, Holl and Pallasmaa (2003) identify proprioception and kinetception related to physical movement in an architectural context by describing it as *Bodily Identification*.

Bodily Identification is how an individual would encounter not only architecture, but any works of art (Perez-Gomez, Holl and Pallasmaa, 2003). This therefore implies that the work of art is not fully complete and not performing its intended function until an individual views, examines and experiences the work of art.(Perez-Gomez, Holl and Pallasmaa, 2003). By interacting and experiencing with *another*, either that be with another human being or an object, the notion of projective identification comes into effect. These projections of your past experiences of yourself onto another object or person, helps develop and further detail the experiences an individual already has (Perez-Gomez, Holl and Pallasmaa, 2003).

The result of designing an architectural manifestation with the potential to locate and provide as many different individual experiences as possible within a specific place or object is the objective. By providing as many opportunities to project one experiences onto another object to help the individual create the more develop understanding of an object within the concrete world.

Proprioceptors: The expected movement of muscle and joints

Proprioceptors are the receptors that describe the expected movement of the joints and muscles in anticipation (sportsmedicine.about.com, 2009).

A subjective example of this is when other senses are un-useable, such as in a dark room where nothing is visible, one's memories of the room when it was lit and visible are activated. By knowing the approximate location of an item within the room, one will reach for it and *feel* one's way until the object is touched. In this particular scenario, when one does touch the object, the haptic/touch sense overrides the proprioceptor sense.

The proprioception sense has strong ties with the expectation or anticipation of an object. A boxer will anticipate and expect a certain amount of pain and force when receiving or giving a punch. Once the punch is given or received by an opponent, the proprioception sense is then converted to another sense of movement for both the giver and the receiver; the kinetception sense (courses.washington.edu, 2009).

Kineticeptors: The physical movement of muscle and joints

Kineticeptors are the receptors and sensors that gauge your ability to perform an action (www.actualfreedom.com.au, 2009).

Subjective examples of these *senses* are when one would determine how much muscle or power would be put into something. This is much like pitching a baseball in a certain location or shooting a basketball from a certain distance away. As well, this can be often referred to as hand-eye judgment or coordination skills.

Traditionally, architecture does not actually move but it can be designed accordingly to propose and facilitate movement to help aid the possibility of positive experiences within a place.

Traditionally, architecture has been designing for the concept of movement by designing spaces within a design based on utility. This meant that designs were strictly limited to the usage and convenience of a space. While designing in this manner is effective and efficient, spaces based solely on utility and single rigid functions are often emotionless and bland. While some functions such as utility spaces and washrooms may want an emotionless space, others often are locked into an emotionless state based on the restrictions it has applied itself due to functionality.

While designing for movement within the architectural field has been applied, research and designed for a long time, many designs are based upon the rigid ideas of singular functions and usage. Hence this methodology of designing is based upon only one possible experience at a specific place and time. It does not allow for all the possible *actions* that a complex nature of a human being has the potential of.



Figure 2.9 Artwork conveying movement and Hemingway quote

Human Perception

The physical world is three-dimensional and therefore, there are many *faces* of the same object. At the same time, an individual can perceive something in many different ways based on the specific location they are viewing the object from. It could be viewed from the top, sides, bottom or any combination of the three of the specific object. Even a slight change location in any direction completely changes the perception of an object, therefore making the direct perception on a singular object infinite. But also due to the three-dimensional nature of the physical world, one individual can never be able to see all sides of an object at one time.

Human senses take in only limited amounts of information and mentally translate the information into a perception. The human uses his or her complex mental understanding to make the final perception or judgment of what is going on. This mental capacity is formed by memories, experiences and emotions.

Due to the many faces of a physical object and the physical limitations of the human body, some aspects of a particular object remain hidden. Imagination and expectation form the missing parts of an object *within one's mind*.

As an individual moves to another location or the object is moved to another location, the same object that same individual senses are exposed to a completely different set of physical data but through memory, one creates what one *had seen within one's mind*.

Due to the fact that some part of a particular object is always hidden, an individual's mind would have to virtually create the rest to complete the object through their imagination and therefore, not necessarily what is physically and actually present.

Traditional architectural designs help translate this idea of multiple perceptions within a single place are within courtyards and lobbies within a design. Within these areas, the concept of node and connections spaces, depth perceptions and the concept of approaching and previewing a space were examined in detail within these areas.

The earliest usage of courtyard designs was developed in Chinese gardens. Chinese garden designers used a series of partial screens and walls for two reasons. The first reason relates to the concepts of expectations and imagination where a visitor cannot physically see what is there but can use their memories and experiences to imagine.

The other reason relates with traditional techniques in artwork where these partial walls provides layers of foreground, mid-ground and background to give a sense of enhanced depth due again to its visible limitations (Keswick, 2003).

These partial walls and screen also have a dual impact on the design. As Chinese garden designers used these walls to create a sense of expectation and imagination, they also used these walls to frame certain images within the garden. This style is a symbol much like framing a painting. These courtyard and garden techniques are still used today in I.M. Pei's Zhou Museum.



We don't see things as they are, we see things as we are.
-Anais Nin.

Figure 2.10 Photography artwork with landscape vs water and Nin quote

The Problems of Physical Receptors In Regards to Experience

One of the main debates the scientific field faces when they study and research physical receptors and sensors is this *conversion* from the physical sensations an individual experiences to the mental sensations they experience.

There are many popular theories regarding this conversion. One accepted theory states that electric pulses caused by the physical receptors transfers to the specific part of the brain the electric pulse responds to.

This concept though, being very scientific, is haunted by many questions in regards to dealing with the intangibility of phenomena and experience.

The debate is based on how an physical electric pulse can carry an intangible experience or an emotion. One will question whether the pulse merely triggers an experience that already resides in the brain. As well based on this theory, it suggests that each individual's brain would have to be complex enough to include all experiences ever imaginable, which most will agree is impossible.

This debate eventually led back to the core problem of translating a *concrete* idea of the human body to the *philosophical* idea of this conversion into a feeling and/or emotion.

Important aspects of experience resulting from the essentials of the perception through movement

The senses may be on a human body to collect data from a singular object and attempt to translate and decipher it into memories and experiences, but the location where the perceiver perceiving the object from is extremely important in determining the individual perception of the object.

An architectural design which provides for the multiple ways of not only viewing, but sensing the same object allows the design to be a driver to create the potential to have many different perceptions of an object, not only different for each individual, but different for each single individual dependant on the location they perceive that particular object.

v. Materiality

Dealing with the concept of experiences in regards to architecture as an encounter between the tangible and the intangible, *materiality* follows along in a smaller scale the same way of thinking; that experience is made up of the tangible in one hand, and the intangible in the other.

The question for architecture which places an emphasis on experience is then; *how do physical materiality and abstract meaning coexist in architectural materials and details?* More importantly *can or do they even coexist?*

TOUCH & HAPTICITY

Materials play a very important role in the haptic realm of architecture. Perez-Gomez, Holl and Pallassmaa (2003) describe that the haptic realm of architecture includes the sense of touch and is assisted by the sense of movement.

Realizing that the world is dominated by the ocular and keeping in mind the notion that the visual sense has taken top priority in culture today, Perez-Gomez, Holl, & Pallassmaa (2003) realize that if the haptic realm of architecture is accounted for in the design, then the experience one receives is further revealed and enhanced, making it closer to a *complete experience* for that individual.

Common in effective phenomenological spaces is that the haptic realm of architecture is evident and noticed by every individual who visits that particular space. Without the use of signage, materiality and details that form the architectural space is subconsciously noticed and similar experiences and memories are generated.

As all senses have the capability to trigger memories and experiences, the sense of touch and hapticity is very intimate for an individual due to the fact that the sense of touch and hapticity always happens within an individual's personal space. Therefore, if hapticity and materials are effective within a given space, then the intensity of similar experiences and memories are stronger than that of the other senses.

Perez-Gomez, Holl & Pallassmaa (2003) poetically compare materials in architecture to ingredients in cooking by stating "[the] total perception of architectural space depends as much on the material and detail of the haptic realm as the taste of a meal depends on the flavors of authentic ingredients" (pp. 125).

Perez-Gomez, Holl and Pallassmaa (2003) even examines deeper with poetic comparisons by including the poetic descriptions of specific details within architectural design. A poetic example of this poetic description of a detail is *how the door handle is the handshake of the building*.

By poetically describing materials and details, an individual sub-consciously recalls and imagines his/her experiences which then ultimately forms more of an emotion and experience with the material rather than what the material physically is. Some of these characteristics could include how the lighting in the area enhances the rough texture. Another could be of how the texture of the wood creates small shadows and cracks within each piece and giving a sense of how old the wood could possibly be.

By carrying this particular approach of describing materials within a particular design, the potential of triggering and recalling phenomena and experience is the focus when choosing materials and not of what the material actually and physically is. This manner of designing and describing a design goes towards the phenomenological description to the context to the intricate details such as a doorknob rather than the physical description of what the doorknob physically is and where it is located.

Below are examples of some pictures of materials within many building designs today. The pictures shown are strategically taken not to capture the entire design of the building, but to attempt to capture enough of the materials and details within the design to entice and recall memories of the particular site visit.

Some examples such as the Louis Vuitton store in Hong Kong are more literal by creating a multi-level wall where one level is created with a wall of *L* pattern and another with a *V* pattern. By viewing the wall as a whole, a *LV* pattern is created.

Other examples are not as literal such as in the case of the MAC store in New York City. The slick and high technological nature of how the stainless steel and glass within the store design conveys the experience of high technology which the store's products are attempting to communicate. Even the placement of the store, which is located on an underground level with only a glass cube form above ground, attempts to convey the minimalistic nature of a MAC computer's shell.



Figure 2.11: Materials can be used to portray literally the concept (above: LV store Hong Kong)

Figure 2.12: MAC store NYC of elevator



Figure 2.13: Materials along with texture and light can provide emotions much like the sterile nature of stone, rock etc.



Figure 2.14: Looking into materials in a microscale to help detail architecture from small to big.

Materials and textures project these certain characteristics to help form the experience of a space. Colours also have the potential to recall past experiences and therefore help with the generating of new experiences.

Studies and research lately has provided details on not how and what colours physically are, but what they mean to individuals. Colours are looked into not what the colour actually is in the physical world, but what they mentally mean to individuals.

Colour is also important not only in a marketing perspective, but also in a sensory perspective. Parker states, "Need to introduce colour into projects because until people have a colour *surgence* they don't respond and seem to search and wander for that *surgence* and migrate until they find that colour". (Parker, 2008). As architects and designers, we cannot guarantee a phenomenological experience, but we can help guide visitors to the design with the best of our ability.

Much like how colours are more than what it is in the physical world, materials and their textures apply the same principles. Materials and textures, much like colours also have the ability to recalls individual's private memories or their culture or social structures to create experiences.

A Dialogue Between the Qualities of Traditional and Modern Technology

Phenomenological architecture is seen and misunderstood as all-natural, based strictly on the human body and devoid of any aspects of technology.

Society does not include the likes of plastic, steel and mechanical advancements as part of nature and hence would categorize them as opposite to nature. Consequently, technology and modern materials can be seen as the mechanism which tries to further separate the human body from its emotions and experiences.

In a world where technology is increasingly important and essential to humans to survive, technology and modern materials such as plastic, concrete and steel should be as large of a part of nature as is a material such as wood. Therefore, modern materials such as steel and concrete have the same ability to recall and elicit as much phenomena and experience to an individual as traditional materials such as wood.

While recent history has done nothing but further prove this from extremely simulated videogames, the invention of the Internet, and the development of architectural designs strictly based on exploratory materials, technology is not the reason for this push away from the experiential component.

Instead the specific problem is not of technology itself but the usage of technology by culture and society today. Cultural and social structure assumes and places constraints onto technology and modern materials that these things do not conform to what experiences and phenomena are thought to be traditionally. This therefore separates and categorizes technology and modern materials as opposites of what experience and phenomena is and where it can come from.

In Giles Reid's (2000) article, Claude Megson states "[m]odern technology available today should not be conceived as an aim or a value in itself, but as a tool to create a *human and friendly environment* that will satisfy the basic needs common to all of us as *human beings*. Despite the unlimited possibilities it opens to us, technology should be used in a controlled, value-oriented and moral way" (pp. 90). Alberto Perez-Gomez (2003) and Julio Bermudez (2007) also have similar observations when it comes to architecture and its fascination with modern technology and new innovations.

Phenomenologists today attempt to apply cultural and social norms within their studies in describing phenomena and experiences, and it is not different in the field of phenomenological architecture. Today's effective phenomenological places successfully use modern technology and materials along with traditional materials to discover and generate strong phenomenological and experiential responses.

If the field of architecture embraces and uses modern technology and materials and realize that new materials, while lacking in history and therefore have less moments of memory and experience, still have the potential to generate as strong of an emotional and experiential response as traditional technology and materials.

Important aspects of experience resulting from the essentials of the materiality and technology

As designers, we gravitate towards certain materials, textures and colours because designers have learned and are taught to appreciate these aspects in help promote certain experiences.

Materials, textures and colours are not just what they physically are within the world, but what they can possibly mean to individuals.

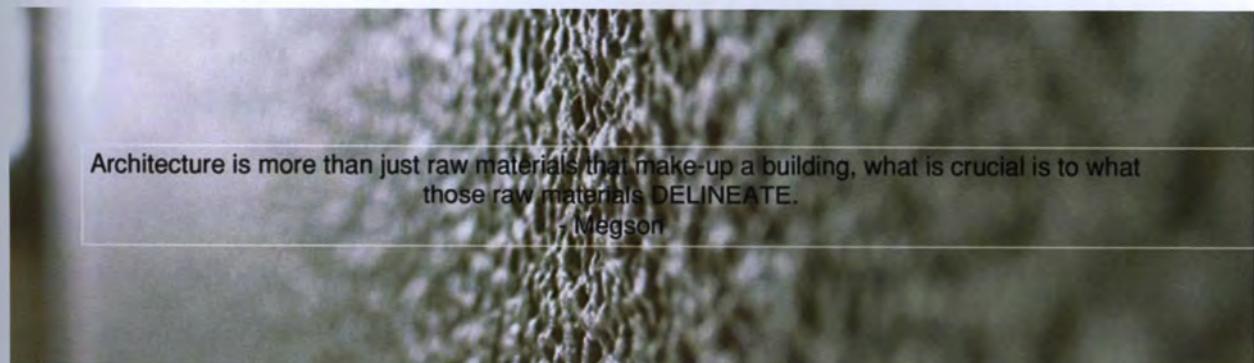


Figure 2.23 Close-up of materials and Megson quote

Therefore, from memories, senses, depth perception, movement and action, materials, textures and colours all have the potential to recall past experiences and therefore help with the understanding of the world that the individual physically lives in.

Architecture, which is effective in allowing the flexibility for potential experiences to occur, can serve as a catalyst to promote experiences to occur within a given space. But for effective experiential architecture to be successful, the essentials of human experience which include the emphasis and balance of space and place, memories and time, movement and perception, and materiality must integrate and work as an integrated whole to provide the necessary parts to create a complete experience.

CHAPTER 4: ARCHITECTURAL REVIEW



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[S.P.A.] Sensory Phenomenological Architecture
Literature Review and Precedent Studies
Lawrence S.C. Ng

i. Thermal Bath in Vals, Switzerland - Peter Zumthor

The result of the literature review was to help find and examine some of the essentials needed to facilitate an experience. As commonalities came about in the research, some particular essentials emerged above others. These are:

- 1) Space v. Place
- 2) Time and Memory
- 3) Em'bodied' experience
- 4) Movement and Perception
- 5) Materiality

As these commonalities emerged from the research, the thermal baths in Vals, Switzerland by Peter Zumthor is reviewed with the essentials of human experience being the focus. Within his methodology of designing and the outcome of the design itself, Zumthor has designed an architectural manifestation which effectively uses each of these essentials of human experience to its fullest.

Architectural Review

Space v. Place

As many phenomenological architects and architectural students would only imagine, being commissioned to design and program a bathhouse would be a dream come true due to the possibilities and sensuous program that a bathhouse already provides. Realizing that many do not get the opportunity to do so, when Zumthor was asked to construct a thermal bath in the town of Vals, Switzerland, he took great strides to design and build a thermal bathhouse which emphasized his strong phenomenological philosophies. The outcome is an extraordinary thermal baths located within the mountains of Switzerland and is regarded by some as the purest architectural manifestation of phenomenology to date.

As Zumthor (1996), states in the description of the Thermal baths, "Our spa is no funfair with the latest technical gadgets, but focus on the quiet primary experience of bathing, cleansing, relaxing in water, the feeling of water all around the body, at various temperatures and in various settings, physical contact with primordial stone"(p. 160). Attempting to use pheomenology within his designs, Zumthor (1996) focused his research on the individual senses rather than on the technological issues.

Due to the natural sensuality of thermal bathing, which allows for the simple act of bathing to become a mystical and mythological ritual, it gave a *readymade* platform for Zumthor to design. Although this seems as if it is a simple task due to how the subject of this design is linked to the senses, he was still required to adhere to the basic form of a thermal bath. This was demonstrated through geometric blocks. These block designs were carved from many separate concrete blocks and placed together in a strategic manner.

Like the dilemma all phenomenological architects face, it was no different for Zumthor when designing this bathhouse. The dilemma stemmed from trying to design a physical, geometric piece of architecture that also has a strong sensuous experience without making one element more significant than the other.

To demonstrate the combination of both sensuous experience and the geometric architectural placement of the concrete blocks, Zumthor employed many elements to exemplify the seamless blending of the two by using the senses of sight, touch and feel (Copans, part III, 2007).

Heidegger dealt with the concept of interaction of the concrete world with the abstract nature of the mind. In Zumthor's thermal bath, he comprehended that a connection between the concrete nature and the abstract nature lies within the human body. In an attempt to balance the experiential factor with the world's concrete nature, Zumthor paid particular attention to the human senses. He focused not only on how one would react biologically to the concrete world but also on how these senses promote similar emotions and feelings.

As a result of dealing with the sensuous ritual of bathing, Zumthor's methodology when designing the thermal baths at Vals balanced the distinction between lived space in are the phenomena and experiences which individuals feel within a space and the physical geometric space. This therefore created an example of the blending of the experience of a place and geometric architecture.

Materiality

The essence of materials play a vital role in engaging an individual's experience and senses. In the thermal bath in Vals, the stones were designed and used in a manner which created a perfect commitment to a human being's sense of sight and touch. Zumthor designed the stone to stimulate an individual's sense of sight by providing an optical illusion that makes it seem as if the stone layers were all different sizes and placed in a random fashion.

To give this visual stimulation while keeping with construction of the building, Zumthor actually uses three different sizes of stone but when all three are joined together, their height is the same. This provides different permutations in which these stone layers can be joined together, providing an illusion of random stone layers (Copans, Part II 2007). Within figures, 4.1, 4.2 and 4.3, Zumthor demonstrates some of the materials in the Thermal baths and their sensuality.



Figure 4.1-4.3 Zumthor's use of natural materials in the bath in Vals

To further promote human senses within these blocks, Zumthor used basic concepts of colour and temperature to generate experiences. Zumthor uses different temperatures of water, ranging from fourteen degrees Celsius to thirty-two degrees Celsius. This was done so that the individuals will feel a different temperature of water with each new block (Copans, Part III 2007).

In addition, instead of the use of signage, Zumthor utilizes the sense of sight and taps into individuals basic instincts of colour. This was achieved through relating warmer water to colours which individuals would consider warm, such as red, orange and yellow while associating cooler temperatures with cool colours such as purple, blues and greens. These shades of colours vary based on the temperature of the water. As a result, Zumthor provided each of his geometric concrete blocks two distinct senses, sight and touch, which individuals will experience immediately when entering each of the private blocks provided (Copans, Part III 2007).

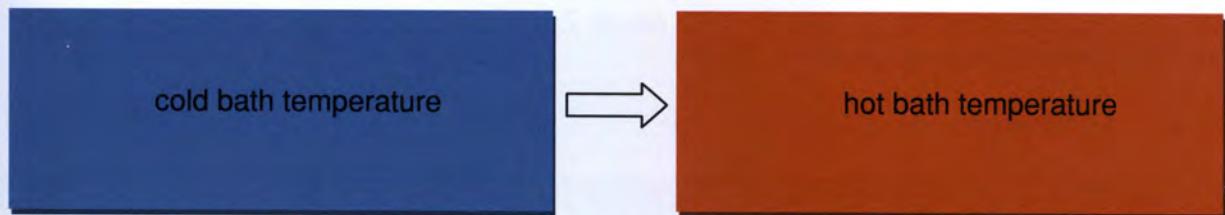


Figure 4.4 Colour and temperature often go hand in hand. Zumthor utilized this fact and used this phenomenon instead of utilizing signage.

Human Movement and Perception

By placing this design in the slope of the mountainside, Zumthor sets a stage on which he plays with an individual's sense of sight with the use of light and shadow. The geometric shapes of the design are connected by glazed joints and these joints are strategically placed to allow for one wall to have a light-washed characteristic within every concrete block in the design.

In addition, Zumthor places these light-washed walls purposefully to lead individuals to certain areas in the thermal bath, but never restricting individuals, allowing them to explore and discover their own experiences within the building design (Copans, Part III 2007).

Figure 4.4 to 4.6 shows the magnificence of these design elements.



Figure 4.5-4.7 Zumthor's use of natural elements such as position and light

Even though Zumthor did not use the latest technological devices to enhance his building in Vals, he used limited sources of light on the bases to enhance some of the sensual qualities an individual might experience. An example of this is shown with the sensuality

which individuals experience when contained in each of these concrete geometric blocks. (Copans, 2007, 1:30)

Light and shadow plays a very significant role within the thermal bath in Vals. Hence much like the representational watercolour drawings of Steven Holl, the building not only regarded light as a source of illumination, but as an essential part of the design to help convey a certain type of experience, feeling and emotion within a space.

As well, Zumthor effectively uses light and shadow to create movement of not only the light rays itself, but also the movement of the visitors as well. Zumthor realizes that human beings are drawn to light and away from darkness. As a result, Zumthor thoughtfully guides visitors through the thermal bath with this concept.

The Result of the Architectural Review

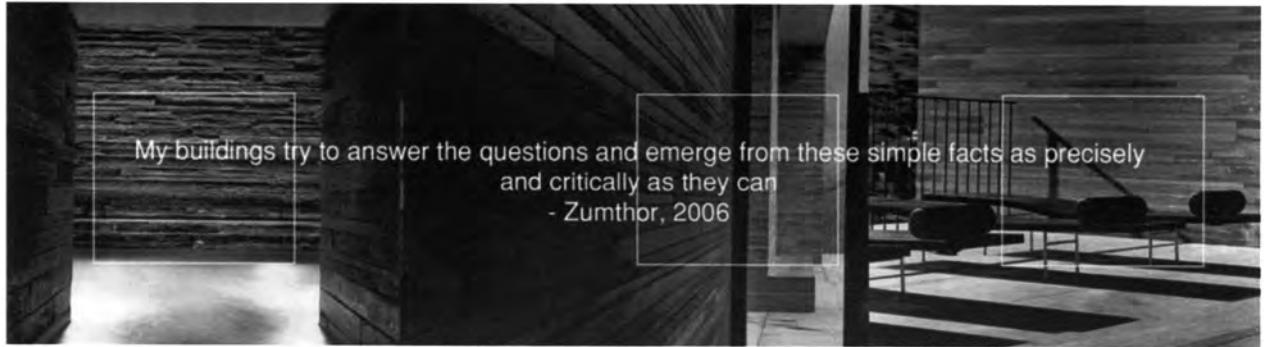
Before attempting to apply these essentials onto an architectural manifestation through the thesis project, one must examine and research each one of these essentials and how it is already prevalent within an architectural design. This helps guide one in creating an architectural manifestation which places an emphasis on human experiences. Hence, the objective is to design architecture which will allow an individual to use the essence of human experiences such as memories, perception and the senses to better understand the space they are physically in.

Peter Zumthor's approach to design is to develop with a conscious mind when creating an experience. This meant that the method in which Zumthor approaches his designs, especially the thermal bath in Vals, is to design in a manner which would emphasize innovative creations of not geometric forms but of volumes of space containing the possibility of many human experiences.

Resulting from the literature reviews and the architectural review of the thermal bath in Vals by Peter Zumthor, important essential commonalities within experiential focused architecture were determined. These essentials are:

- 1) Space v. Place
- 2) Time and Memory
- 3) Embodied experience
- 4) Movement and Perception
- 5) Materiality

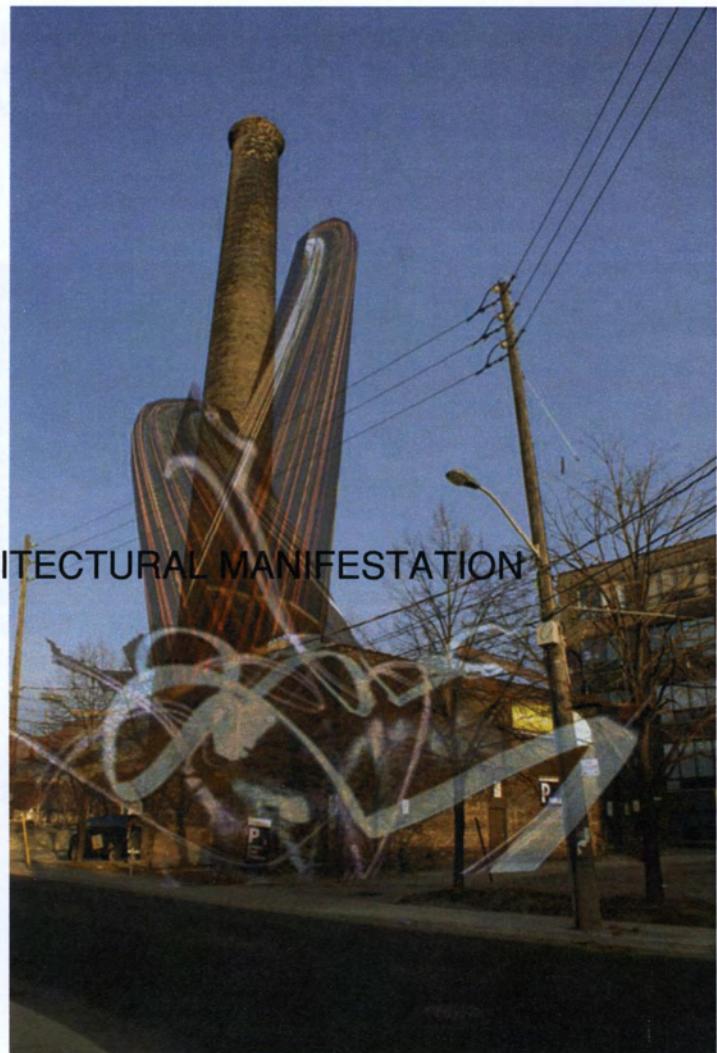
These essentials are important and need to be emphasized to help create a space that has the potential of many experiences for an individual. An architectural manifestation that places particular focus onto these essentials will therefore focus on the phenomena and experience within a space.



My buildings try to answer the questions and emerge from these simple facts as precisely and critically as they can
- Zumthor, 2006

Figure 4.8 Thermal Baths in Vals and Zumthor Quote

CHAPTER 5: ARCHITECTURAL MANIFESTATION



[S.P.A.] Sensory Phenomenological Architecture
Architectural Manifestation
Lawrence S.C. Ng

Here I am. Sitting in the sun. A grand arcade - long, tall, beautiful and sunlight. The square offers me a panorama - the facades of houses, the church, the monuments . Behind me is the wall of the cafe. Just the right number of people. A flower market. Sunlight. Eleven O'clock. The opposite side of the square in the shade, pleasantly blue. Wonderful range of noises; conservations nearby, footsteps on the square, on stone, birds, a gentle murmuring from the crowd, no cars, no engine sounds, occasional noises from a building site. I imagine the start of the holidays making everyone walk more slowly.

-Zumthor, Atmosphere

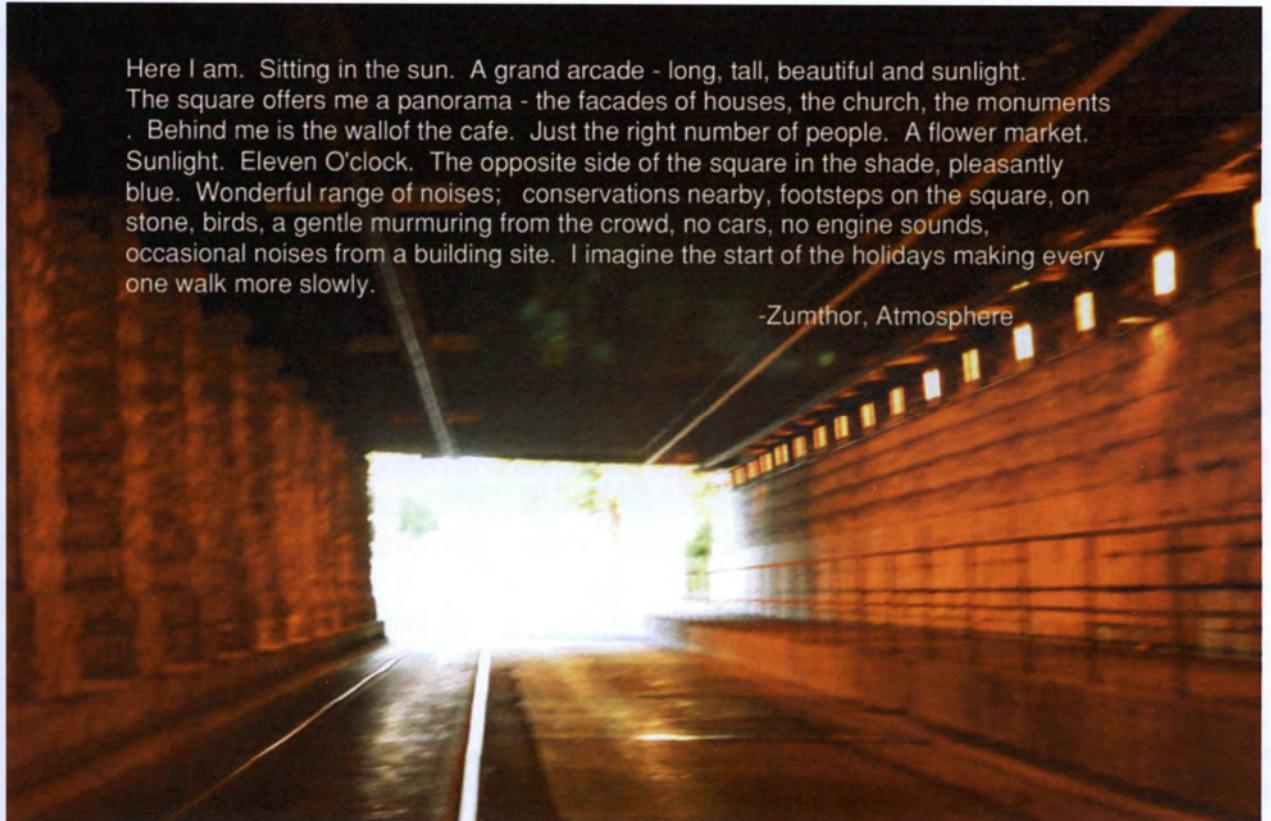


Figure 4.1 Bridge Tunnel near King St West and Atlantic Rd, Liberty Village

Six Significant Landscapes by Wallace Stevens (2004)

I

An old man sits, In the shadow of a pine tree
In China. He sees larkspur,
Blue and white, At the edge of the shadow,
Move in the wind. His beard moves in the wind.
The pine tree moves in the wind. Thus water flows
Over weeds.

II

The night is of the colour of a woman's arm:
Night, the female, Obscure,
Fragrant and supple, conceals herself.
A pool shines, Like a bracelet
Shaken in a dance.

III

I measure myself against a tall tree.
I find that I am much taller, for I reach right up to the sun,
With my eye; and I reach to the shore of the sea
With my ear. Nevertheless, I dislike
The way ants crawl in and out of my shadow.

IV

When my dream was near the moon, the white folds of its gown
Filled with yellow light. The soles of its feet
Grew red. Its hair filled
With certain blue crystallizations from stars,
Not far off.

V

Not all the knives of the lamp-posts, nor the chisels of the long streets,
Nor the mallets of the domes and high towers,
Can carve what one star can carve,
Shining through the grape-leaves.

VI

Rationalists, wearing square hats, think, in square rooms,
Looking at the floor, looking at the ceiling.
They confine themselves to right-angled triangles.
If they tried rhomboids, cones, waving lines, ellipses --
As, for example, the ellipse of the half-moon --
Rationalists would wear sombreros. (p. 25)

i. Intent / Project Statement

The objective of the thesis is to effectively provide architecture that has the potential to provide as many possible experiences in an individual's life for that specific space. Architectural approaches and design processes today focus on visual stimulation. These types of approaches become architectural manifestations that are focused on geometric forms which stimulate the visual sense and nothing else. The visual sense is only a small piece to the entire puzzle when creating a complete human experience. Hence, architectural methodologies must be approached in a way that the architecture serves as a catalyst which puts an emphasis on the bodily experience of space in hopes of creating a potential for a variety of phenomenon and experiences.

The result of this approach defined some of the essentials of human experience. These essentials were categorized so that when designing they would be easier to focus on. The essentials used to create this type of design approach consisted of:

- a) Designing in a methodology which balances the properties of *space* and *place*
- b) Designing to give individuals the *time* and opportunity to recall *memories*
- c) Focusing on designing with the *Em'bodied' experience*
- d) Using an architectural manifestation to represent *movement* and *perception* of a space
- e) Using *materiality* and architectural details to help develop parts of a whole experience

Each essential was integrated and combined together to see how they worked towards the holistic value of a complete human experience consisting of aspects such as time, smell, light, sound, materiality, space, movement, pause, history and memory.

Poetry has always had a special way to provoke feeling and emotion through just the use of language and words, the objective of the architectural manifestation is to create architecture that has the potential to provoke feeling and emotion through the essentials of human experience as well.

In Wallace Stevens' (2004) poem *Six Significant Landscapes*, he poetically describes the essence of experience within a landscape in a way to encourage readers to capture their personal expectations and imaginations. The architectural manifestation hopes to achieve the same. The design and description of the architectural manifestation encourages readers to recall personal experiences and imaginations as well. Stevens (2004) showcases that nature and landscapes are more than just rocks, mountains and stars. It is dependent on how the readers connect these physical objects to their own personal understanding of the world.

Peter Zumthor also uses poetic descriptions when describing his architectural designs. In addition he uses it within his design approach to focus onto what he really wants to achieve

throughout his designs which is *how individuals experience and understand that particular space.*

An example of Zumthor's design approach is how he would design and describe an arcade space. He would describe and represent the essence of what he wants the arcade to be. He would design and describe the arcade as not of the form or functionality but as the essence of experience, feeling and emotion which can be possible within it.

The concept of designing, creating and representing in an architectural manner that immerses individuals into the design with all of their senses is important but cannot be solely based on it. The objective for the architectural manifestation is to apply architectural design in regards to materials and details in which all the senses of a human body are engaged. All the senses collects portions of the complete experience which then is integrated with the memories and imaginations of a particular individual. This allows the individual to develop his or her understanding of the space that he or she is in.

The space developed itself into a design of a spa but was designed not to display the form and function of the building itself, but designed as a vehicle that has the potential to allow for a wide variation of *experiences* to happen within a given space.

The design itself may only be physical in nature and visual in representation, but by consciously thinking of the essentials of human experience throughout the entire design process, traditional and untraditional uses of representation can be approached in a way to encourage and activate other essentials of human experience. This thereby can help each individual immerse themselves within the architectural manifestation proposed. The objective of the design is for an individual to complete the design for themselves by integrating their own personal experiences regarding to time, smell, light, sound, materiality, space, movement, history and memory.

ii. Traditional Versus Phenomenological Architectural Plans/Presentation

Traditional architecture as previously mentioned presents designs in a manner which stimulates one's sense of sight and not much else. It relies on having visually pleasing pieces which wow and shock audiences through beautiful visual display. It often uses technology such as computer generation to display accurately the physical aspect of the design. It however does little else especially when referring to how an individual would experience the space.

One may wonder then how does architecture convey an individual experience within that space. There is no denying that plans are a must. It sets the groundwork and Cartesian position for the design. The way in which these plans are represented to the client however is where it differentiates. Architects who want to convey the experience within their design space would not only present the plan as is but try to set a stage instead. A stage in which experiences can occur and therefore allow the client to imagine and dive into not only the concrete aspect of the building but also the feeling and emotions that will be triggered within the design.

In addition to the plans, this type of approach to design would try to stimulate the other senses through other media such as creating models which not only look like the design but also feel like it. For example, as previously mentioned Zumthor utilizes the actual materials and builds installations and prototypes versus just traditional paper models. This allows one to have an actual sense of what the building will be like through feeling and imagining. It also hopes to encourage some sort of experience.

The objective of these types of representational approaches is to give an introduction to the entire experiential potential of the *place* itself. Much like how Peter Zumthor through his descriptions of his designs and Wallace Steven's (2004) through his poetry, experiential representation of the space is not only determined by the physical volume, functionality, and concrete nature of space within a landscape or design. It instead details the time, smell, light, sound, materiality, space, movement, and memory. The entire *experience* of the abstract notions of place is equally portrayed.

Programming'

Traditional architectural notions depict the functionality of rooms and label their physical spaces based solely on their intent and function. While labeling rooms based on their function is efficient as individuals can assume the intent of the *space*, the experiential component is ignored and one must only blindly guess the experience of the *place*.

The following program is based on a traditional spa experience for its functionality but the intent of an experiential approach to programming provides and brands its space on its experiential component rather than its functionality. An example of this approach to programming is the courtyard space. Within traditional architecture, the courtyard is depicted as a gathering space and function which are intended within it but through architecture which has the objective to

convey an experience, it is depicted as the experience of viewing and traveling through a hilly landscape.

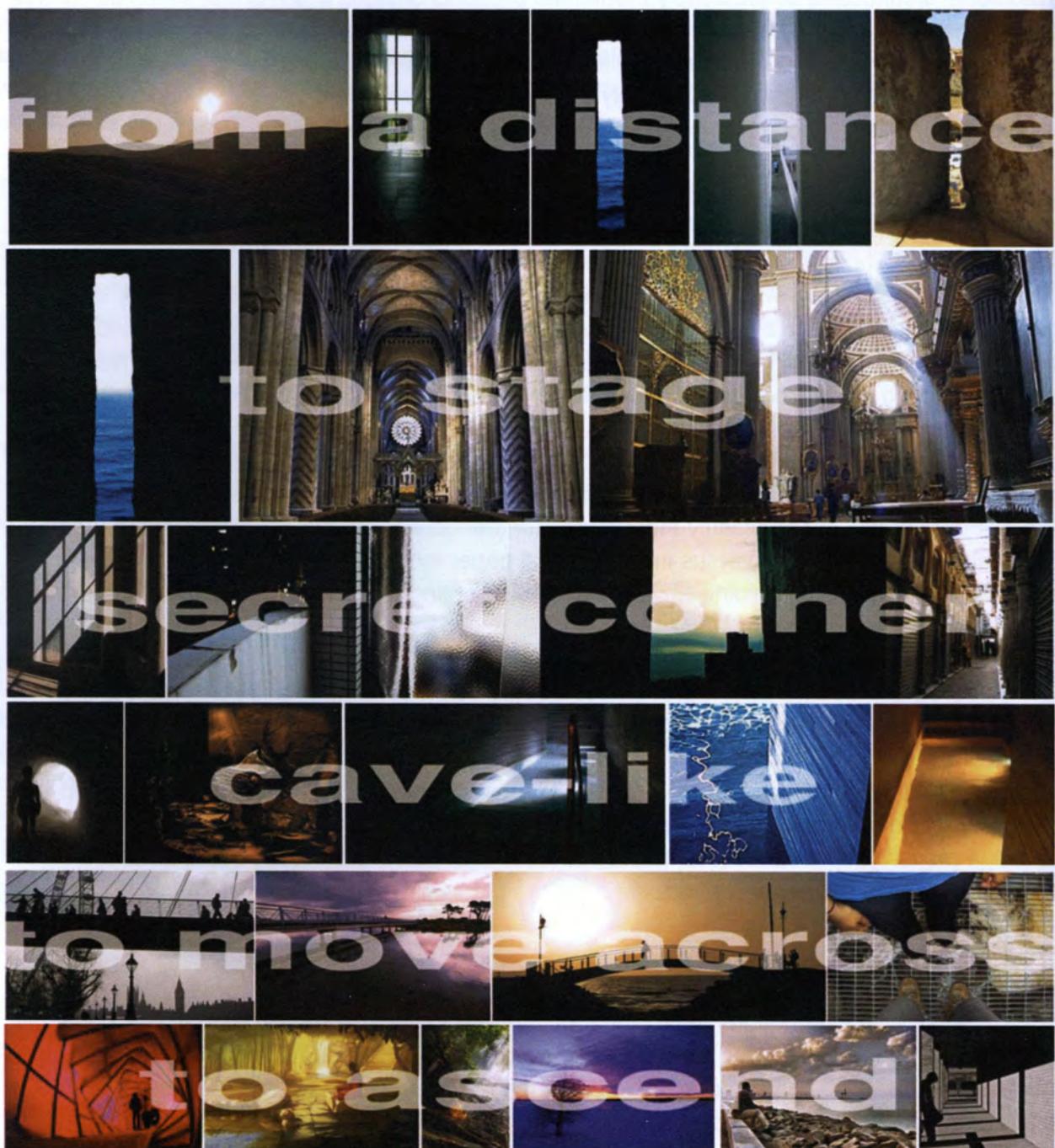


Figure 4.3 Collage of possible framed mental images to convey experiential program

Plans / Sections

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In the fashion of traditional architectural representation that emphasizes on experience, conventional architectural drawings focused on points, lines and planes. While these types of drawings may provide a precise representation of the design in its manifestation in the physical world, it lacks human experiences that human beings are able to sense through *time, smell, light, sound, materiality, space, movement, history, and memory*. Hence, its *experiential quality* is neglected.

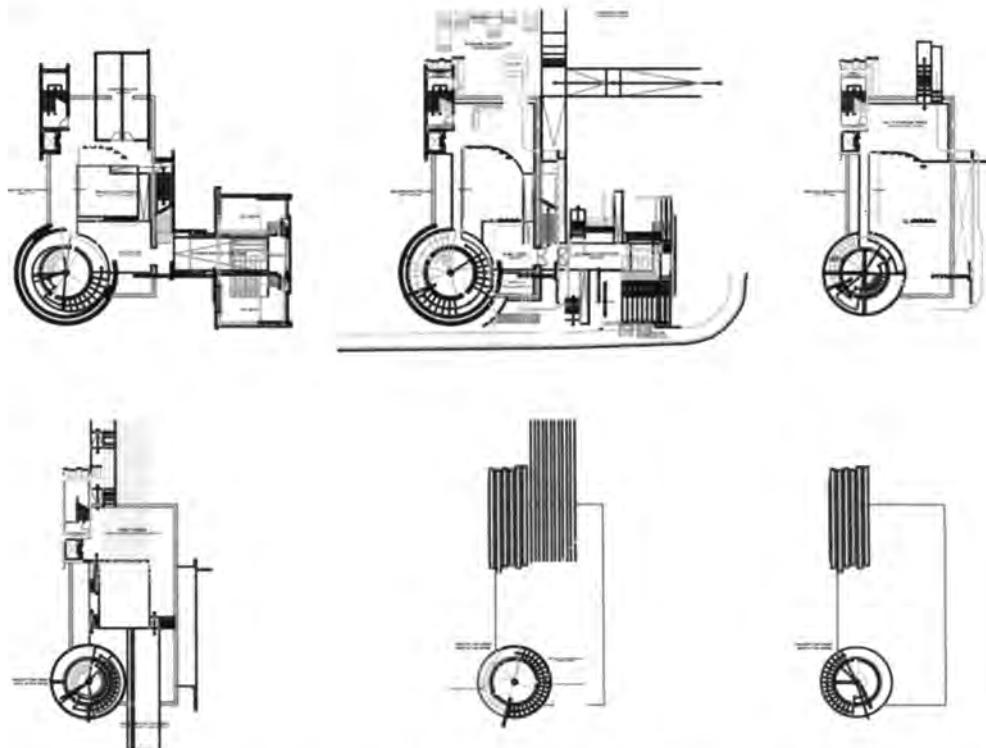


Figure 4.4 Traditional architectural drawings, while precise in the physical world, do not explain the entire story

To begin to address the *time, smell, light, sound, materiality, space, movement, history, and memory*, the objective of the design is to set, depict and portray aspects such as the rays of light through window slits, the flowing texture of the fabric screen, the lines between wooden planks, and the sandy texture of the unsmoothed concrete along the walls of the caves. By recognizing these details that individuals can bodily sense within a space, an experiential story and understanding has begun within an individual.

iii: Experience of the Design

Experimenting with the Concept of Space Versus Place

The methodology of approaching design with a strong emphasis of experience is always conflicted with the argument of its intangible versus tangible nature and hence will always run into the obstruction of creating something within the concrete world from an abstract notion. Through the methodological approach used in creating the spa, these inspirational phenomena depict how the abstract notions of phenomena and experience work together with the concrete nature of the world. This approach led from experiments and photo collages with the intent of achieving, stimulating and discovering phenomena and experience. These experiments eventually led to an architectural manifestation which utilizes the phenomenological and experiential characteristics found within the experiments.



Figure 4.5 Collage of Phenomenological Experiments

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Recalling Memory and Time

The objective of creating architecture with an emphasis on human experiences strongly ties together with the notion of being able to get individuals to recall past experiences. By creating architecture which achieves this effectively, experiences develop as visitors pass through the design. Mental images appear through one's mind as one journeys through the design. These experiences are represented as collages of mental images that can have an infinite number of possibilities and are dependent on each individual's personal experiences of memory, expectation and imagination.

Below are examples of only a few of the infinite number of possible mental collages an individual can create as he or she is walking through the architectural manifestation. It is not the architecture which creates these images, as many of the images have almost nothing in regards to the design itself. The architectural manifestation only provides the catalyst to recall, expect, imagine and sense.

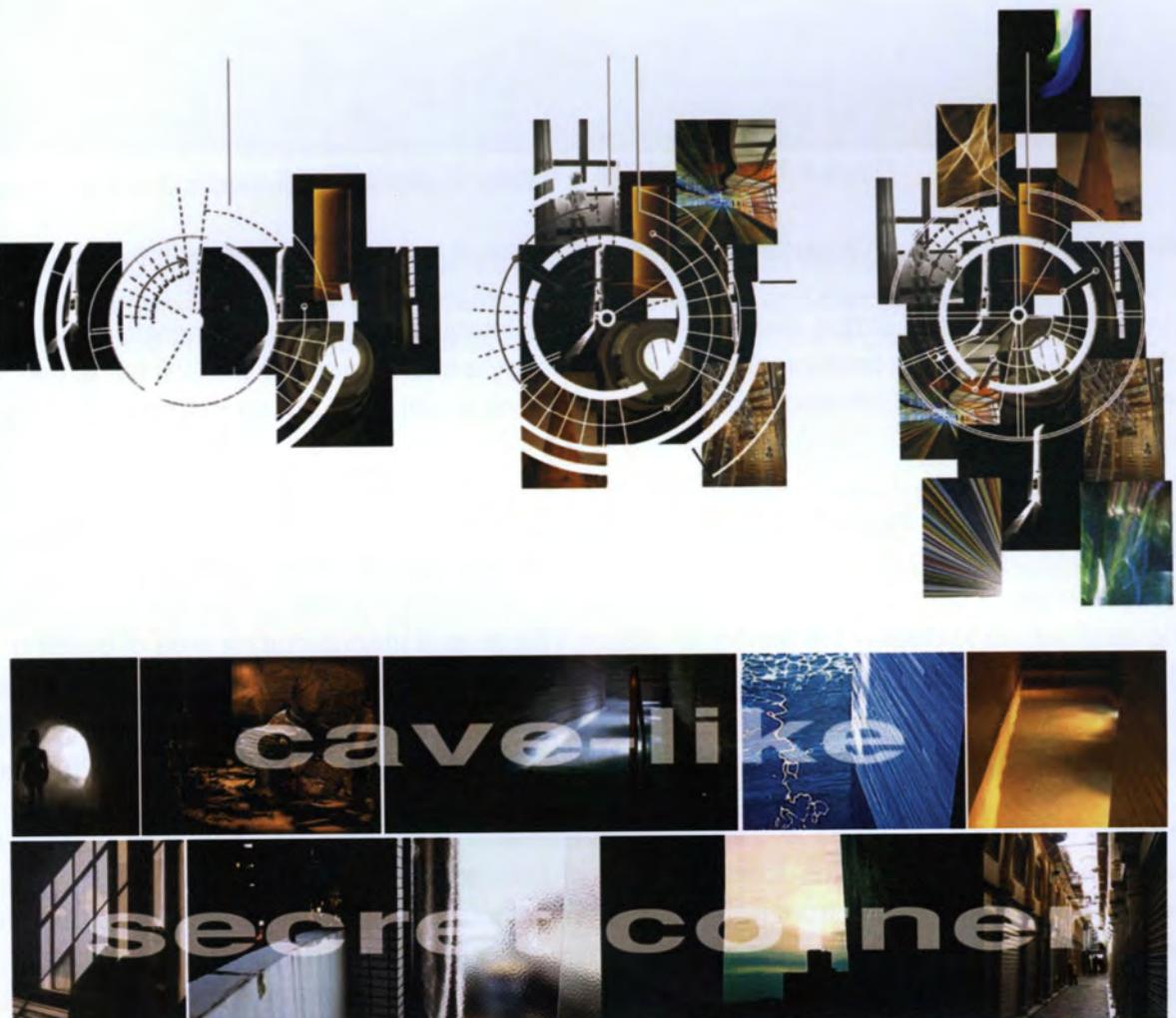


Figure 4.6 Mental Collages created as Individual spirals up the staircase or through a specific space

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Potential of the Site



Figure 4.7 Collage of Site & History of Libery Village

Memory and time plays an important role in the creation of a successful and lasting *experience*.

An individual must have strong memories, habits and imagination of the site, therefore the site context must be rich with tradition and history to convey a strong *memory of habit* but at the same time be filled with unlimited potential for the future to convey a *strong memory of imagination*.

Liberty Village which is located on the west side of downtown Toronto, has the prospective capabilities of capturing the memory of habit and imagination to its fullest. The site, sixty Atlantic Avenue, is currently an abandoned boiler house heritage building from the early 1900's being landmarked to display the history of Liberty Village as a manufacturing area of building and construction materials. Today, it is currently being transformed into a manufacturing area of the twenty-first Century. Instead of manufacturing of physical materials as it did historically, it has now changed into the designing of digital simulation, industrial and advertisement design.

The physical nature of the area also provides an excellent integration area and node point. It is far enough away from the hectic downtown core of Toronto, but close enough not to become totally dissociated from it. Traditional architecture happens on a *physical* lot and in a *physical* space, and the design does not consider what is around, below or above it, hence manufacturing architecture which is contained. Architecture with an emphasis on the experiential aspect realizes that experiences cannot be contained.

The result translates into an architectural manifestation that not only focuses only the space itself but also the approach and encounter towards a space. This is due to the fact that experiences do not happen only when one enters a space.

The decision to execute an architectural manifestation in this specific context is to provide an area with the greatest potential for an individual to experience history that they can be familiar with, yet be surprised at the same time.



Figure 4.8 All memory and time leads itself towards the S.P.A.

Describing the Em"bodied" Experience Within a Space

The embodied experience refers to the stimulation of the human senses when one engages with this design. Sight, smell, taste, touch, sound, movement and perception are engaged in many ways and in many combinations as one journeys through the architectural manifestation.

Vision

Through vision, light is often used to convey areas of convergence which has a public feel and the sense of darkness and shadow is used as isolated and private areas. By naturally forming a light well into the center of the design, the areas of light are within the core of the design and therefore, the general public will naturally converge towards the center of the design.

Through reflection, refraction and absorption of the light, it fades and becomes less intense as it hits more surfaces. The program of this design utilizes this to create an experience. The areas which are more isolated and private, such as the meditation and bath areas, are darker due to its lack of light and increase of shadows.

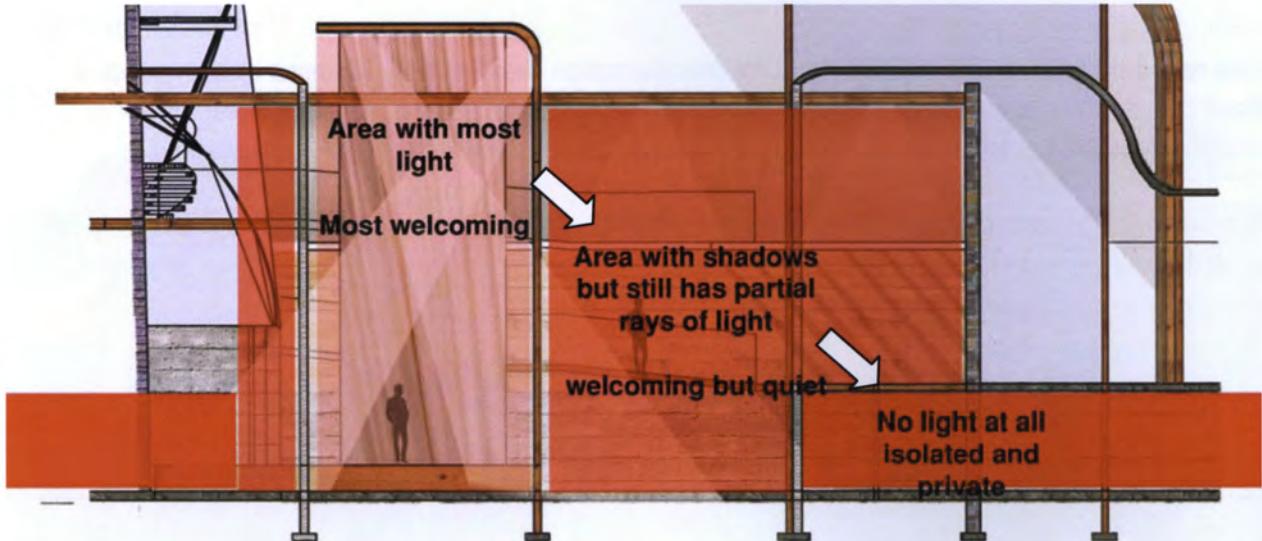


Figure 4.9 Public to private. Light to dark.

Hearing

The sense of hearing is often determined on the sense of how *much echo sound is made*. This can be determined by the size of the volume and the type of materials which is used within the volume itself.

Areas which have more echo sounds are often culturally pre-determined to be spaces where individuals are quiet due to the fact that sound can travel a long distance. Within this design, the quiet areas, without the aid of signs, are the areas which create the most echo, either by form or materials.

By form, the staging and lobby areas are quiet. By materials, areas such as the caves, due to its concrete materials, create an increased echo sound and therefore are pre-determined as quiet areas.

Smell

Smell plays an intricate role towards the role of this particular design. Smell can be used to evoke a lot of different emotions due to past experiences. This sense can also be used as invisible signage, drawing patrons into different areas of the design.

A good example of this is the placement of the cafe within the corner area. Due to its natural location, the design uses the smell of the coffee and concentrates it into an encased corner where it can leak outwards and therefore enticing patrons to wander their way to the back of the design without having to view the cafe from the distance.

Also due to the fact that it is in the shadow, the location of the kiosk itself seems to be secret and only open to those who can find it.

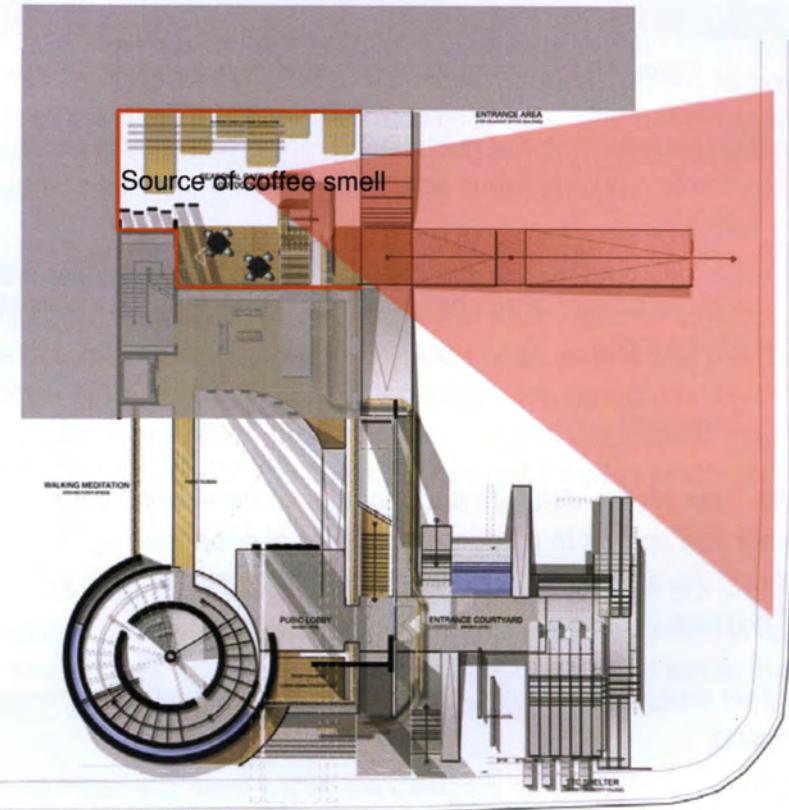


Figure 4.10 Coffee smell draws in visitors to an area where 'street viewing' is optimal

Taste

This sense of taste does not only go for food smells, but individuals know specific types of materials by what they smell. If these smell particles are large enough, they often land on the taste buds as well. An example of this is how patrons within the design itself will locate specifically the areas of the baths due to the fact that the smell and taste of concrete can be sensed by an individual. Hence, the creation of the slang term, *this taste likes concrete*.

Touch

The sense of touch is determined by the types of materials and their softness. The design exploits the use of softer types of materials as materials of converging and welcoming. Harder materials give off the sense of isolation.



Figure 4.11 Different types of materials used within the design

The design itself converges onto the public courtyard area which is created by wood panels and is showcased by the translucent fabric screen giving off the sense of a blanket of warmth in the main gathering space.

Areas such as the more private areas are made up of materials such as steel and concrete giving it a sense of hardness.

Perception and Movement

When one walks through the different areas of this spa one will experience different feelings. Individuals do not just appear in a space itself. Part of experiencing the spa is through one's movement through the space. As a result of the movement through the space, multiple perceptions of a space is created.

Individual use their imagination and expectation to form the missing pieces which our human body is not sensing.

The multi leveled exterior courtyard is an example of this. It moves individuals throughout the space and provide them with the opportunity for multiple views towards the same area. Each level leads individuals around and hopefully by the end of the space itself, an individual has sensed enough to create mental images of each possible section and side of the area. This therefore details and develops the individuals understanding of the space itself

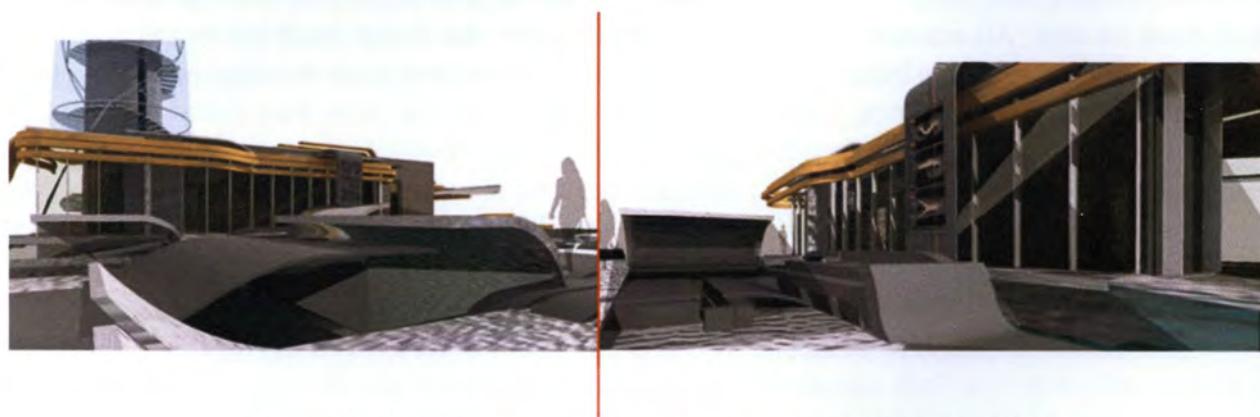


Figure 4.12 Same area, different experiences depending on location

Conveying Experiences through Materiality

In addition to the process of creating and designing architecture which emphasizes experience, the actual materials help convey an experience on an intimate level with an individual due to the fact that he or she can touch and get very close to a specific material. Space as previously defined is an empty area while place has a subjective quality to it. The design attempts to convey this subjective quality of space with the use of materials and details which an individual can intimately engage with.

Inspiration arose from the experiments performed with the different types of material because as the experiments were performed, certain characteristics of each material stood out. These characteristics have the potential to change the experience of an area within the design. The design mainly consist of concrete, wood and steel. As the feeling brought on by the materials can only be determined by each individual, the design attempts to use certain materials within certain spaces to provide only the potential to convey a desired emotion which an individual can feel.

With the choice of each type of material used, a specific feeling is desired but the material itself does not convey the feeling. The method in which the material is used within the space itself is what helps convey the desired feeling and emotion. The material is used within the design to help on a personal scale to convey the potential for experiences.

The following are the main materials used within the design:

Wood

Wood which is used in lobby areas can stimulate the feeling of being welcomed. It can also cause the feeling of warmth which can be inviting.

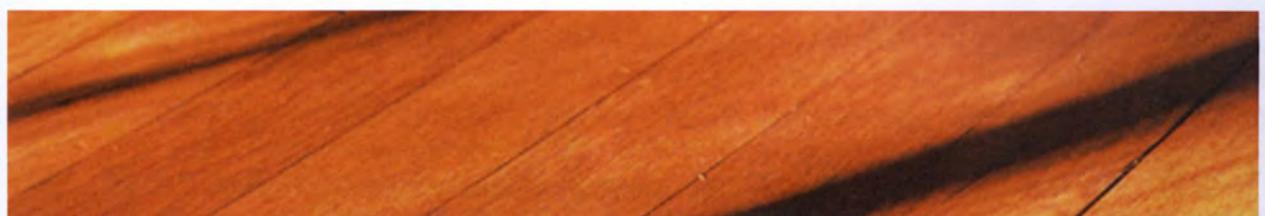


Figure 4.13 Wood as a material

Stone

Stone which is used in the baths helps create a private atmosphere. It can remind someone of a cave. A cave can cause one to feel isolated, as if nothing else in the world matters. It can also suggest to a person to explore the different areas of the bath.



Figure 4.14 Stone as a material

Steel

Steel on the other hand is often seen as cold and sterile. A place which is isolative. Steel is also used in another manner. Many may feel as if steel is hard but it can be manipulated in a manner which can cause an individual to feel as if it light. By making steel into grates it can stimulate the thought and feeling of flying.



Figure 4.15 Steel as a material

The manner in which each material engages with another also helps intensify the experience of the space as well due to the fact that if an individual has two recent experiences, recalling and referencing the differences between the experiences becomes much easier.

Not Just Materials, but what they mean and convey

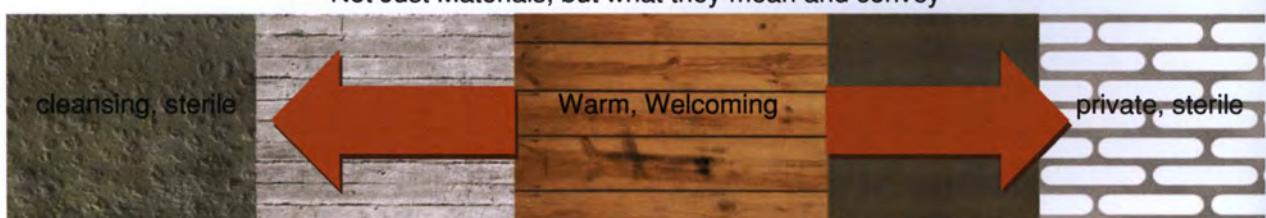


Figure 4.16 How the position of materials can determine individuals experience.

iv: Traditional Versus Phenomenological Architecture

After being aware and investigating the different aspects that create an experience. One can start to look at the design as a whole.

In a traditional architectural sense, the design can be described as a building which is a spa that offers the function of meditation and ritual of bathing.

There is much more to it in the objective of designing architecture which places an emphasis on the human experience. To begin to understand the experience which one will have within this place, one needs to take a journey through the different parts of it. Below is a series of experiential stories helping to guide one through the different areas of the spa. Within each of these areas many senses are triggered and meshed to create an experience.

While there is an order in which these stories are told within the thesis, it is also important to note that these stories could be read in any order. By doing this it not only creates one told story but it can tell an infinite number of stories depending on the path and journey an individual chooses to proceed through a space.

Words can only narrate the experience but to fully give an experiential aspect towards the design, the writing is accompanied with two sets of representations to help convey:

- 1) Abstract photograph to spawn and help individual recall an imagination or memory
- 2) Renderings being used as a tool to show how the design is used as a driver to attempt to convey a similar experience through the design itself.

Sectional drawings were also created with the same intent. In addition to the renderings which display the location and geometric forms of the design, details drawn sections as well as sections created with actual materials were done.

The intent of the extra types of sections:

- 1) Drawn sections with details drawn around it helps the focus of the design to be placed on the small details which help convey a feeling of a design as well as how details might be perceived within a certain location
- 2) Actual sections were created with actual materials to convey the materiality of the design and how each material engages with each other.

The end result attempted to fuse together the drawn detail section with the section created with actual materials to help develop a section which emphasizes on aspects such as perception, materiality and detail.

Courtyard
Traditional Method

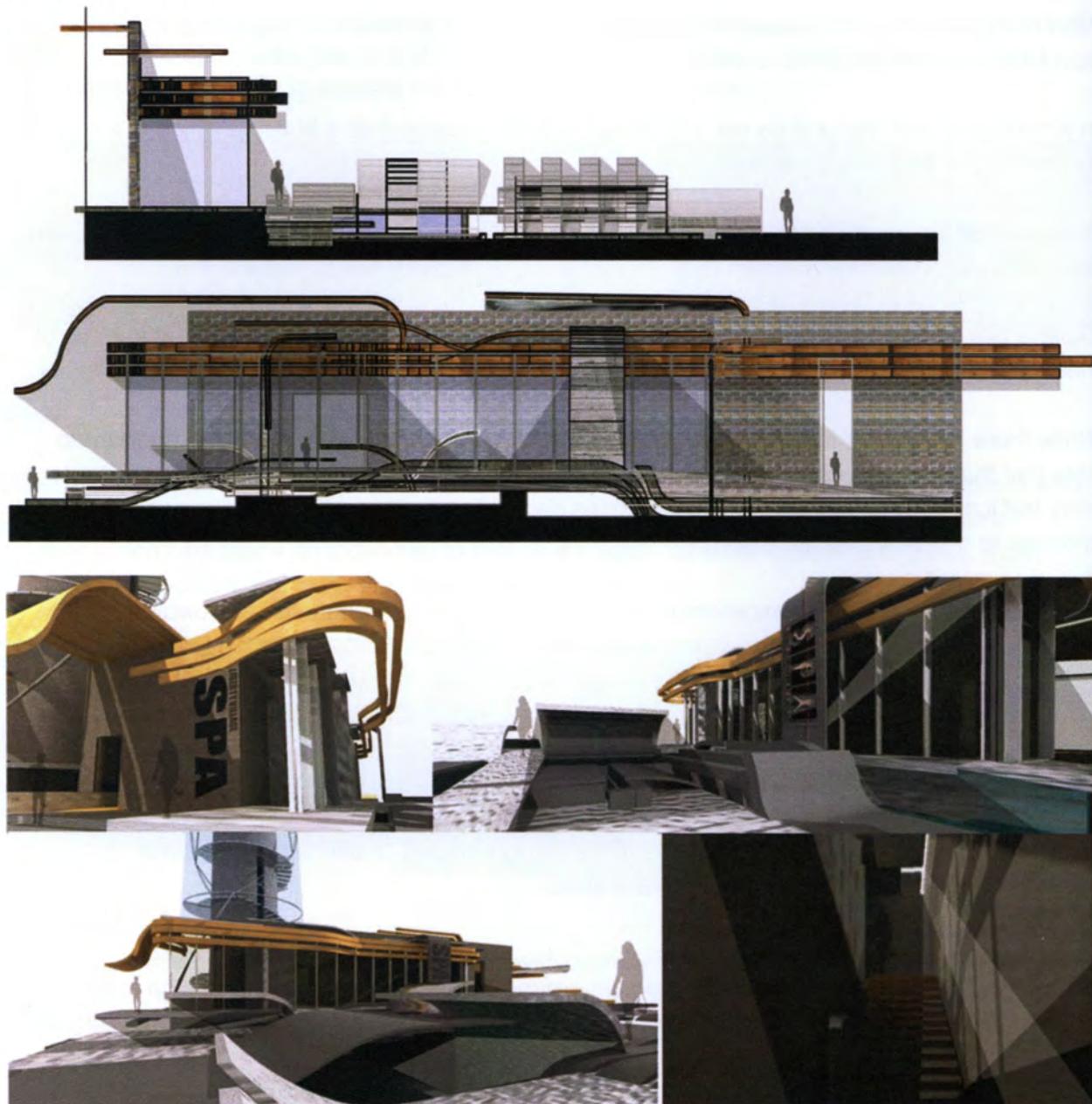


Figure 4.17 Approaching and meandering through the hills and plains

The SPA begins at the courtyard area with a small visitor's parking area for the members of the spa. The courtyard is characterized by its undulating reinforced concrete panels which curve and bend to create this wave-like pattern.

These wave-like concrete panels partially hide a raised platform which leads the visitor into the main entrance vestibule. From the vestibule, depending on each visitor's needs, can either lead to the members entrance or the reception desk.

Phenomenological Significant Landscape A: Approaching Experience



Figure 4.18 The phenomena from a distance – Landscape A

Getting out of the car across the street. From a distance, the wave-like undulations curve, hide and wrap various parts of the weathered brick face.



Figure 4.19 Landscape A, part 1

Protruding through the hills and plains towers the cylindrical tower and is intricately wrapped with a steel structure like a deoxyribonucleic acid (DNA) strand. Behind me, the sun shines through the low skyline and hits the forecoming hills, creating valleys and holes of darkness.

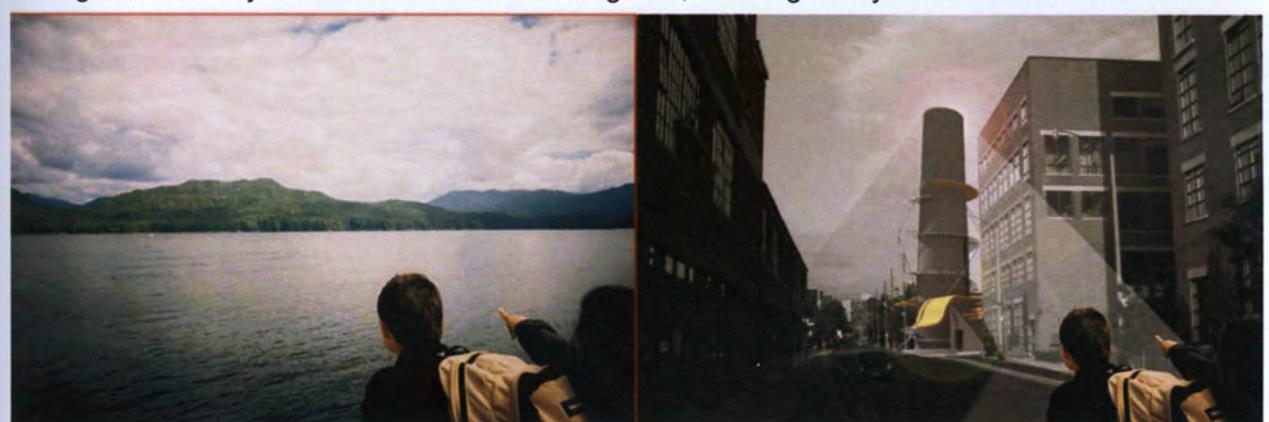


Figure 4.20 Landscape A, part 2

Wandering around the perimeter of the hills, I wander to find a meandering path towards a higher ground. I climb the hills and when I reach the top, I see the entrance. Before I head for it, I look back; make a mental panorama of the farmer's market across the street, the hint of coffee smell coming from the turn around the corner; breath in the air and face up to receive the sun shining on my face.



Figure 4.21 Landscape A, part 3

I exhale; not expecting anything, proceed into the darkness.

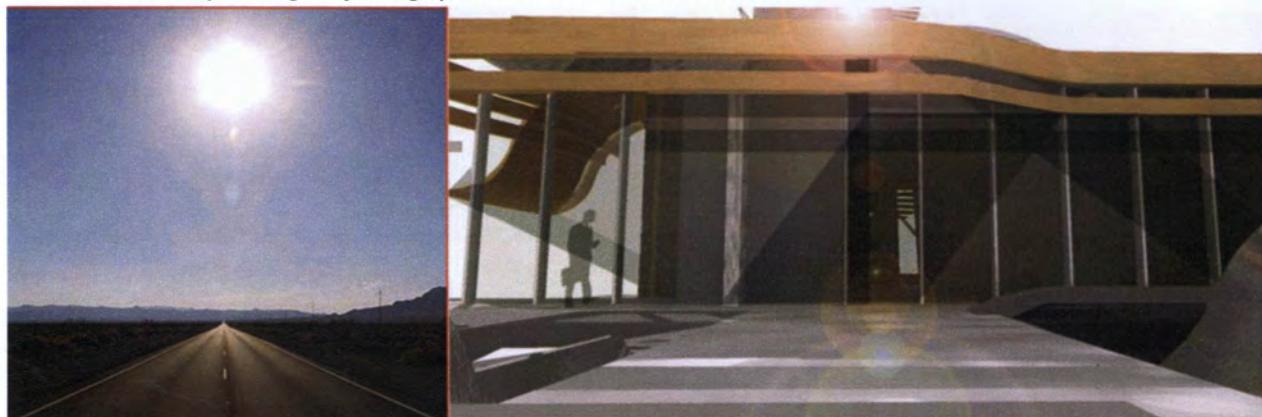


Figure 4.22 Landscape A, part 4

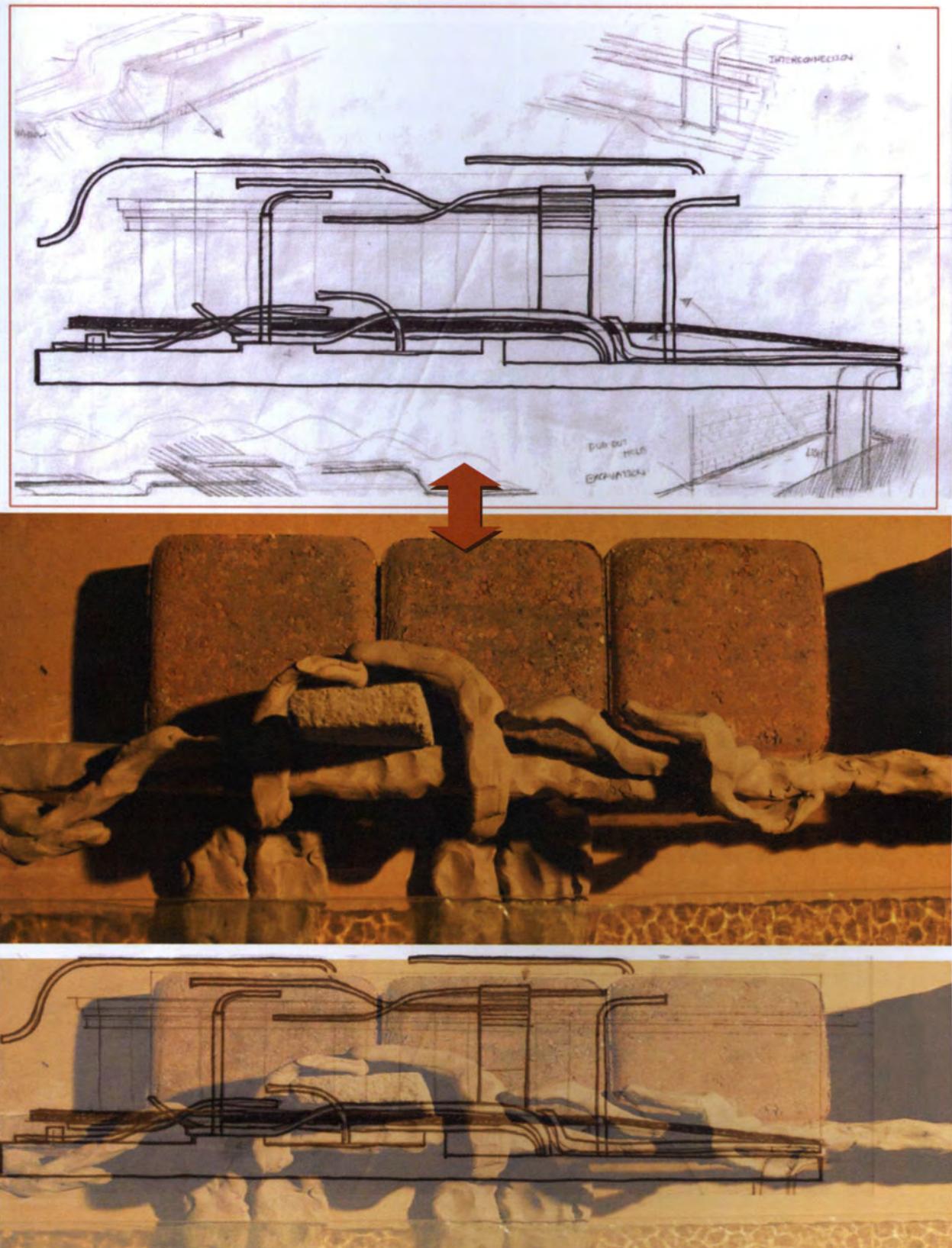


Figure 4.23 Phenomenological Section of Landscape A

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Public Lobby
Traditional Method



Figure 4.24 Entering, Preparing and Staging

Entering the design, narrow wooden pathways lead visitors down and around the main private courtyard area from the ground floor. From this level, one can view down onto the lower level courtyard area where members gather together and convene.

The courtyard area has a translucent fabric screen to allow privacy for members which are currently engaging within the walking meditation bridges and require more privacy.

As well, the fabric screen provides a partial glimpse of the types of materials which are dominant on each floor. On the lower level is concrete and stone, the ground level is wood and second level is steel.

Phenomenological Significant Landscape B: Entering and Staging Experience

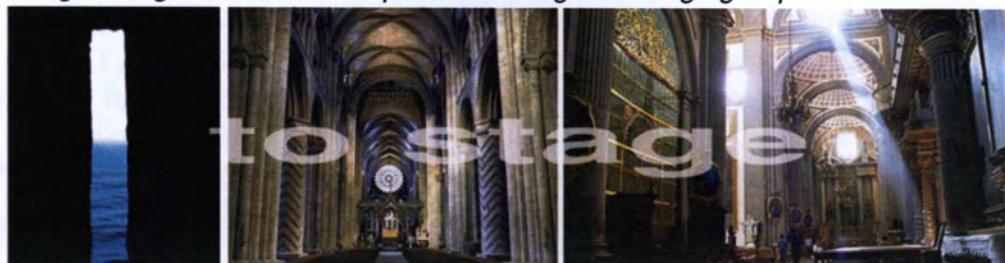


Figure 4.25 The Phenomena of entering, preparing and staging - Landscape B

So many choices, so many choices. I stop and ponder which is the correct path. Remembering the last time I came here, I know if I walk down the narrow wooden plank stairs, which creaks and cracks as I take each small step, takes me faster to my destination. But I have time today and decide to take it slow.



Figure 4.26 Landscape B, part1

I grasp the doorknob, turn it and pull out. A gush of dusty air reminiscent from its boiler house days makes me pause for a second before stepping out of the concrete stone and onto the warm, welcoming wooden interior.



Figure 4.27 Landscape B, part2

The wooden interior is warm and welcoming, but from the corner of my eye, I see through a small slit in the wall a huge fabric screen and it seems to wrap and cover the stage like a blanket. As I walk and discover the opening of an arcade with a fabric screen, I feel as if I am behind a stage, with the curtains closed. Like a show which I am playing a part of, I am anxious, yet nervous, waiting patiently for the curtains to open and the *show* to begin.



Figure 4.28 Landscape B, part3

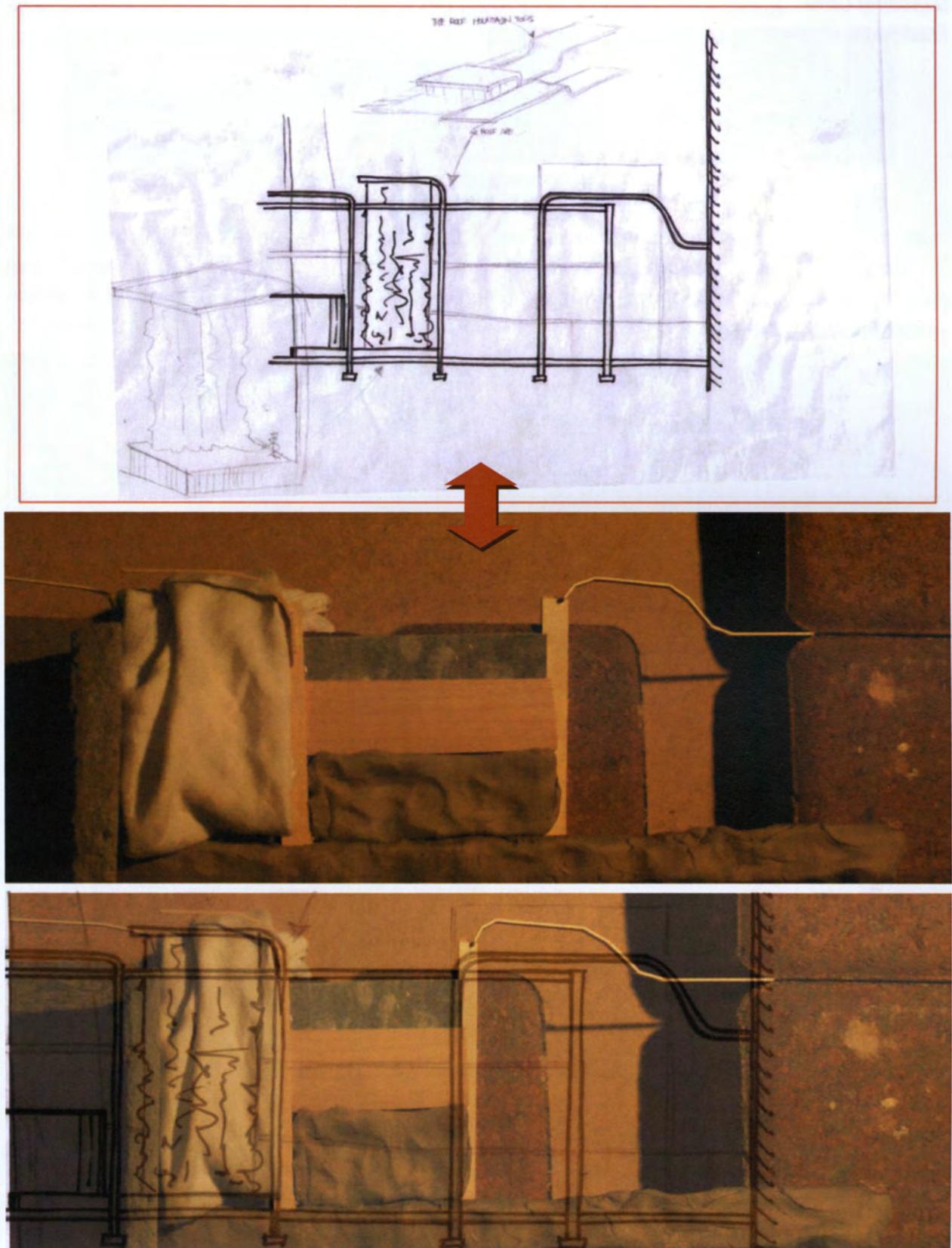


Figure 4.29 Phenomenological Section of Landscape B

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Seasonal Cafe
Traditional Method



Figure 4.30 Resting, Lounging and Interacting in the *Secret Spot*

The coffee kiosk within the design is located in the empty back lot area between the existing boiler house and the office building which owns the boiler house. The coffee kiosk creates an exterior lounge area to rest in a shaded area.

Phenomenological Significant Landscape C: Lounging and Meeting Experience



Figure 4.31 The phenomena of lounging and drinking coffee - Landscape C

The hint of bold coffee enters into my nose and gives me a reminder of the tiring day I had. My head turns and all I see is the weathered corner of an abandoned boiler house. I investigate, moving slowly towards the corner as the smell of coffee grows stronger. I squint my eyes, trying to view into the shadows but only imagine what is behind within the shadows.



Figure 4.32 Landscape C, part 1

I turn the corner and enter the shadows. It all appears clear to me now. I see a secret corner, like a tree clubhouse I used to be in as a child, which is warm and cozy. I hear the murmurs of people chatting and laughing from various points, and the hunger in my stomach, along with the sweet smell of pastry, convinces me to get a coffee and a donut.



Figure 4.33 Landscape C, part 2

I sit down onto an open bench, place my food onto the table and position myself to have a panoramic view spying out onto the semi-busy streets of liberty village.

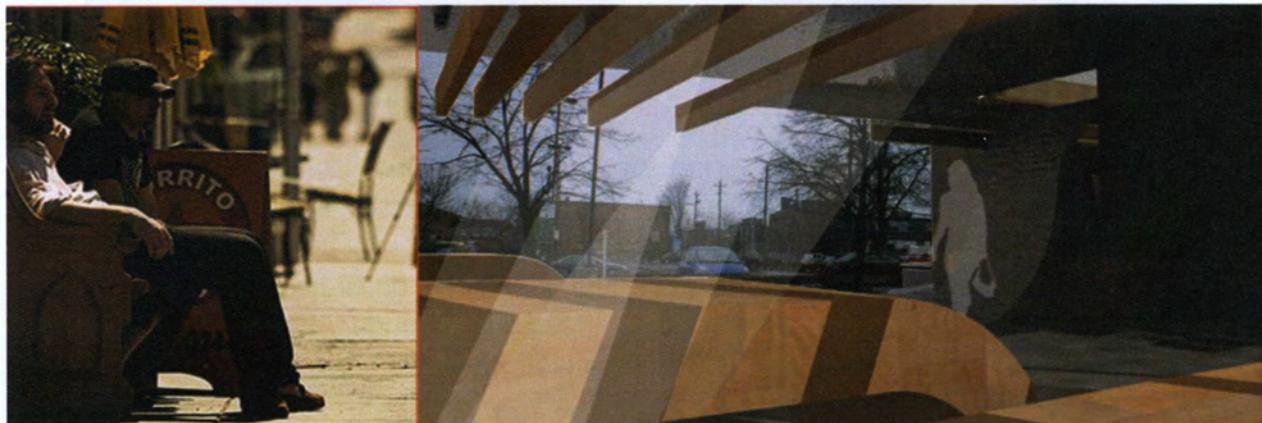


Figure 4.34 Landscape C, part 3

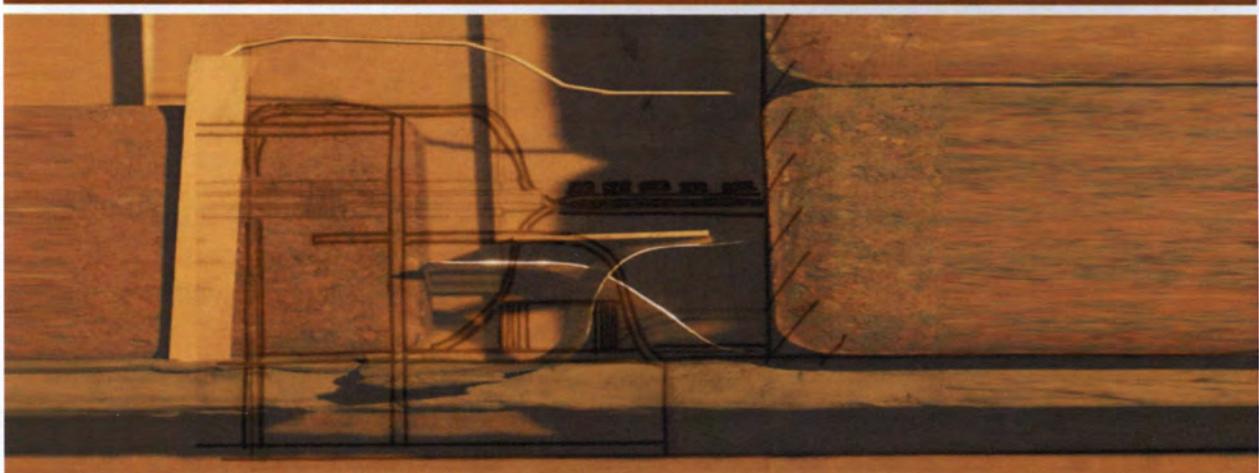
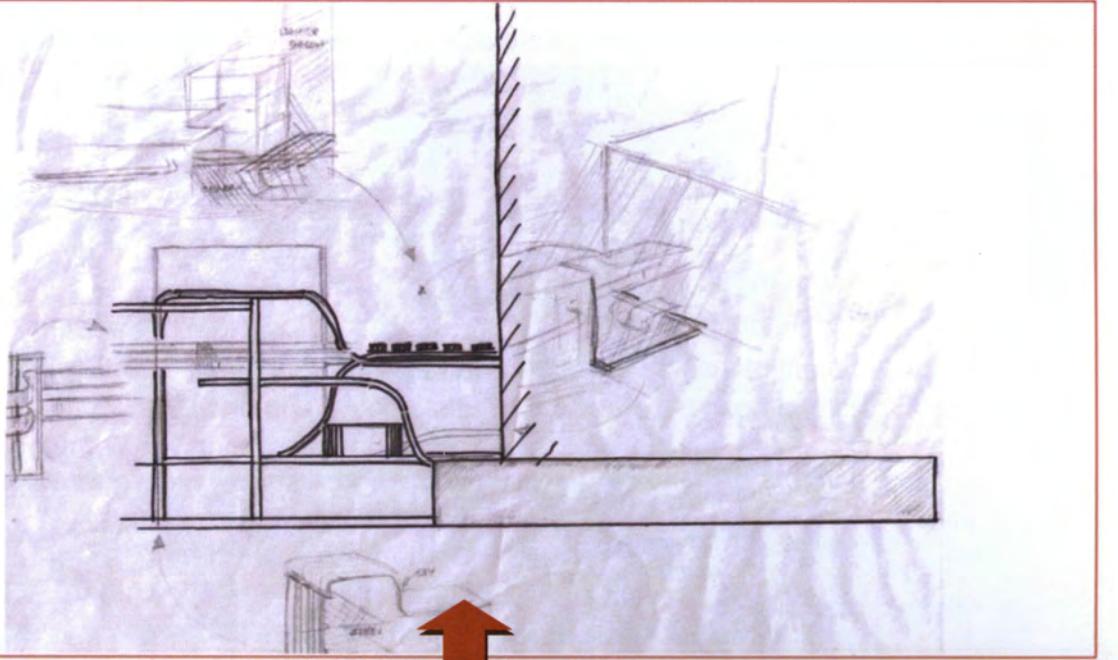


Figure 4.35 Phenomenological Section of Landscape C

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Thermal Baths
Traditional Method

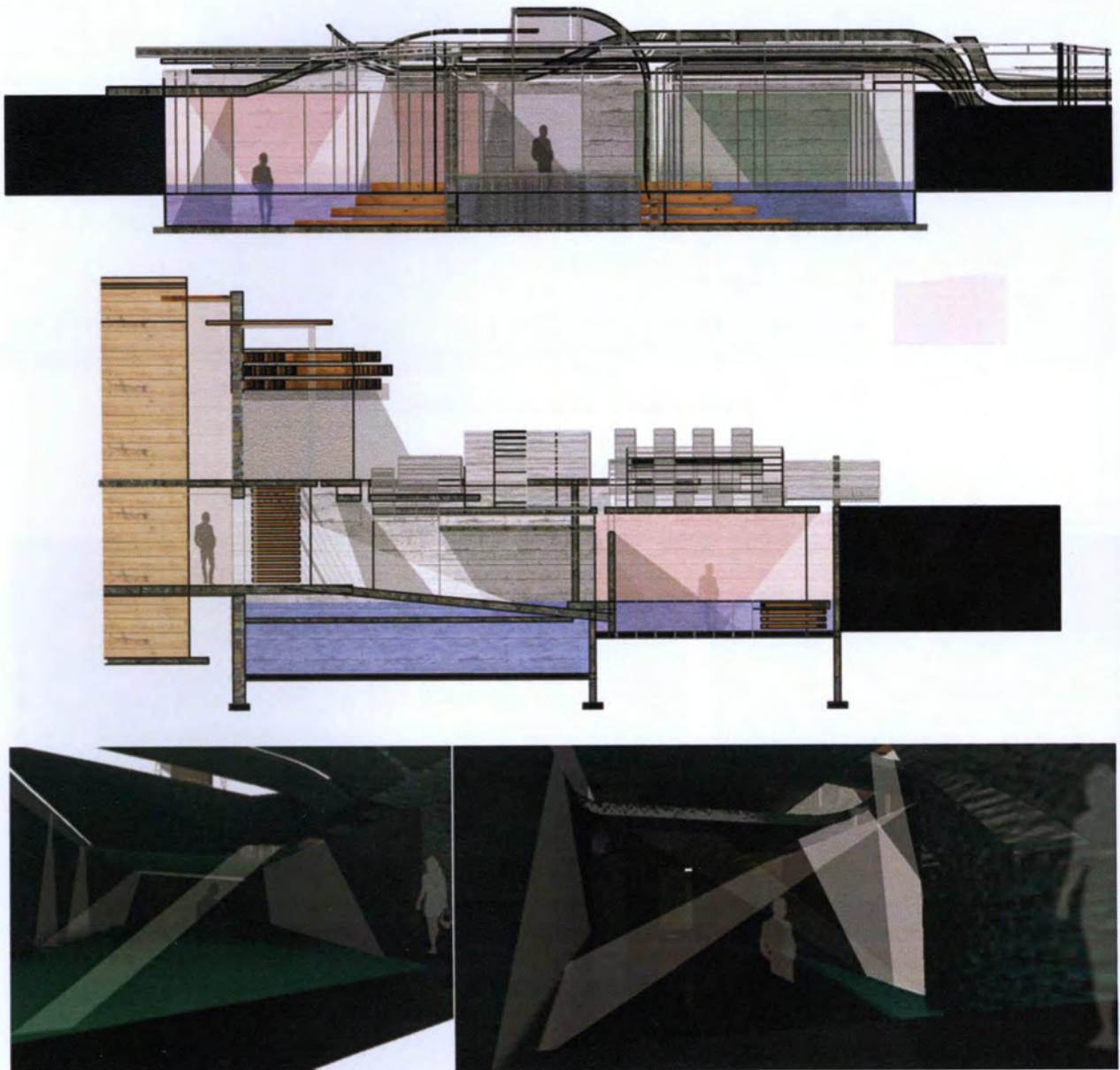


Figure 4.36 The act of cleansing in a sterile cave

Upon walking down towards the baths, patrons are led down a ramp where they are greeted by lukewarm water in the main bath area. Slits from the above courtyard creates rays of light shining down onto the water and is then reflected off the water onto its concrete walls.

When patrons reach the end of the main bath area, they are greeted with a platform where they can choose to enter the cold bath or the hot bath. The cold plunge is characterized by a room which has its concrete painted a turquoise colour and the hot plunge is characterized by the concrete being painted red.

Phenomenological Significant Landscape D: Cleansing and Bathing Experience



Figure 4.37 The phenomena of cleansing and bathing - Landscape D

Walking down to the underground level, the warm feeling of wood turns into the hard, sterile, private nature of stone and concrete. As I leave the stage into the quietness of the caves, the brightly lit area and hustle and bustle of the interacting community gets quieter and fainter as I enter the private act of cleansing.

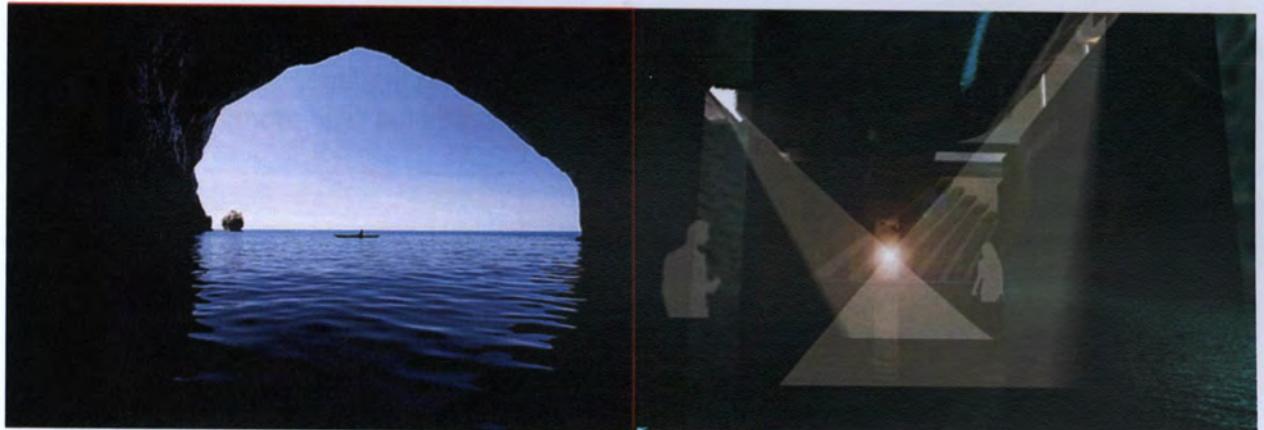


Figure 4.38 Landscape D, part 1

Instead of loudly plunging into the pool, I slowly submerge not only into the lukewarm water, but into the cold nature of darkness. The cold and wet feeling begins with my feet, to my knees, then to my stomach.

Feeling insecure about my body image I choose to meander into the shadows and not into the dusty rays of light shining and flooding the stone walls. I feel more comfortable with slowly cleaning myself and not rushing my bath.



Figure 4.39 Landscape D, part 2

At the end of the tunnel, I have a choice; the steam brushes onto my face and I am enticed to enter the hot springs of the *red* room but as the sweat drips down my face, I question the hot springs and think about dipping my head in the icy cold waters of the *blue* room; What a dilemma.

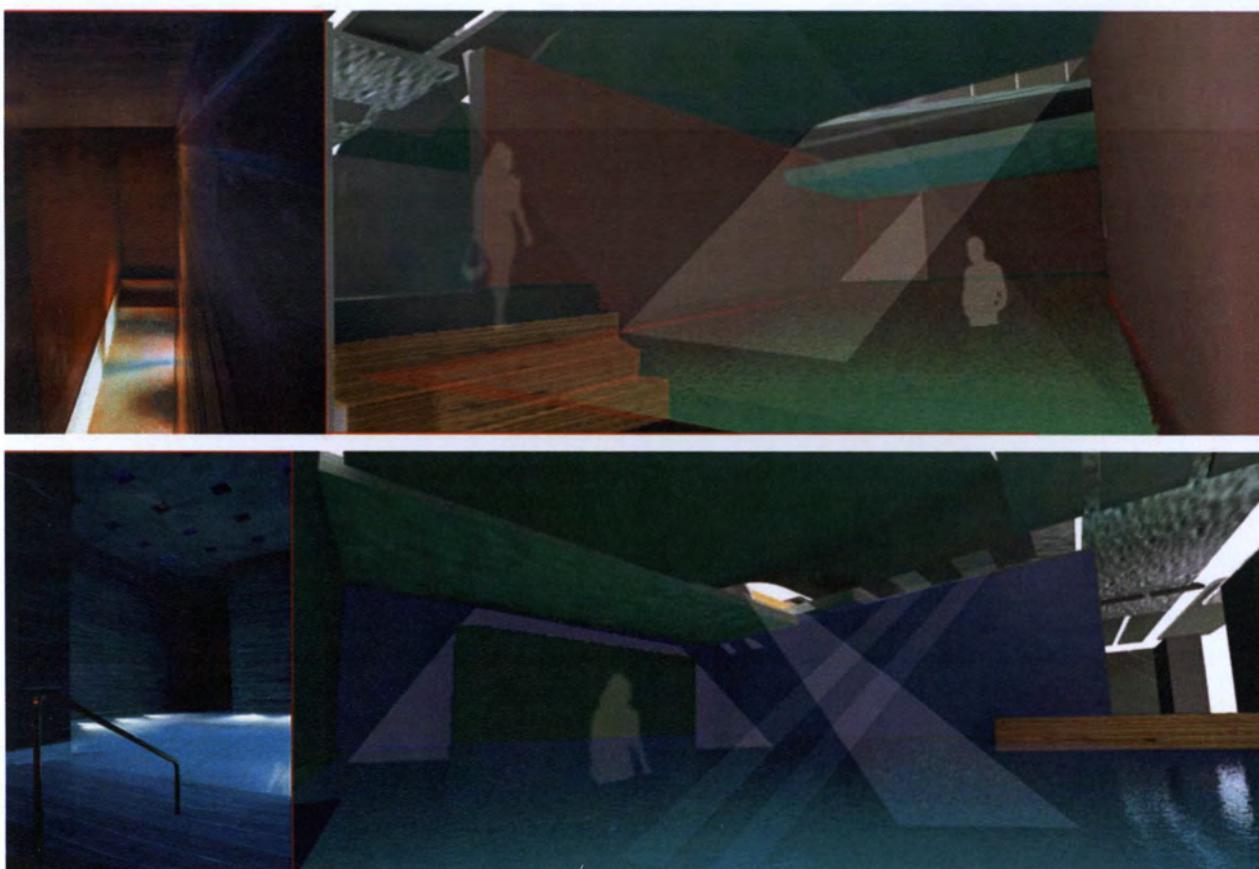


Figure 4.40-4.41 Landscape D, part 3

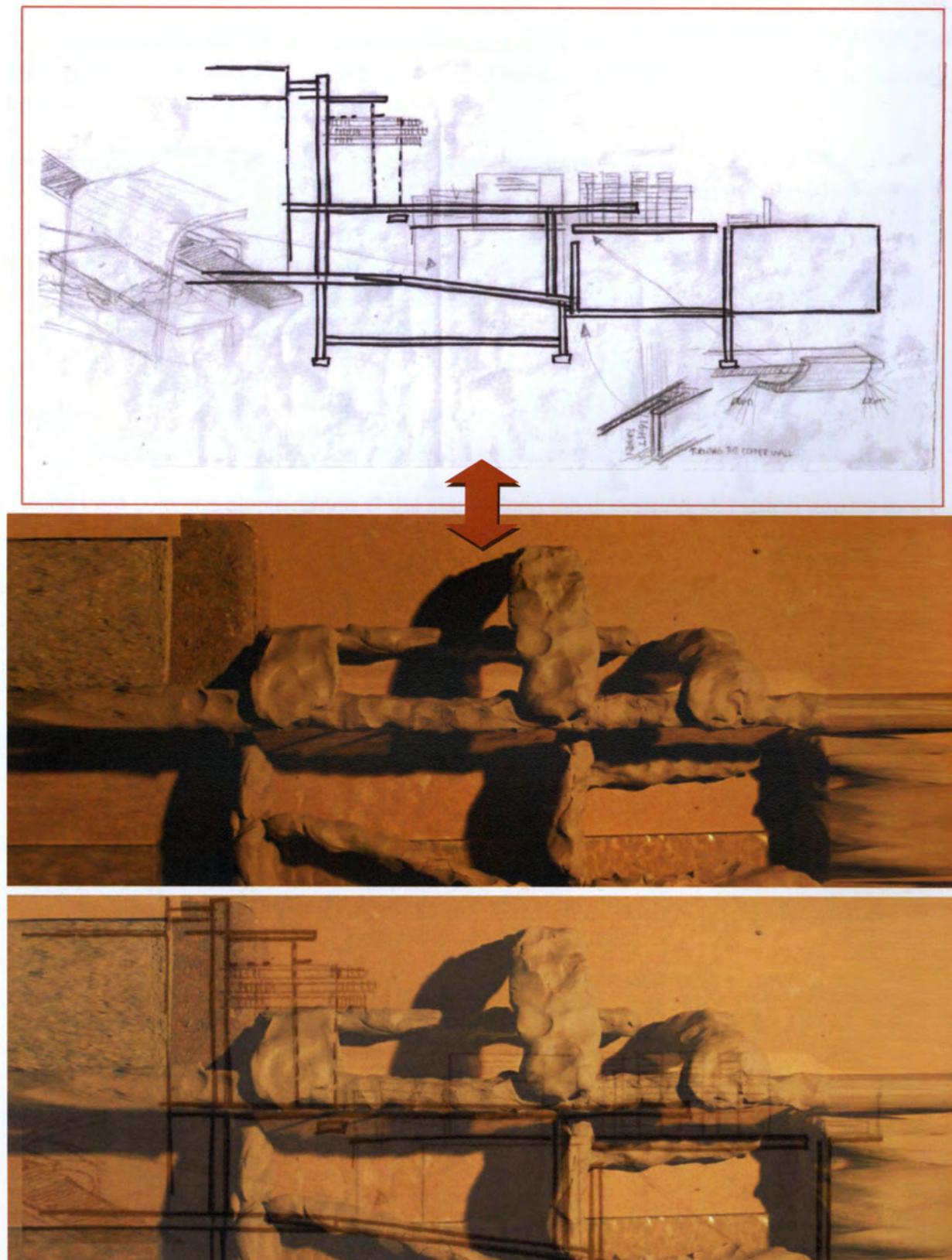


Figure 4.42 Phenomenological Section of Landscape D

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Walking Meditation Bridges
Traditional Method

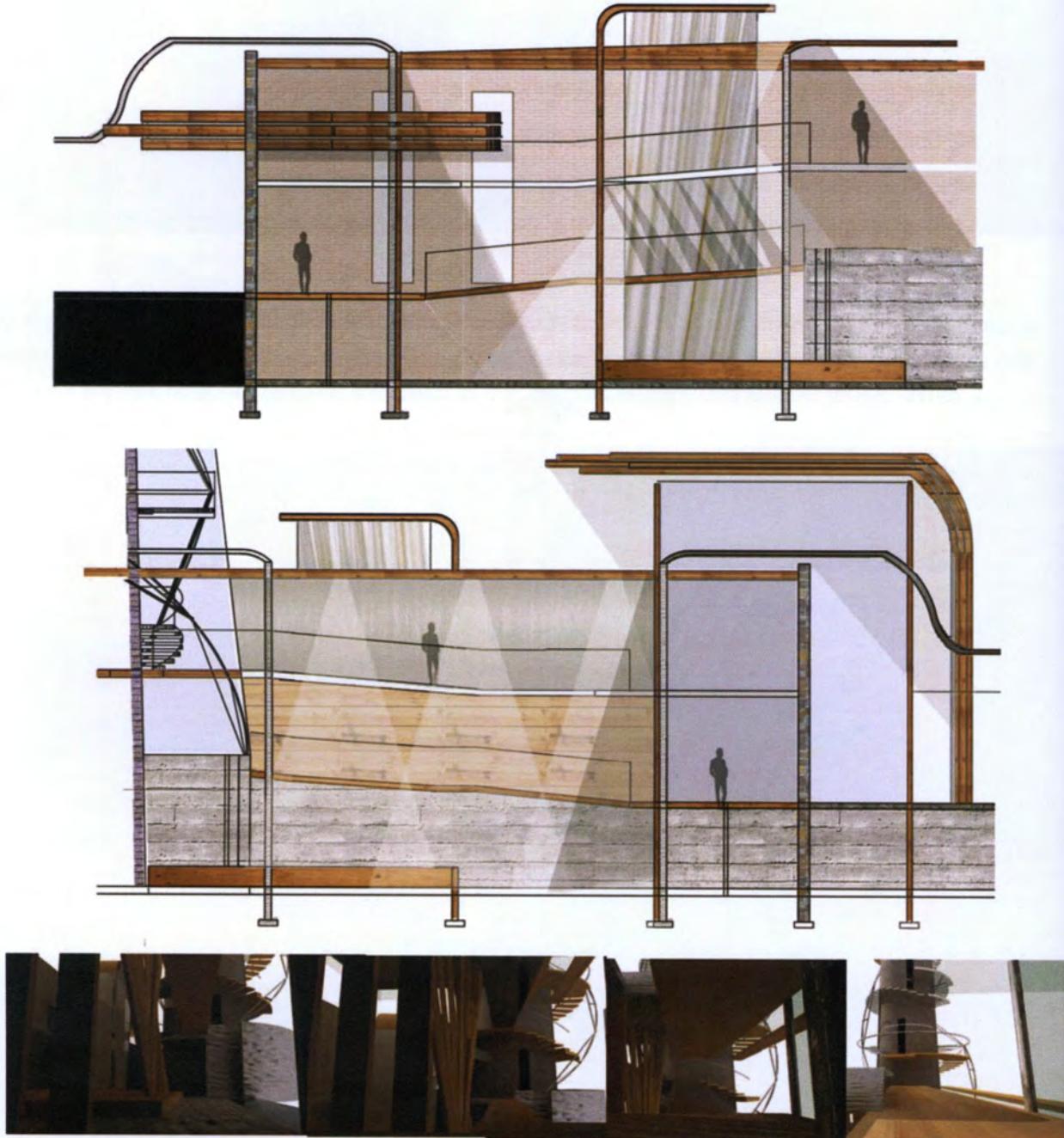


Figure 4.43 The act of Crossing Obstacles to a Goal

The walking meditation bridges are characterized by the type of elevation and materials. To link the three bridges together as well as to provide privacy, a translucent screen is placed along the east side of the three bridges.

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The lower level pathway is characterized by stone and concrete, ground level by wood and the second level by steel. Each level has a different sense of experience as they walk across the bridge towards the private meditation area.

Phenomenological Significant Landscape E: Walking and Crossing Experience



Figure 4.44 The phenomena of crossing - Landscape E

The towering smokestack is menacing. Gathering enough courage, I take a deep breath and walk towards it. Like any goal in life, to reach for something comes with various obstructions and obstacles. A goal is not satisfying unless it is through pain and struggle.

Taking hard cold and sterile nature of the steps along the underground, I shiver and try to reach the goal to rest and warm up within the smokestack. I feel isolated and the stone conveys a feeling that nothing can live there, hence I feel alone.

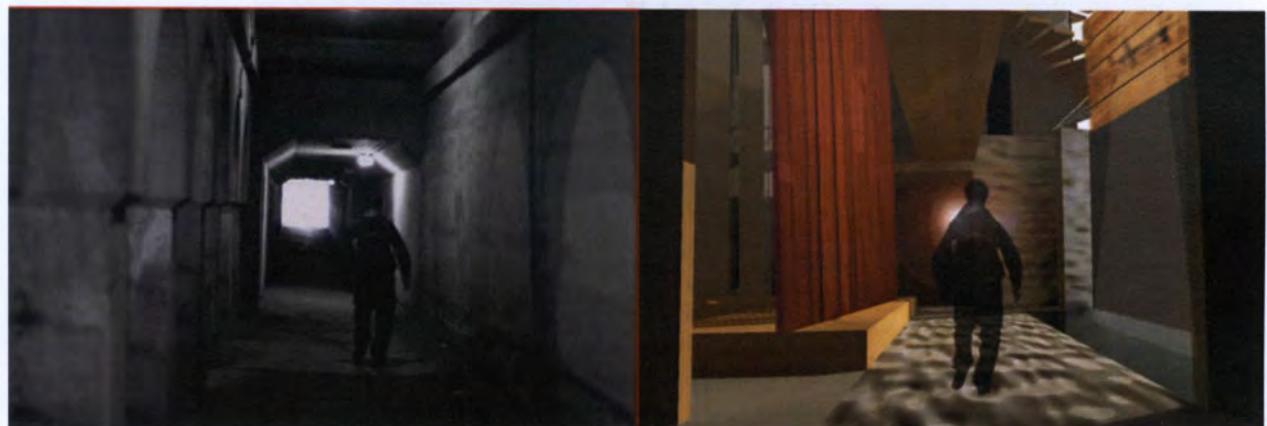


Figure 4.45 Landscape E, part1

Walking along the wooden steps along the ground floor, I thought I would feel better but I do not no longer feel cold and isolated, but my fear of heights causes me to pause and look to my left and right just for a second, with the fearful thought of the injury or death I can sustain if I fall. With each step and each crack of the wood, my fear heightens.

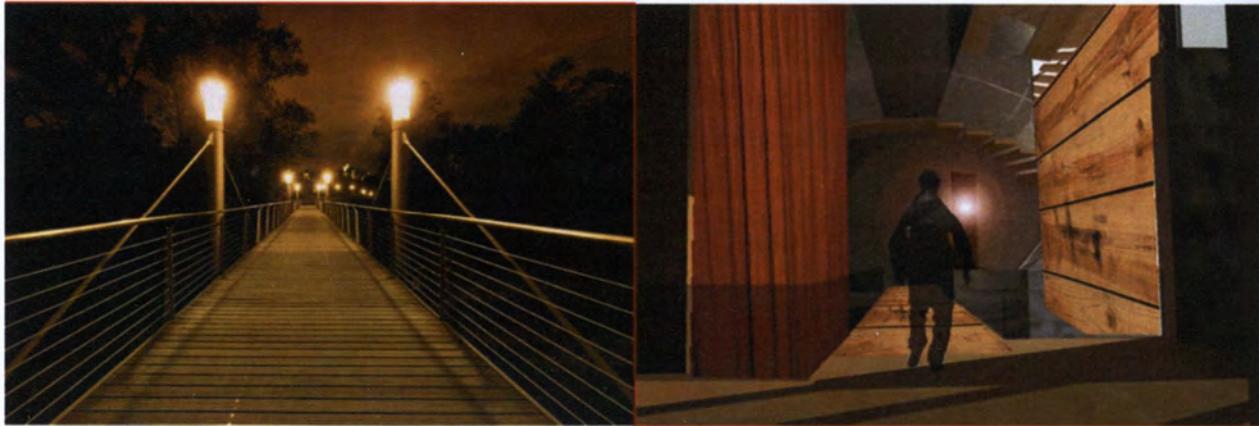


Figure 4.46 Landscape E, part2

As I walk the steel grates, I am at the height of my fear because I look down, see and wonder how small pieces of metal bound and woven together can hold my weight. I cross, reach the end, look back and my fear turns into awe and imagine and remember the travel across, and realize I felt like a bird gliding through the air.



Figure 4.47 Landscape E, part3

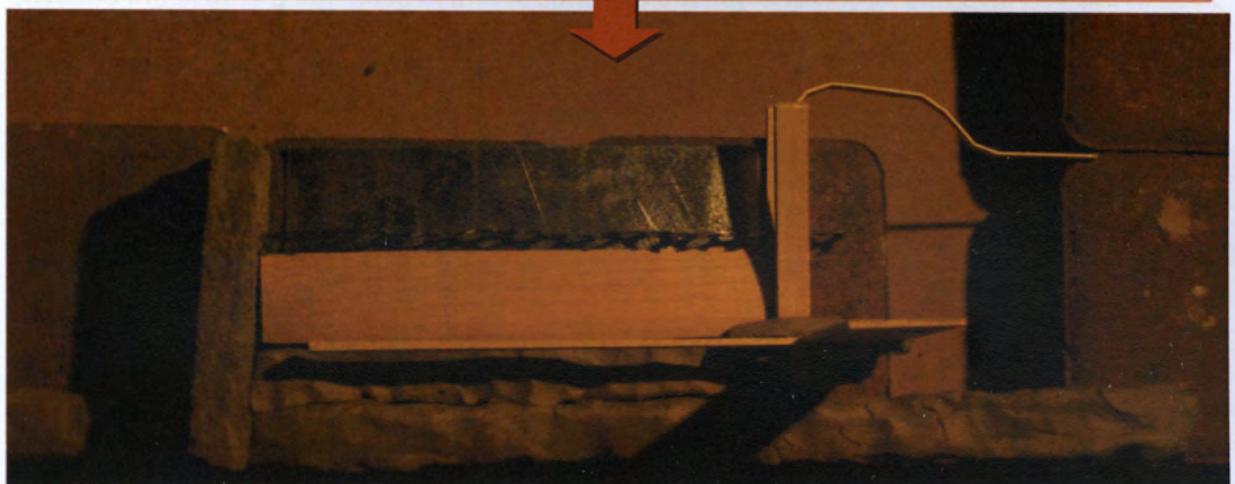
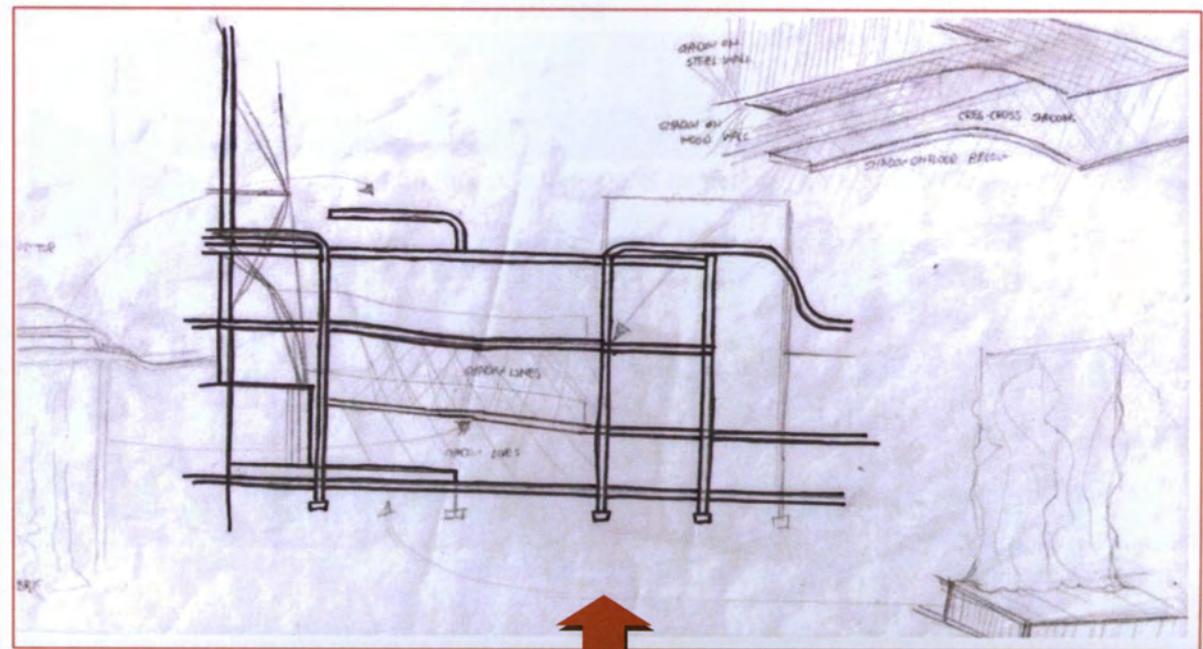


Figure 4.48 Phenomenological Section of Landscape E

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*Main Meditation Staircase
Traditional Method*



Figure 4.49 Ascending the Spire

The main spiraling staircase is spaces shared between private basic meditation platforms as well as an imagery deck for private imagery meditation.

The spiral staircase sneaks up and through the smokestack spire and is possible due to the strategic removal of some of the brickwork to create small slits up and around the staircase. The slits themselves not only allow individuals to go from the interior to the exterior of the smoke stack, but also allows light to shine and create rays of light within the spire itself.

Significant Landscape F: Asending Experience



Figure 4.50 The phenomena of asending - Landscape F



Figure 4.51 Unrolling a spire

I ascend the spiraling staircase in and around the privacy and notion of the smokestack. As I spiral around, I begin to get dizzy, so I pause, regain my bearings, and look at the distorted proportion of the space and admire the panoramic scene that the landing of the staircase provides.

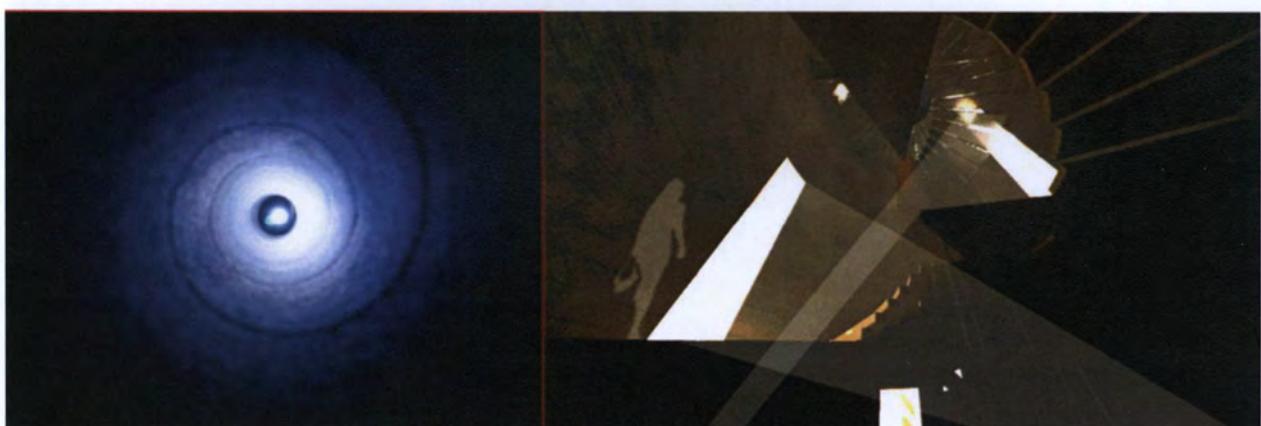


Figure 4.52 Landsape F, part 1

As I determine that I am ready to move on, I see a narrow light which leads into the darkness of the smokestacks interior. It is so dark inside that the shadow even leaks and protrudes outward onto the landing on the exterior. Being a narrow slit, so narrow that my shoulders have to slide into the slit one at a time, I enter into the *smoke*.



Figure 4.53 Landscape F, part 2

Right away, the light inverts itself. The dark narrow slits now become light sources providing lines of light onto the adjacent cylindrical wall. Through all the darkness, I look up to see a point source of light. Like a car crash, it is difficult to keep your eyes on it, but hard to tear your eyes away, I focus onto the light and head up and reach for the source.



Figure 4.54 Landscape F, part 3

By reaching for the light that through rational explanation I know I can never obtain, I still reach for it and continue up the stairs; Hence, *aspiring up a spire to be inspired*.

All Significant Landscape Together: One of infinite combinations of experiences together

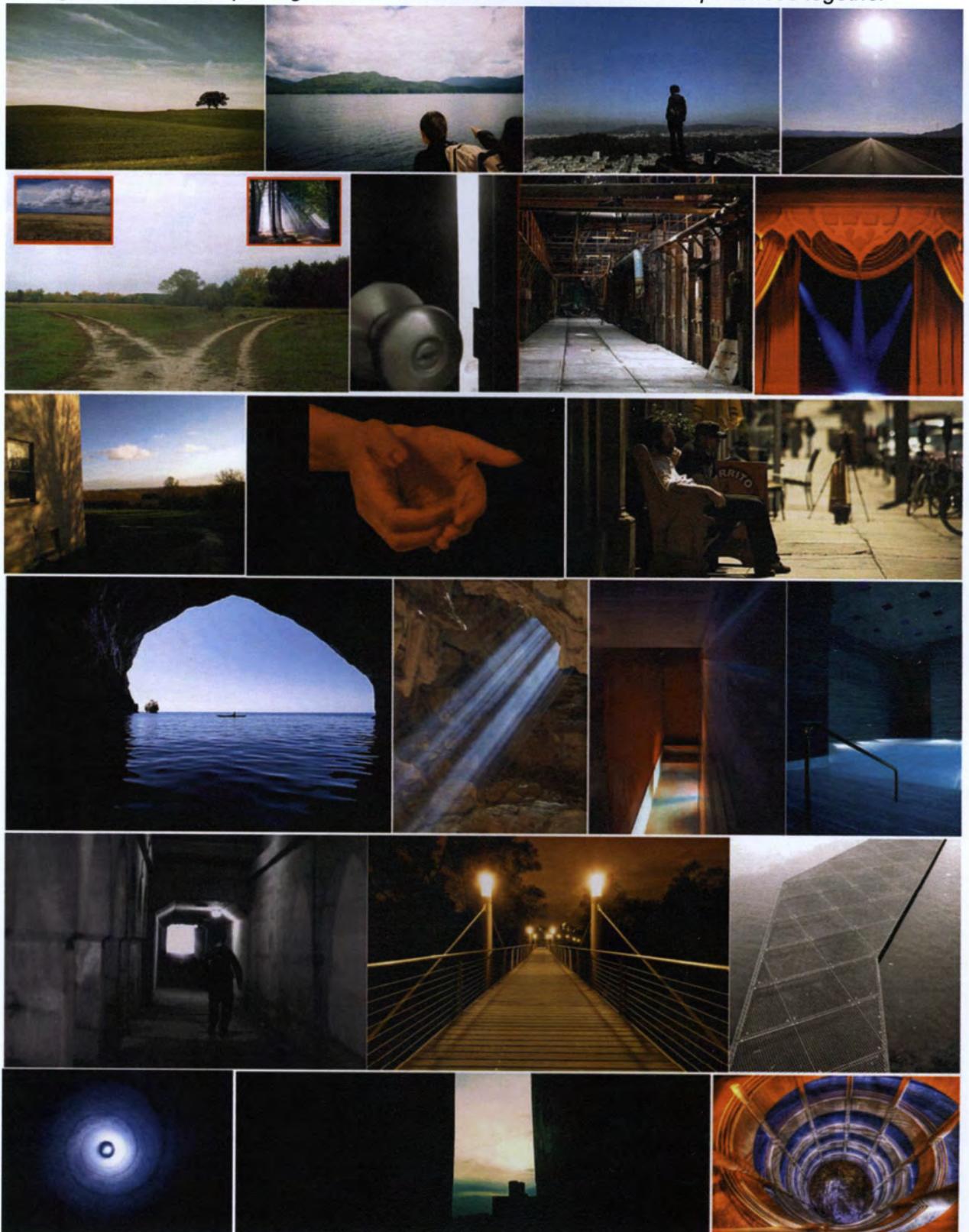


Figure 4.55 Landscapes together

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Figure 4.56 Landscapes with the design as a driver

iv: Physical Models

Much like the phenomenological experiments and the inspirational pieces of artwork that were concurrently done, they combine, distorted, and manipulated to create physical models which led to the end result of the architectural manifestation.

Like the experimentation themselves, they started strictly and solely based on phenomenological aspects and then filtered through to expose, distort and discover various phenomenological aspects to apply them into a scale fit for an architectural design of a spa.



Figure 4.57 Phenomenological experimentation to create and discover phenomena and experience



Figure 4.58 Phenomenological experimentation created within a given volume of space



Figure 4.59 Abstract artwork to form tangible materials to provide the potential for phenomena and experience

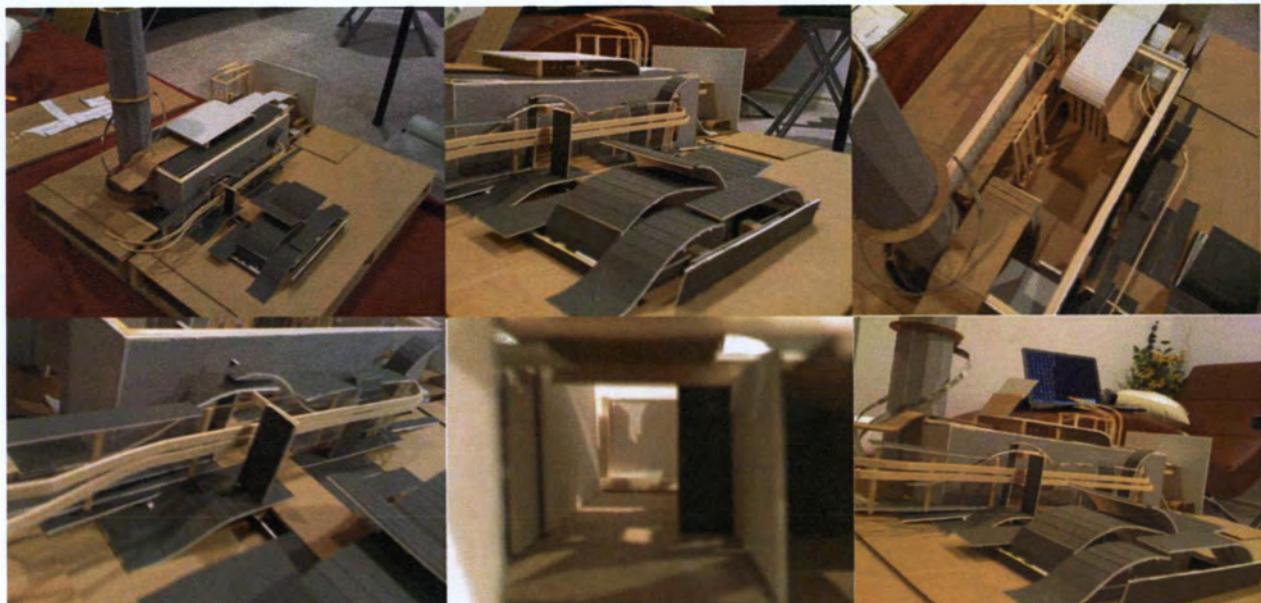
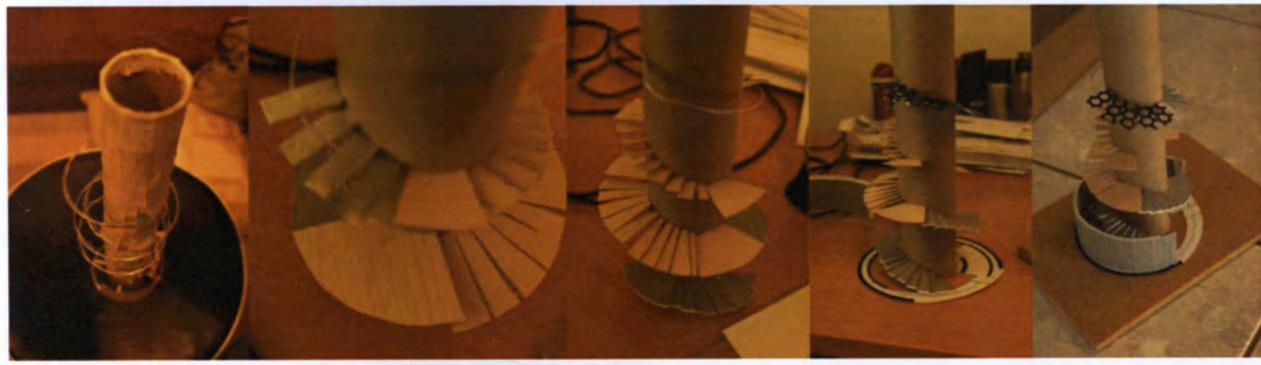


Figure 4.60 Traditional architectural model to provide location and form of design

The above collage of pictures displayed a finished architectural model done with traditional methods which included forming a geometric shape with card stock and cardboard.

Much like how the sections attempted to fuse together and focus on creating an architectural manifestation which intends to focus onto some of the essentials of human experience, actual materials which were chosen to be used within the design were used in the development of the final physical model of the design





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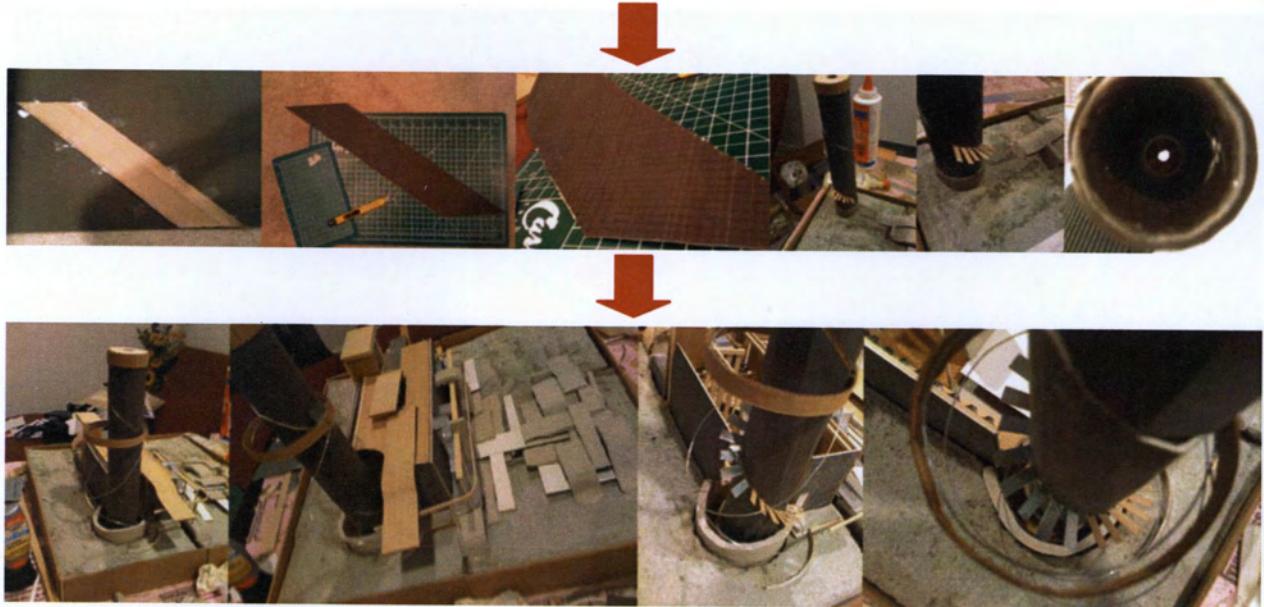
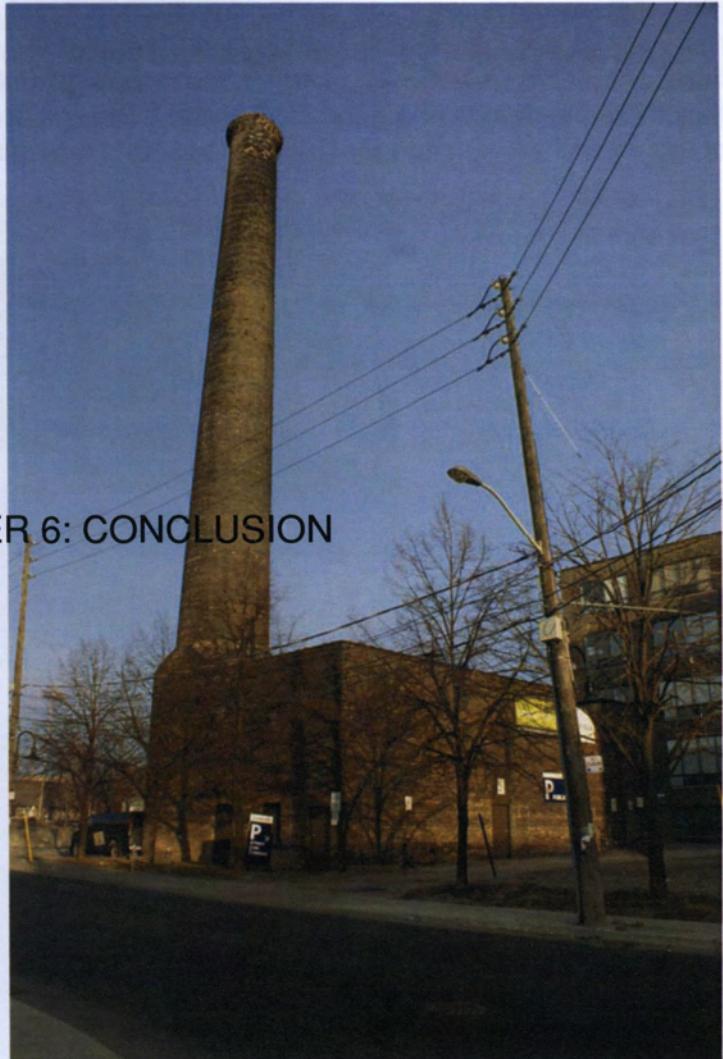


Figure 4.61 Documentation of the process and creation of the phenomenological model dealing with phenomena, experience, perception, materials and textures

CHAPTER 6: CONCLUSION



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i: Summary

Traditional architecture has given the world many aesthetically pleasing pieces however there is a vital component missing. A component which is approached and attempted when architecture places an emphasis on experience and places it into an otherwise cold and lifeless geometric structure.

Architecture with an emphasis on experience focuses on essentials such as place, memory and time, the original five senses, perception through movement and materiality. It also is aware that each of these essentials work in a manner that they are not mutually exclusive but are intertwined. The result of focusing on the essentials of human experience places the human factor into the design of a geometric object. The spa presented here is a physical manifestation of this idea of architecture that places focus and emphasis onto phenomena and experience.



Figure 6.1 Framework of ones' *sense of experience* through the site consisting of phenomenological aspects, materiality & meaning, memory & time, history & site, creativity, imagination, sense of place.

ii: Future Consideration

Like with any good methodology like the ones before phenomenological architecture, there leaves space for improvement. With the ever changing technological advances of the world, the results of these advancements can only be a further impact on the advancement of human experiences within architecture. Topics such as through hyperreality(Baudrillard, 2007) and virtual reality are current issues facing the essentials of human experience.

However, as technology has often become a barrier to the advancement of the experiential factor within the world, the advancement of human experiences is possible if a proper balance between technology and experience is maintained.

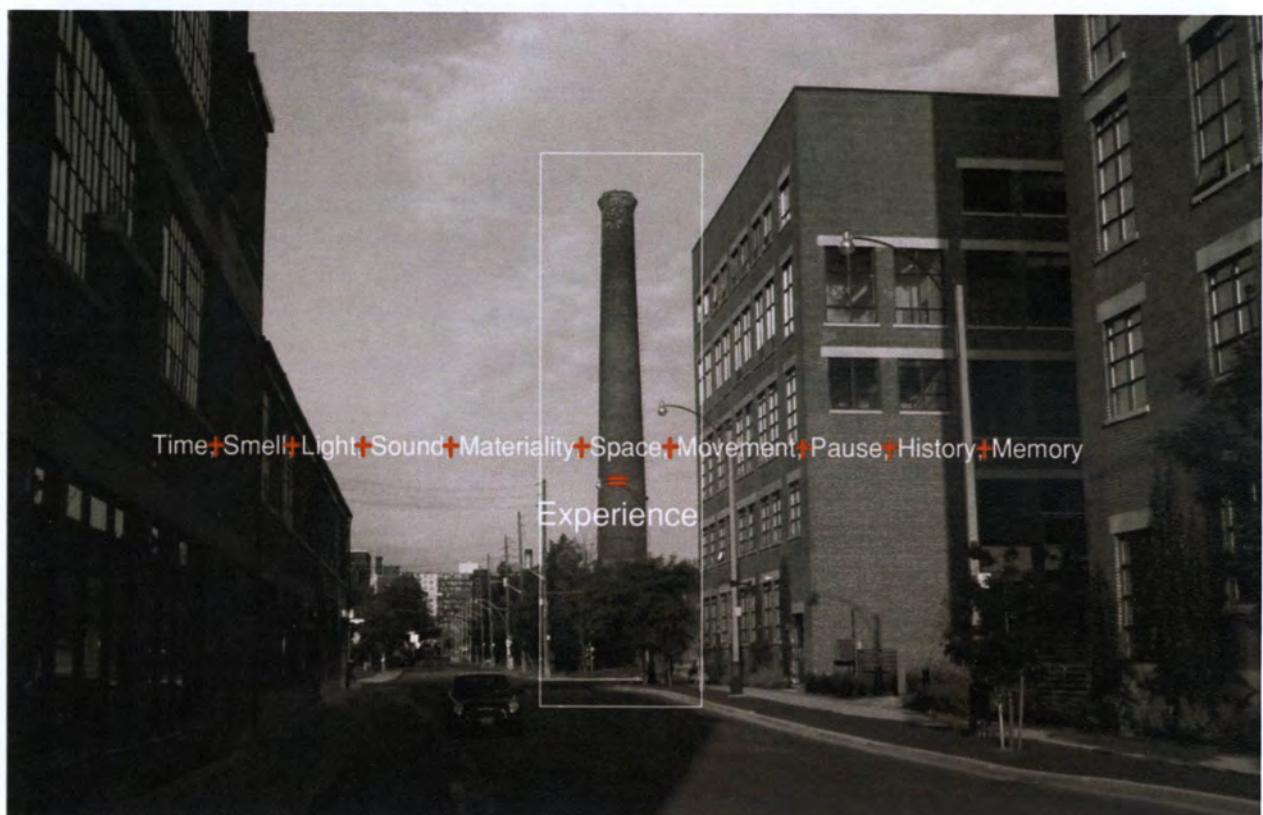
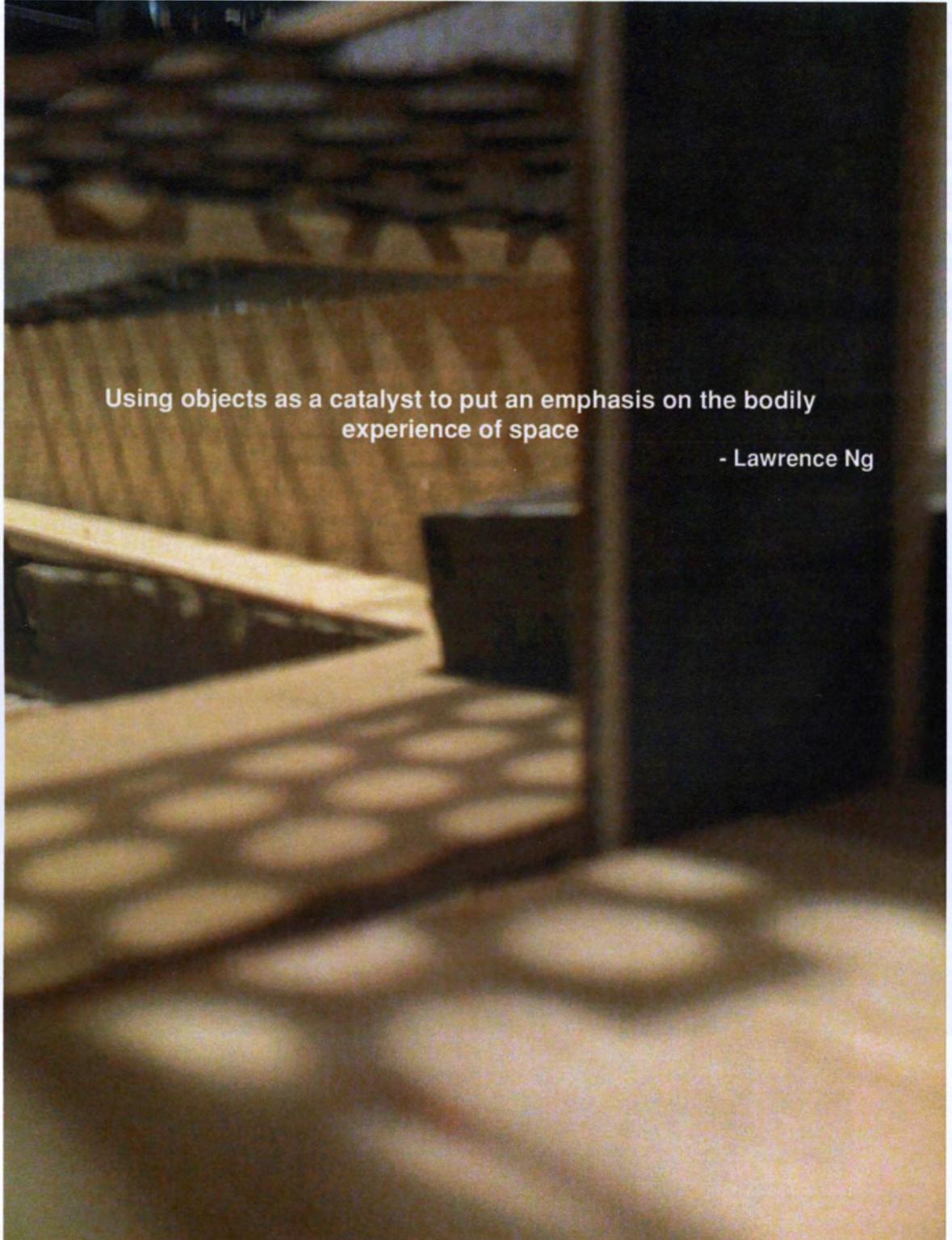


Figure 6.2 Time + Smell + Light + Materiality + Space + Movement + History + Memory
=
Experience



Using objects as a catalyst to put an emphasis on the bodily
experience of space

- Lawrence Ng

Figure 6.3 Phenomenological design interior shot with Lawrence Ng quote

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CHAPTER 8: APPENDICES

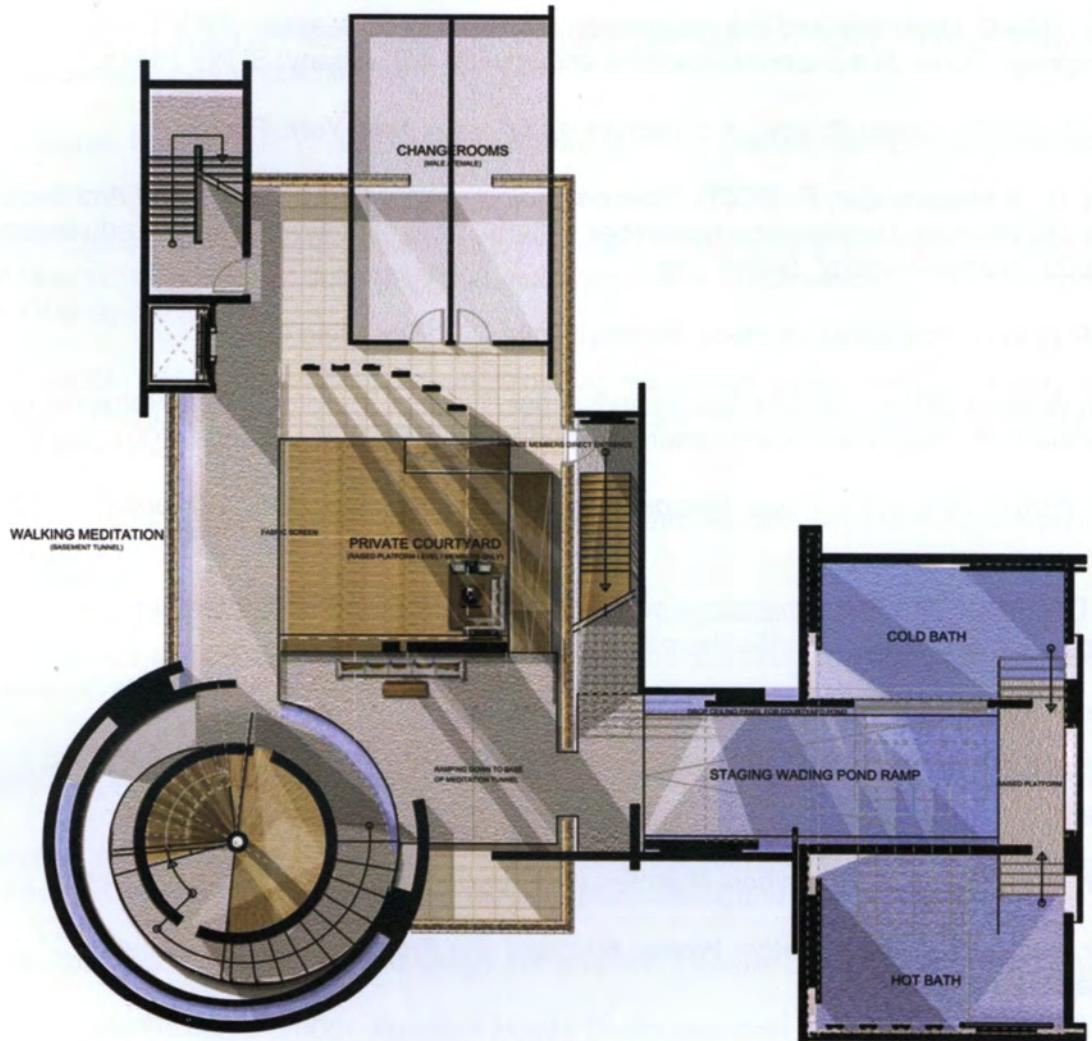


Figure 8.1 Underground floorplan

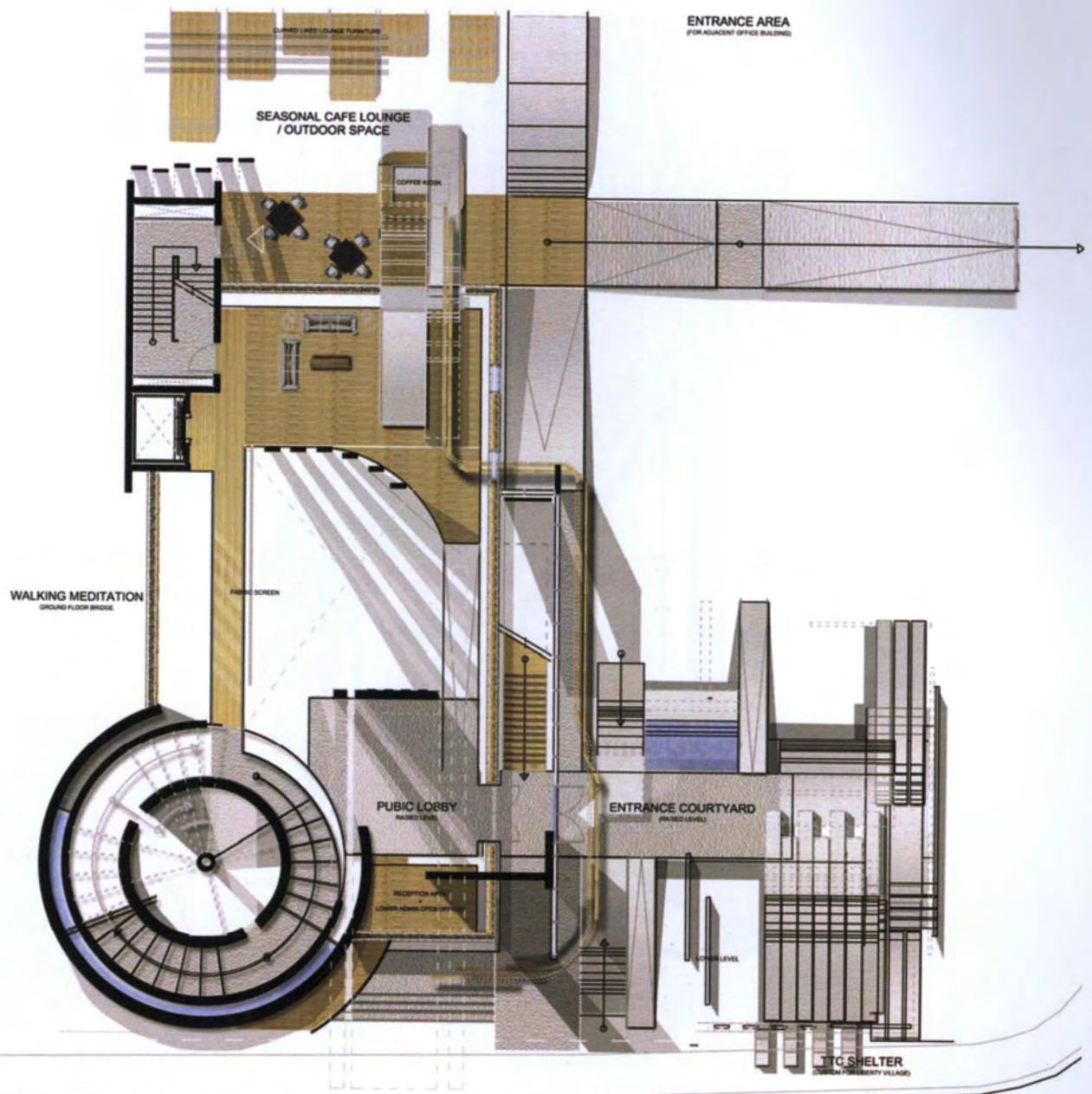


Figure 8.2 Ground floorplan

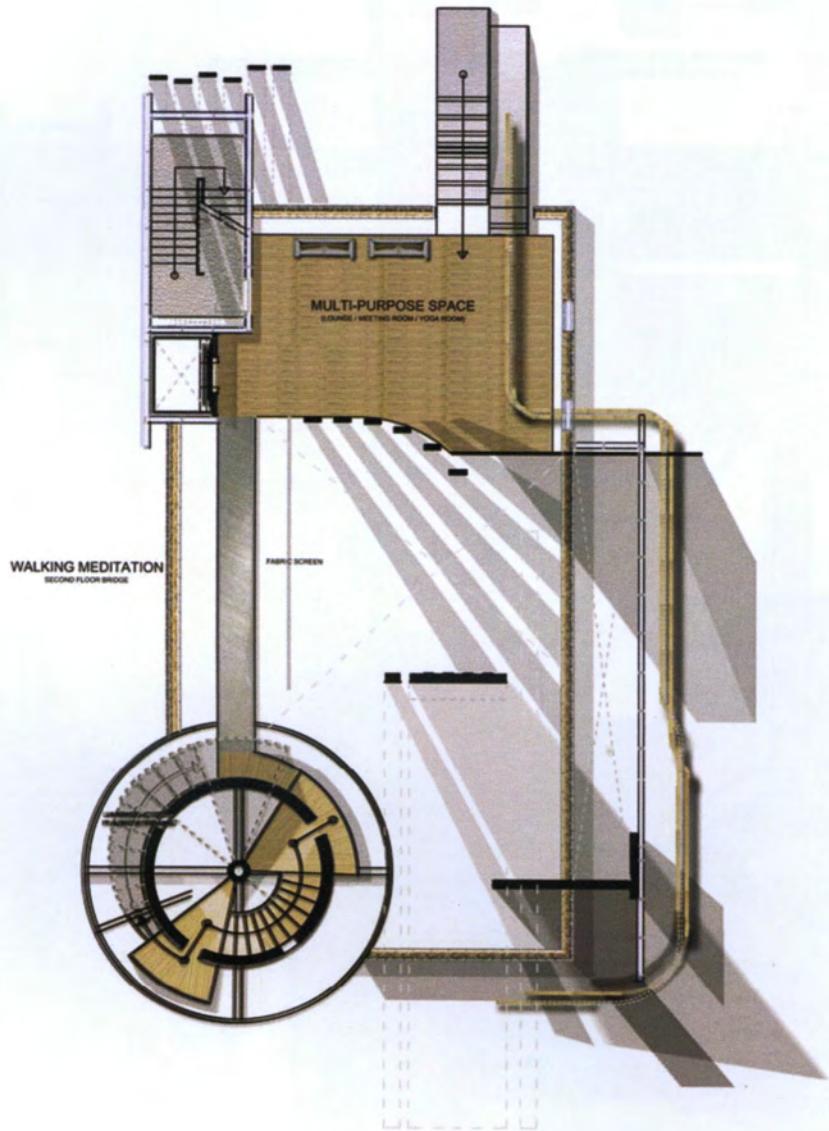


Figure 8.3 Second level floorplan

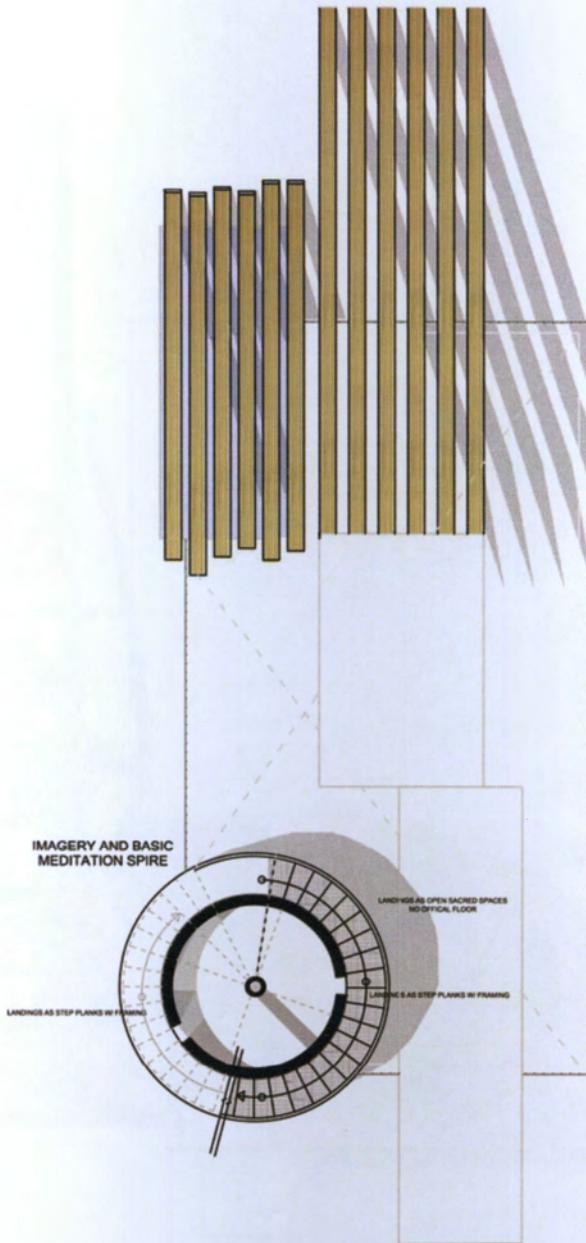


Figure 8.4 Roof floorplan

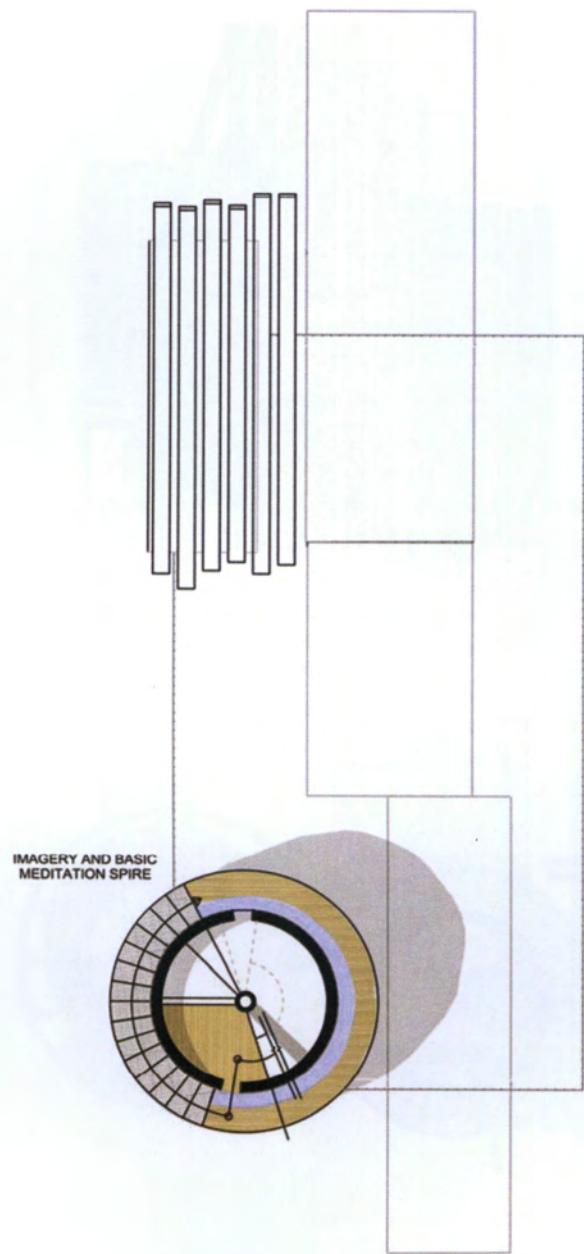


Figure 8.5 Upper level floorplan

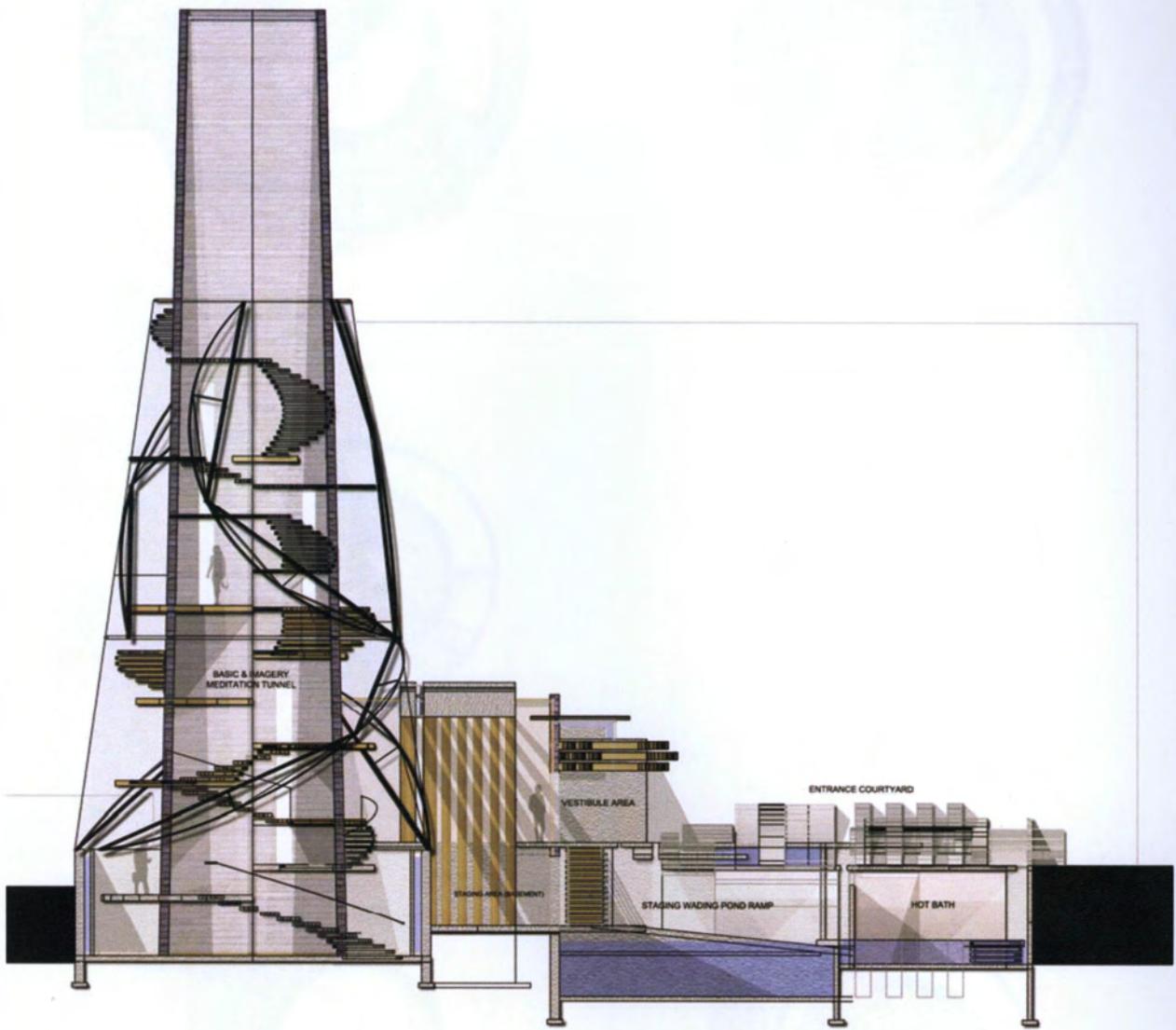


Figure 8.6 East-West sectional cut through design

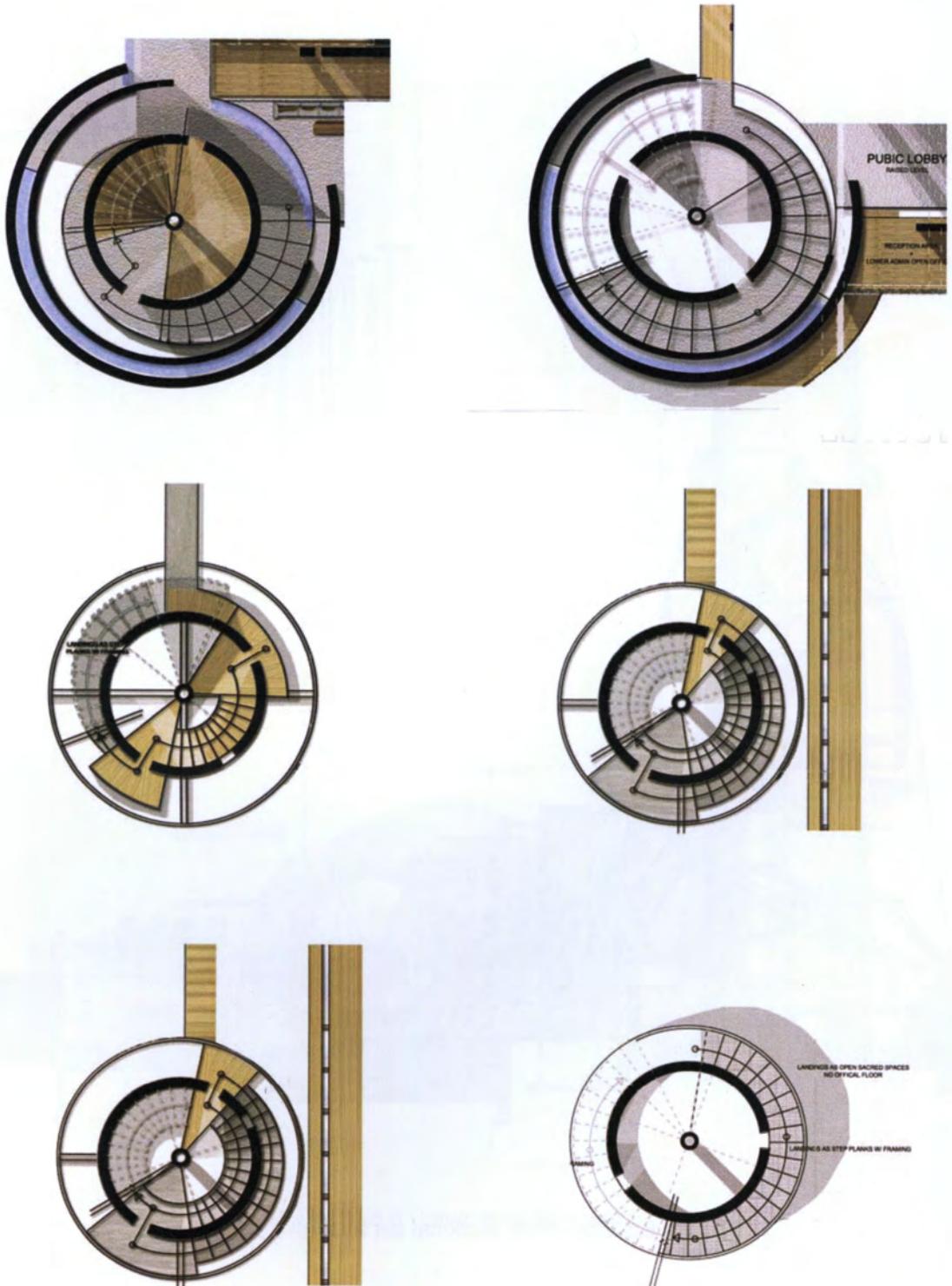


Figure 8.7 Meditation staircase floorplans

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