

Manipulating Emotions

A study of emotional evocation in architecture

Katherine Due



Manipulating Emotions

A study of emotional evocation in architecture

Katherine Due

*A thesis submitted in partial requirement for the degree of
Master of Architecture (Professional)*

*School of Architecture ,
Victoria University of Wellington*

2011



Abstract

Architecture is understood to inspire awe and affect our emotions and moods. This thesis aims to focus these effects through our emotional sensibilities, questioning the capability of architecture to act as an emotional evocation. The objective of this work is to challenge some current practice within architecture of irreverent and careless applications of atmospheric qualities, where little appreciation is given to the emotional impact these decisions have on the occupants of the spaces. This thesis will outline the use of atmospheric conditions in the creation of an *architecture of emotional evocation* that presents spaces of two emotional states, proving with this, the existence of particular atmospheric conditions and the emotional impact inherent within them. The result is a design that incorporates spaces embodied with the characteristics associated with either grief or love- emotions chosen to limit the scope of this work. The qualities within these spaces are transferable and felt by the occupants through expression theory and the personification of architectural elements and qualities. A theatre programme tests the design of these emotionally evocative spaces, creating an affiliation between the performance of theatre and the performance capacity of architecture. This thesis concludes with the understanding of the necessity and reliance of associating emotional states to characteristics that can be qualified within an architectural situation. Perception and psychology of emotions are used as a theoretical basis for the understanding of the personal and subjective nature of architectural experience. Concepts of perception and sensation are also imperative in the development of the architectural project in its totality, creating a full experience through the combination and dialogue between the different spaces. The associations and connotations of materials, forms and proportions create a framework for the analysis of case studies attributed to either emotion.

These case studies formulate the spatial character of each emotion, incorporating material, form, volume and light as key qualities alterable to produce appropriate emotional atmospheres. Design progresses from sketches of concepts utilised in these case studies and the literature to create two 'languages' according to the two emotional states. These 'languages' are tested in the final design, where the communication between the two emotions is vital in the narrative and experience of the building. The *architecture of emotional evocation* proves the emotionally stirring qualities of particular architectural atmospheres and the capacity and power of architecture to evoke these emotional states within the occupants.

Utilised terms within this thesis include evocation and languages. 'Evocation' implies a passive transference of emotion through the representation of associated qualities within the architecture. 'Languages' is used to envelope the production of these associated qualities, with this thesis creating separate 'languages' for grief and love.

Key terms: emotional evocation, perception, experience, grief, love, atmosphere

Acknowledgements

I would like to thank my supervisor Philippe for supporting my ideas and encouraging me through this year. Thank you to my family, without whom I would never have had the motivation to complete this work. And thank you to my friends and classmates who have made the last five years so unforgettable and enjoyable.

Contents

<i>i</i>	<i>Abstract</i>		
<i>iii</i>	<i>Acknowledgments</i>		
<i>vi</i>	<i>List of figures</i>		
<i>1</i>	<i>Introduction</i>		
<i>5</i>	<i>The Psychology of Emotion & Perception</i>		
<i>6</i>	<i>The Psychology of Emotions</i>		
<i>9</i>	<i>The Experience of Perception</i>		
<i>11</i>	<i>The Perception of Architecture</i>		
<i>12</i>	<i>Perception & Emotions</i>		
<i>14</i>	<i>Conclusion</i>		
<i>17</i>	<i>The Tools of Experience</i>		
<i>18</i>	<i>Sensation</i>		
<i>19</i>	<i>Atmosphere</i>		
<i>21</i>	<i>Conclusion</i>		
<i>25</i>	<i>A Spatial Language of Emotions</i>		
<i>26</i>	<i>Artistic Expression</i>		
	<i>26 Expressing Emotion in Art</i>		
	<i>29 Written Architecture</i>		
<i>31</i>	<i>Physical Expression</i>		
	<i>31 Materiality</i>		
	<i>34 Form & Proportion</i>		
<i>37</i>	<i>Conclusion</i>		
<i>39</i>	<i>Architecturalising Emotions: a case study</i>		
<i>40</i>	<i>Grief</i>		
	<i>40 Le Mémorial des Martyrs de la Déportation, Paris</i>		
	<i>43 Treptow Crematorium, Berlin</i>		
	<i>45 Findings of Grief</i>		
<i>46</i>	<i>Love</i>		
	<i>47 Nant-y-Cwm Steiner School, Pembrokeshire</i>		
	<i>49 La Petite Maison, Jean-François Bastide</i>		
	<i>52 Findings of Love</i>		
<i>53</i>	<i>Conclusion</i>		
<i>55</i>	<i>Design: Applying Emotions</i>		
<i>56</i>	<i>Programme</i>		
<i>57</i>	<i>Site</i>		
<i>58</i>	<i>Creating an Architectural Emotion</i>		
	<i>58 Grief</i>		
	<i>62 Love</i>		
	<i>67 Architecture of Emotional Evocation</i>		
<i>100</i>	<i>Reflection</i>		
<i>105</i>	<i>Conclusion</i>		
<i>108</i>	<i>Bibliography</i>		

Figures

Chapter 1 : The Psychology of Emotions and Perception

Fig 1.1- Photos of love expression - *taken by author*

Fig 1.2- Photos of grief expression - *taken by author*

Fig 1.3- Diagram of perception - *by author*

Fig 1.4- Tearful face - *sketch by author*

Fig 1.5- Mournful body - *sketch by author*

Chapter 2 : Tools of Experience

Figs 2.1- 2.4- Sensation diagrams of Thermal Baths - *sketch by author*

Figs 2.5 & 2.6- Photos of Thermal Baths - *sourced from Hayley Wright*

Chapter 3 : A Spatial Language of Emotions

Fig 3.1- Le Brun's drawings of expressions - *From* : Mezieres, N. L. C. d. (1992). *Le Genie de l'architecture*. Santa Monica, California: The Getty Centre for the History of Art and the Humanities. pp. 24.

Fig 3.2- Jacques-François Blondel's "à l'Italienne" project - *From* : Cleary, R. (1989). Romancing the Tome: or an Academician's pursuit of a popular audience in 18th Century France. *Journal of the Society of Architectural Historians*, 48(2). pp. 143 *Removed from pdf*

Fig 3.3 - 3.4- Photos of materials - *taken by author*

Fig 3.5- Photos of Materials in Peter Zumthor's home- *photos by Laura Padgett from*: Zumthor, P. (2006). *Thinking Architecture* (2 ed.). Basel, Switzerland: Birkhauser. pp. 34. *Removed from pdf*

Fig 3.6- 3.11- Christopher Day concept interpretations - *sketches by author*

Chapter 4 : Architecturalising Emotions; A Case Study

Fig 4.1-4.4- Memorial photos - *sourced from Philippe Campays*

Fig 4.5- Memorial photo - *sourced from Philippe Campays*

Fig 4.6- Sketch memorial - *sketch by author*

Fig 4.7 & 4.8- Memorial photos - *sourced from Philippe Campays*

Fig 4.9- Crematorium photo - *sourced from Andrew Charleson*

Fig 4.10 & 4.11- Crematorium - *sketch by author*

Fig 4.12- 4.14- Crematorium interior photos - *sourced from Andrew Charleson*

Fig 4.15- Crematorium plan - *sketch by author*

Fig 4.16- Volume diagrams - *sketch by author*

Fig 4.17- Diagram descending - *sketch by author*

Fig 4.18- Diagram light - *sketch by author*

Fig 4.19 Steiner School elevation - *watercolour by author*

Fig 4.20- Steiner School plan - *sketch by author*

Fig 4.21- Steiner School interior corridor - *watercolour by author*

Fig 4.22 & 4.23- Steiner School interior - *sourced from* Geograph Project Limited. (n.d.). Retrieved August 10, 2011, from (<http://www.geograph.org.uk/photo/579975>) *Removed from pdf*

Fig 4.24- Image of La Petite Maison book cover - *sourced from* Renaud Bray. (2008). *La Petite Maison*. Retrieved November 15, 2011, from ([http://www.renaud-bray.com/books_product.aspx?id=926852&def=Petite+maison\(La\)%2CBASTIDE%2C+JEAN-FRANCOIS+DE%2C9782743618094](http://www.renaud-bray.com/books_product.aspx?id=926852&def=Petite+maison(La)%2CBASTIDE%2C+JEAN-FRANCOIS+DE%2C9782743618094))

Removed from pdf

Fig 4.25- Image of La Petite Maison book cover - *sourced from*. Bastide, J.-F. (1996). *The little house: an architectural seduction* (R. ed-Khoury, Trans.). New York: Princeton Architectural Press.

Chapter 5: Design: Applying Emotions

Fig 5.1- Context site plan - *by author*

Fig 5.2 - 5.4- Site photos - *taken by author*

Fig 5.5 - 5.6- Site sketches - taken by author

Fig 5.7- Star diagram, Grief -by author

Fig 5.8- Initial translation sketch-grief - by author

Fig 5.9- Diagrams of volume-grief -by author

Fig 5.10- Diagrams of ceiling-grief -by author

Fig 5.11- Diagrams of columns -by author

Fig 5.12- Diagrams of light- grief -by author

Fig 5.13 & 5.14- Initial sketch of space of grief -by author

Fig 5.15- Star diagram of love -by author

Fig 5.16- Initial translation sketch-love -by author

Fig 5.17- Volume diagrams-love -by author

Fig 5.18- Diagrams of spatial forms, Love -by author

Fig 5.19- Diagrams of light, Love -by author

Fig 5.20 - 5.22- Initial sketches of space of love -by author

Fig 5.23 & 5.25- Photos of paper models -models and photos by author

Fig 5.25- Initial movement planning -by author

Fig 5.26- Site plan -by author

Fig 5.27- 3D sectional perspective -computer rendered and hand drawn by author

Fig 5.28 - 5.31- Floor plans_scale 1:100 - drawn by author

Fig 5.32 & 5.33- Sections_scale 1:100- drawn by author

Fig 5.34- Street view during the day -computer rendered and hand drawn by author

Fig 5.35- Street view in the evening -computer rendered and hand drawn by author

Fig 5.36 & 5.37- Entry- watercolour and sketch - drawn by author

Fig 5.38- Grief volume viewed from entry -computer rendered and hand drawn by author

Fig 5.39 & 5.40- Grief space - watercolour and sketch by author

Fig 5.41- Grief space viewed from walkway -computer rendered and hand drawn by author

Fig 5.42 & 5.43- Studio One - watercolour and sketch by author

Fig 5.44- Studio One -computer rendered and hand drawn by author

Fig 5.45- Detail of Studio One - drawn by author

Fig 5.46 & 4.47- Studio Two - watercolour and sketch by author

Fig 5.48- Studio Two -computer rendered and hand drawn by author

Fig 5.49- Studio Two from exterior - sketch by author

Fig 5.50- Detail of Studio Two facade - drawn by author

Fig 5.51- Beam detail intentions - sketch by author

Fig 5.52- Detail of beam through concrete - drawn by author

Fig 5.53- Walkway - watercolour by author

Fig 5.54- Studio Three -computer rendered and hand drawn by author

Fig 5.55- Studio Three structural section - drawn by author

Fig 5.56- Theatre foyer - watercolour by author

Fig 5.57- Light entering theatre - sketch by author

Fig 5.58- Theatre -computer rendered and hand drawn by author

Fig 5.59- Theatre structural section - drawn by author

Fig. 5.60- Contrasting spaces-'love' intersect with 'grief' volume - drawn by author



Introduction

It is understood that our environment affects our emotions and moods, that we are shaped by the world around us. This thesis explores emotional impact of the environment through an architectural project, exploring the capacity of the built environment to manipulate our emotions. It questions whether our built environment can directly impact us to feel a particular way: evoke a particular emotion. This thesis questions: *does architecture have the ability to evoke emotions in its occupants?* The research incorporates multidisciplinary concepts of psychology, behaviour and architectural qualities. It aims to discover and critique how spaces can evoke certain responses from their inhabitants and establish a singular emotional state, ultimately defining how space affects the occupants. An *architecture of emotional evocation* provides a facilitator in which to test the ability of people to become actively involved in the evocation of their emotions. The term 'evocation' is used throughout this thesis in reference to the aims of the architectural project¹. The term is intended to imply a passive nature to the emotional transference that is intrinsic in the techniques utilised to create this *architecture of emotional evocation*.

The thesis is structured beginning with initial research of the largest theories that are not primarily architectural or spatial, and leading to a narrowing focus towards more architectural ideas of atmosphere and aesthetics. These initial theories are aimed at creating a base understanding of experience. Following this, the application of these theories to architecture is explored through sensation, atmosphere, and connotations of materials, forms, proportion and colour. This thesis does not position the *architecture of emotional evocation* in a realm of

¹ Etymological definition of 'evocation': from the Latin 'evocare' = 'e' (a variant of 'ex') - 'out of, from,' and 'vocare' - 'to call.'

therapy; rather it aims to test the resonance of emotional manifestation and expression in architectural experience.

The first chapter discusses emotions and perception. For the purpose of this thesis emotions are discussed in reference to their role in positioning oneself in space and the effect that environment has on emotional states. Emotions are claimed as being a state which we move in and out of; thereby, this thesis focuses on the idea of transference and displacement and it is understood that emotional experience cannot take place without a level of disorientation or repositioning of oneself. Emotions are linked to the theory of perception, explored by French philosopher Maurice Merleau-Ponty. Perception is established as the giving of information which enables appropriate actions within a context or situation. Architectural experience is understood, in this thesis, as involving the basic process of perception, combining the senses, thought, sensibility and motility.

The second chapter discusses the applicability of these concepts to the physical construct of architecture. Sensation is understood as the process in which perception is received by a person, labelled as a tool for perception. The unity of senses is discussed as an important concept in creating a full perception of architecture, where the building in its totality is understood through a sensory experience. Atmosphere is discussed as an architectural tool used in creating experientially rich spaces, and it is linked to perception and emotion through the evocation of the senses and the establishment of atmospheric character through our emotional sensibilities.

Chapter Three presents ideas of emotional expression in other art forms, through aesthetic and expression theories. At this point the connections between qualities related to particular emotions and their reference to the characteristics of a person in that emotional state will be claimed as a personifying of architectural qualities. More specific emotional resonance is established through the discussion of

materials, form and proportion. This section discusses the connotations of particular spatial volumes and qualities and their associations and appropriations to particular functions and intentions.

Case studies form a large proportion of the research, utilising the previous chapter's findings to analyse the qualities and structures of the case studies in reference to two emotional states. The choice of two emotions refines and limits the scope of this experiment. These two emotional states are grief and love, chosen due to the inter-connected relationship, and their enduring existence in a person's life. Case studies are chosen in reference to these two emotional states. They are analysed through visual representations and literary explanations in a framework that looks at volumes, materiality, light infiltration, atmosphere and spatial composition. The term 'language of emotions' is used in this thesis to reference the composition of aesthetic and atmospheric qualities attributed to each emotion, creating a 'language' that associates these qualities to a finalised outcome.

The final *architecture of emotional evocation* explores the languages and atmospheric conditions established through the literature, case studies and design process in a theatrical building. The theatre programme relates to emotional transference in acting, where the audience perceives the emotional embodiment by the actor and is affected by it. The project will align architecture with this concept, allowing the architecture itself to perform the emotions and transfer them to the occupants. The 'languages' of each emotion will be applied and tested in separated spaces that, in combination are intended to create an emotional journey through the movement and experience of the building. The *architecture of emotional evocation* will test the power of architectural spaces and their impact on the occupants, challenging the irreverent use of these qualities.

1. The Psychology of Emotions and Perception

This chapter will succinctly look at the concepts of emotions and perception. Emotions have been established as the catalyst for this thesis and with this, a testing of emotional stimulation becomes the main aim. Therefore, emotions are the departure point, here focusing on the definition and application of emotional psychology that most directly relates to environmental effect. The effect that environment has on emotional states is key in the establishment of an emotionally stirring environment. The integration of perception is necessary in the understanding of the effect of architecture on emotions. The perception and experience of architecture integrates ideas of perception, in the combination of all sensations, to architectural concepts of sequences of spaces and spatial hierarchy. The two main concepts of emotions and perception are brought together through the correlation of emotions as a structure of behaviour (related to perception theory), as it has been found that direct associations between the two are not dominant in initial literature on perception.

1.1 The Psychology of Emotions



Figs 1.1

photographs by author

Exploring the bodily expression of emotions. The concepts of connection, intimacy and embrace were used to express ideas of love.



Emotion is defined as “a moving out, migration, transference from one place to another...a moving, stirring, agitation, perturbation” (Perception, 2010).

“We experience emotion when we feel ourselves being distanced from or moved out of a prior orientation and dis-placed or dis-located with respect to it, as we begin to assume another emotional stance or ‘position’ in adaptive response to the perceived alterations...emotional experience cannot take place without some such dis-orientation”, some such dis-positioning...this di-“stancing” may be experienced as losing or acquiring some ground of support” (Cataldi, 1993, p. 91).

Much debate has occurred among psychologists over the defining of emotions and remains somewhat ambiguous in its distinction from mood, motive, attitude and reflex. The main impact of emotion on this body of work is in the establishment and transference of emotions, how the environment affects emotional states and how they are controlled by surroundings and events. For the purpose of this thesis, the general definition that emotions are reactions to our actions and experiences will be emphasised. They define how we deal with our surroundings and the actions imposed by others.

Emotions are noted as being neither entirely in the mental realm or the physical realm- existing as a connection between the two, a state that can be associated with architecture existing in the physical realm but creating a mental impact on its inhabitants. Eric Shouse defines an emotion in reference to feelings and effects as “a feeling is a sensation that has been checked against previous experiences and labelled...it is personal and biographical...an emotion is the projection/display

of a feeling" (Shouse, 2005). When looked at in this way the definitive progression from feelings to emotions is made clear, an emotion being our response to the way we feel and the projection of this feeling to others.

Emotions are divisible into three categories according to '*Emotions, A short introduction*' (Evans, 2001): basic emotions, culturally specific emotions and higher cognitive emotions, sited between the previous two. Basic emotions, as defined by psychologist Paul Ekman, include joy, distress, anger, fear, surprise and disgust (Evans, 2001). Higher cognitive emotions include love, guilt, shame, embarrassment, pride, envy and jealousy. Higher cognitive emotions are less instinctive than basic emotions, meaning their reaction to events or situations is less determinate or instantaneous.

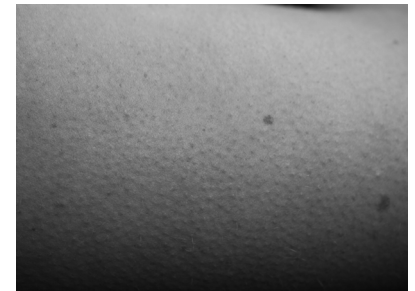
When discussing emotions it is impossible to avoid the topic of universality of emotions; the dependence on prior experience, environment and society is inevitable. However, emotional theorist and psychologist Paul Ekman developed several studies through his research that have proven the universality of emotions (Ekman, 1984). The only thing that is noted as effecting the expression of emotions within a cultural framework is 'display rules'.¹ Within this context the variation of emotions through cultural, historical, linguistic and class distortions are being ignored in favour of a simple concept of emotion that can be applicable to a majority.

The question of controlling emotions is relevant to this thesis proposition through application to an architectural project which aims to evoke the emotional state of the inhabitants. Discovering the concepts behind how we ourselves control

Figs 1.2

photographs by author

Exploring the bodily expression of emotions. The ideas of cold, protection and solitude were used to explore the expression of grief.



² An example of this in western society is the understanding that males should not cry, females should not show anger, winners and losers should not present their subsequent joy or disappointment in public (Ekman, 1984).

our emotions and how we can control others' emotions will aid in the design process of this thesis. The idea that we are possessed and held by our emotions establishes a concept of lack of control. "It does appear to be true of our deeper emotional experiences to say that the emotions have us; it is not 'we' who have the emotions" (Cataldi, 1993, p. 106). The passive nature of emotions is linked to the theories of philosopher Maurice Merleau-Ponty, which are discussed in the following section.

1.2 The Experience of Perception

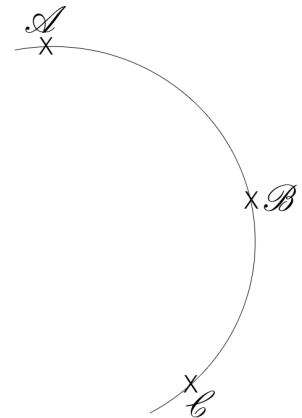
The purpose of perception is to give information that enables us to act properly or appropriately within a situation or context. Dictionary meanings defines perception as the ability to see, hear, or become aware of something through the senses. Perception is the “sum of our own experiences” (Norberg-Schulz, 1965, p. 37). Our attitudes or ‘intentions’ take a role in orientating our experiences within our environments. Therefore “perception... is anything but a passive reception of impressions” (Norberg-Schulz, 1965, p. 31).

For the purpose of this thesis, the concept of perception will be discussed in relation to the theory of French philosopher, Maurice Merleau-Ponty, who rethought the concept of experience through the embodiment of the subject. Within the theory of perception there are two trains of thought; the empiricist and the intellectualist. Merleau-Ponty positions himself between these two, agreeing and disagreeing with neither. Empiricism is based around four concepts involving the senses in the perception of environments; (i) that perception involves the recording of some kind of simple sensory units; (ii) that each sensory faculty serves as independent; (iii) that the perception of an object is a result of the combining of these individual sensory faculties; and (iv) that affective and emotional qualities are excited by perceptual experience (Cerbone, 2008). Merleau-Ponty argues that by segregating our experiences through individual sensations, an ordinary experience is not possible. Perception depends on complementary functioning where each of the senses informs the others through common behavioural characteristics to provide a full perception and experience of an object or environment (Reynolds, 2001). Intellectualist theory emphasises the role of the subject, the perceiver in the act of perception. The involvement of judgement is the main focus of intellectualist claims; therefore the subject who makes these judgements is at the centre of perception. The issue with this theory is that

Fig 1.3- Perception

sketch by author

The empiricist train of thought pertains that these marked spots are perceived as circular curving through our previous experience of a circle. Merleau-Ponty argues that it is only because we already perceive the marks as curving that we can associate it to previous experiences of circles.



“perception becomes an ‘interpretation’ of the signs that our senses provide...”
(Cerbone, 2008, p. 127).

There is much emphasis placed on the body and bodily self-experience in the theories of Merleau-Ponty. He argues that the world we experience is related to us in accordance with our bodily structure and skills; our inhabitation of the world has a bodily focus. Therefore, our experience of architecture must directly be related to our body; a space is analysed by how it fits our body and our sensory responses. Space is owned by the soul; the soul inhabits space and thinks in accordance to the body (Merleau-Ponty, 1964). The body can be discussed in relation to the senses where “the senses and one’s own body generally present the mystery of a collective entity which, without abandoning its thisness and its individuality, puts forth beyond itself meanings capable of providing a framework for a whole series of thoughts and experiences” (Weiss, 2008, p. 139). It is this view of the body’s place in perception that is emphasised for this thesis work, where the body is not looked at in its physical dimensionality; rather it is established as a tool of experience, focusing upon the sensory faculties. The concept of the ‘intentional arc’ combines the unity of the senses, intelligence, sensibility and motility; the tools for perception in the experience of space.

1.3 The Perception of Architecture

"Instead of merely creating objects of visual seduction, profound architecture relates, mediates and projects significance. It defines horizons of perception, feeling and meaning; our perceptions and experiences of the world are significantly altered by architecture"

(Palasmaa, 2005, p. 5).

The relationship of architecture to the soul is discussed by Nicolas Le Camus de Mézières as the same as the relationship of the soul to music: a harmonic relation of the parts to the whole. Therefore, architecturally, when one occupies a single space, one must start to feel the sensations of the space to follow (Pelletier, 2006).

"A complex architectural organism can only be experienced through a movement where the succession of perceptions becomes organized mentally into a total experience. In this case the perceptionis determined by our knowledge of the presence of certain forms"(Norberg-Schulz, 1965, p. 198).

The context or situation that is perceived, in this case architectural space, is totally dependent on its relation to the subject- the orientation, polarity, envelopment- are linked to the subject's presence in space (Merleau-Ponty, 1964). The experience of perception is based on several elements of perception created through a multi-layering of dependents on the body, light and embodied sense (Protevi, 1998).

While emotions have the ability to shift rapidly, such as a person changing their feelings from sadness to excitement instantaneously, the qualities that are projected onto the environment remain much more stable. There are four types of emotions in regard to environmental relationships: pleasant-arousing (excitement, elation and happiness), pleasant-unarousing (relaxed, peaceful, contented, serene, calm), unpleasant-arousing (stressed, frightened, annoyed, angry), unpleasant-unarousing (sad, gloomy, bored, depressed) (Dazkir & Read, 2011).

Fig 1.8- Tearful Face

sketch by author

Tearful face, perceived as expressing the emotion of sadness or grief.



1.4 Perception and Emotions



Fig 1.9- Mournful Body

Sketch by author

Body cradling itself, seemingly in a state of grievance. The contraction of limbs and containment of the body in a small area assumes to express a state of sadness or fear.

Merleau-Ponty has not established a specific philosophical account of emotions, although emotional phenomena appear throughout his writings. Cataldi “assumes the position that [emotions] are sensed- that they are phenomena of perception- and that they ‘belong to’ the “expressive space” of Flesh” (Cataldi, 1993, p. 90). Suzanne L. Cataldi argues in *Embodying Perceptions of Death: Emotional Apprehension and Reversibilities of Flesh*, that “the body which possesses senses is also a body which desires;” here the links between emotions, the senses and the perception of experience are made.

Emotions are incorporated as structures of behaviour in Merleau-Ponty’s writings. As structures of behaviour, emotions are defined as adaptive movements, the way that our bodies respond to situations which are flexible and changing by attempting to “regain a momentary stability, a state of equilibrium” (Cataldi, 2008, p. 165). Linking emotion to structures of behaviour automatically establishes its importance in the perception of experience, where structures of behaviour involve the concept of reflex- the way we react to a situation.

The idea of perception cannot be separated from the impact of emotions. Through the concept of synaesthetic perception, the intercommunication of the senses -a key concept in Merleau-Ponty’s *Phenomenology of Perception*- it is explained how sights and sounds, and other sensory receptors, have the ability to touch us emotionally. At this point the sensory and affective overlap to have an emotional effect on the subject through the environment.

Theatre is an example of a discipline that makes connections between emotions and perception with the transference of emotions between audience and actor. This connection is shown to produce a direct correlation between the act of perceiving, done by the spectator, and the expression of emotion by the

performer. Three key techniques were utilised in involving the audience: the art of acting, music and machinery (Fischer-Lichte, 2010). The former technique is of most use here, where the expression or representation of emotion is shown to transfer between the actors to the audience. Aristotle considered the effect of tragic theatre as the excitement of pity and terror. Two main theatrical concepts are relevant to this work. *Catharsis*, involves the transference of emotion through a spectator's perception; their gaze perceiving the actor's body, facial expression and gestures (Fischer-Lichte, 2010). Indian concept *Natyasastra*, relies on the correspondence between eight particular expressions and different modes of being or emotional dispositions (Fischer-Lichte, 2010). These dispositions are then transformed into actual emotional states. The representation of a certain emotion was anticipated to evoke that emotion in the observer. These concepts, perhaps understandably transferred between human beings, arouse the connection between the performance of emotions on stage and the performance of architecture in the role as actors in theatre to determine the observers', or in this case the inhabitants', feelings and emotions through the witnessing or experience of space.

1.5 Conclusion

This chapter briefly establishes the key underlying themes of this research: ideas of emotional state, environmental impact and perception. The focus of emotions is established as a state which a person moves in and out of. A focus on the idea of transference and displacement argues that emotional experience cannot take place without a level of disorientation or repositioning of oneself. Emotion is linked to the theory of perception, with perception informing a person on how to act appropriately within a situation or context. Integrity of perception is extracted from the general theory of perception, focusing on the combination of all sensations in the experience of environment. Architecture must also be experienced through a multi-sensory lens, combining total architectural perception within the sequence of spaces. This specific concept will be developed with design experimentation within this thesis, where a contribution from all sensations is applied to produce the desired effects for perception. These two aspects of psychology -emotion and perception- are brought together through the claim of emotions being structures of behaviour. These theories are the base layer of understanding the effect of environment on emotional dispositions for this thesis. An introductory understanding of these large theories, establishes an acknowledgement of subjectivity and personalization of emotions and experiences that will be required to reflect on the controlling ability of the case studies and the experimentation within design.

References

- Cataldi, S. L. (1993). *Emotion, depth and flesh: A study of sensitive space*. Albany: State University of New York.
- Cataldi, S. L. (2008). Affect and sensibility. In R. Diprose & J. Reynolds (Eds.), *Merleau-Ponty Key Concepts* (pp. 163-173). Stocksfield, UK.: Acumen.
- Carbone, D. R. (2008). Perception. In R. Diprose & J. Reynolds (Eds.), *Merleau-Ponty Key Concepts* (pp. 121-131). Stocksfield, UK.: Acumen.
- Dazkir, S. S., & Read, M. A. (2011). Furniture forms and their influence on our emotional responses toward interior environments. *Environment and Behaviour*.
- Ekman, P. (1984). Expression and the nature of emotion. In K. R. Scherer & P. Ekman (Eds.), *Approaches to Emotion* (pp. 319-343). New Jersey: Lawrence Erlbaum Associates, Inc.
- Evans, D. (2001). *Emotion A very short introduction*. New York: Oxford University Press, Inc.
- Fischer-Lichte, E. (2010). Performing emotions. How to conceptualize emotional contagion in performance. In S. Flach, D. Margulies & J. Soffner (Eds.), *Habitus in Habitat I: Emotion and Motion* (pp. 25-40). Bern: International Academic Publishers.
- Merleau-Ponty, M. (1964). Eye and mind. In J. M. Edie (Ed.), *The primacy of perception*. Evanston, Illinois: Northwestern University Press.
- Norberg-Schulz, C. (1965). *Intentions in architecture*. Cambridge, Massachusetts: M.I.T. Press.
- Palasmaa, J. (2005). *The eyes of the skin : architecture and the senses*. Hoboken, New Jersey: John Wiley & Sons.
- Pelletier, L. (2006). *Architecture in words*. London: Routledge.
- Protevi, J. (1998). The "sense" of "sight": Heidegger and Merleau-Ponty on the meaning of bodily and existential sight. *Research on Phenomenology*, 28(1), 211-223.
- Reynolds, J. (2001, 27 June 2005). Maurice Merleau-Ponty. *Continental Philosophy* Retrieved 5 June, 2011, from <http://www.iep.tum.edu/merleau/>
- Shouse, E. (2005). Feeling, emotion, affect. *M/C Journal*, 8(6).
- Weiss, G. (2008). Ambiguity. In R. Diprose & J. Reynolds (Eds.), *Merleau-Ponty Key Concepts* (pp. 132-141). Stocksfield, UK.: Acumen.

2. *Tools of Experience*

This chapter briefly introduces the tools and techniques utilised by architecture and design to link the concepts of psychology of emotions and perception, discussed in the previous chapter, to the experience of architecture. Perception is experienced through the sensate and the unity of sensations. Sensation discusses the way the body reacts to stimuli and what effect this has on a person's experience linking to the theory of perception. This chapter will later discuss the unity of the senses under the construct of sensation and the implications of singular sensory stimulation within perceptual experience. Atmosphere is discussed as a tool for creating spaces that embody emotional connotations. Atmosphere is argued to be a perception through our emotional sensibilities. The emotional state that we are in relates to the atmosphere that we perceive. However, design of atmosphere is possible and this is argued more specifically, through the writings and ideas of architect Peter Zumthor.

2.1 Sensation

Integrity of perception and the unity of sensations was experimented with simply at an early stage. The Thermal Baths, Vals by Peter Zumthor was used to demonstrate the requirement for all sensations to be combined for a full experience of the architecture to be perceived.

Fig.2.1. Sound- interpreted as abstractions of the sound qualities in relation to materials. The textured planes, refracting sound at several angles and water absorbing sound.

Fig.2.2. Light- represented from the positioning of natural and artificial light portals. Again materials were related to reflections.

Fig.2.3. Texture- the varying textures of the concrete material.

Fig.2.4. The combining of the previous three, a total picture is created.

Sensation is linked to this thesis through its definition as the operation or function of the senses; perception by means of the senses. Through this definition, the concept of perception is actively applied to experience through the use of sensation as the tool of experience. This is established in *Phenomenology of Perception*: "when I say that I have sense and that they give me access to the world..." (Merleau-Ponty, 1962, p. 251). Although the sensations one receives- what one sees, hears, tastes, touches and feels will always be the same in the same situation, memory impacts and new images affect the experience of the space, altering how that space is perceived. Human intention or experience colours our perception of surroundings; we cannot separate our experiences from the reaction we get with sensations. For example, noise is never a pure noise; rather it imbues the connotations of human activity and intention (Reynolds, 2001).

All architectural experience is multi-sensory. The sensory faculties work in unison to establish qualities of space and scale. "Phenomenological reflection on our actual sensory experience reveals the unity and diversity of our senses in that coexistence with the sensible which is prior to any reflection" (Langer, 1989, p. 76). 'Synaesthetic' activity involves the collaboration of all senses in the perception of our surroundings. This idea can be directly linked back to the concept discussed through perception of the "integrity of perception," where the whole is dominant over the parts. With the accumulation of all sensory stimulation the whole situation, or scene, becomes perceived within the subject. Without this, the scene is incomplete and not understood at its full capacity. Each sense provides different perceptions on the same space; auditory and olfactory responses are noted as being discontinuous and fragmentary; tactility is aggregative and visual perception disconnected and additive. "Architecture is the art of reconciliation between ourselves and the world, and this mediation takes place through the senses" (Palasmaa, 2005, p. 50).

2.3 Atmosphere

The notion of atmosphere concerns a spatial sense of ambience; it can be cheerful, oppressive, tense, uplifting or stuffy. "Atmosphere is something between the subject and the object; therefore, an aesthetic of atmosphere must also mediate between the aesthetics of perception and the aesthetics of the product or of production" (Böhme, 1998, p. 112).

Atmosphere is perceived through our emotional sensibilities; it is immediate and instantaneous; "...we are capable of immediate appreciation, of a spontaneous emotional response, of rejecting things in a flash" (Zumthor, 2006a, p. 13). Through the creation of atmosphere, we are able to provoke emotions within the inhabitant of a space. Anything can move us: people, air, noises, sound, colours, materials, presences, textures, forms, "...my mood, my feelings, the sense of expectation that filled me while I was sitting there" (Zumthor, 2006a, p. 17).

Interiority is encapsulated through atmosphere; Mark Wigley proclaims interiority as "...a kind of sensuous emission of sound, light, heat, smell, and moisture" (McCarthy, 2005, p. 122). Music, light, smoke and humidity are all tools to create immaterial atmospheres, atmospheres where one feels interiorised but there are no physical boundaries.

*"Good architecture should take hold of a person, experience him
and let him live"* (Zumthor, 1997, p. 71).

With the creation of immaterial architecture, the superficiality of 'shock factor' techniques needs to be avoided if the experience of the building or spaces is to remain meaningful through constant use (Hill, 2006). Space can be created through the use of confinement, expanse, direction, lightness and heaviness.

The radiance, impressions and suggestions of movement that an object or space gives are most important (Böhme, 1998). First impressions are imperative in architecture, giving the inhabitant, in the first fraction of a second, a feeling about a space. That feeling, although able to be softened or emphasised with further experience, is difficult to overthrow. According to Peter Zumthor, architecture is created through nine tools: the body of architecture, material compatibility, the sound of space, the temperature of a space, surrounding objects, between composure and seduction, tension between interior and exterior, levels of intimacy and the light on things (Zumthor, 2006b). With sound, interiors are like large musical instruments; they collect sound, amplify it and transmit it elsewhere. Many factors incorporate to create this musical instrument: the shape of a room, the surface and application of materials within. The temperatures of space can be created through materials, but though they are physical, they can also be psychological. "It's in what I see, what I feel, what I touch, even with my feet" (Zumthor, 2006a, p. 35). Composure and seduction incorporate the way architecture involves movement.

Memories form an important role in creating architectural atmospheres, the prior experiences that the designers have impact the way surroundings are viewed in their atmospheric capacity. "Memories...contain the deepest architectural experience that I know. They are the reservoirs of the architectural atmospheres and images that I explore in my work as an architect" (Zumthor, 2006b, p. 8). Our interpretation of architecture begins from childhood; all experiences of architecture, although predominantly subconscious, play a role in shaping the way we interpret and view our physical surroundings:

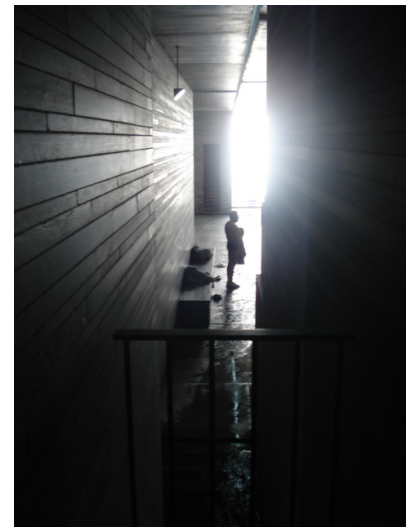
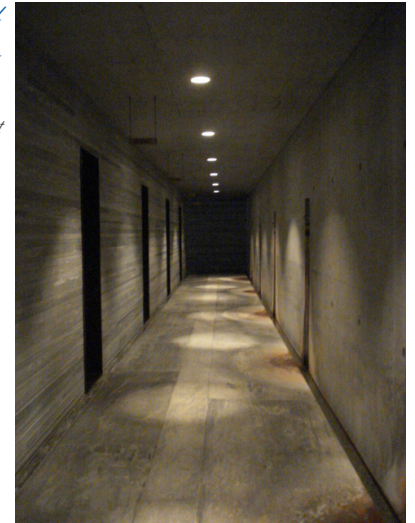
"The roots of architectural understanding lie in our architectural experience: our room, our house, our street, our village, our town, our landscape- we experience them all early on, unconsciously, and we subsequently compare them with the

countryside, towns and houses that we experience later on...the roots of our understanding of architecture lie in our childhood, in our youth..." (Zumthor, 2006b, p. 65).

Atmosphere will be utilised as a design tool in this design research process to create spaces that leave affective impressions on their inhabitants. The concepts of sensation and atmosphere have here been linked where the creation of an atmosphere is produced through the application of certain sensations. This thesis' design process aims to create emotional atmospheres and therefore, requires the defining of particular sensations within specific atmospheric conditions.

Fig.2.5 & 2.6- Thermal Baths, Vals, Peter Zumthor

Photos courtesy of Hayley Wright



2.4 Conclusion

This chapter has connected, although briefly, the ideas of emotion and perception to the application of architecture. The concept of sensation is established here as being a tool for perception. Perception is received by a person through their sensory receptors and it is clear the importance of a multi-sensory experience to produce a totality in the perception of a space. A total picture of architecture relies on the succession of sensations forming a total experience. Atmosphere as an architectural concept, is common, but is labelled here as being a perception through our emotional sensibilities. It is the ideas of atmosphere that can bring together concepts to be examined in the following chapters, producing a total experience that can be linked to emotional states.

References

- Böhme, G. (1998). Atmosphere as an aesthetic concept. *Daidalos*(68), 112-115.
- Hill, J. (2006). *Drawing forth immaterial architecture*. UK: Routledge.
- Langer, M. M. (1989). *Merleau-Ponty's Phenomenology of Perception: a guide and commentary*. Basingstoke, UK: Macmillan.
- McCarthy, C. (2005). Towards a definition of interiority. *Space and Culture*, 8(2), 112-125.
- Merleau-Ponty, M. (1962). *Phenomenology of Perception*. London: Routledge and Kegan Paul.
- Palasmaa, J. (2005). *The eyes of the skin : architecture and the senses*. Hoboken, New Jersey: John Wiley & Sons.
- Reynolds, J. (2001, 27 June 2005). Maurice Merleau-Ponty. *Continental Philosophy*
Retrieved 5 June, 2011, from <http://www.iep.tum.edu/merleau/>
- Zumthor, P. (1997). *Three concepts*. Berlin: Birkhauser Verlag.
- Zumthor, P. (2006a). *Atmospheres. Architectural environments. Surrounding objects*. Basel, Switzerland: Birkhäuser.
- Zumthor, P. (2006b). *Thinking architecture* (2 ed.). Basel, Switzerland: Birkhauser.

3. *A Spatial Language of Emotions*

This chapter consists of two sections. The first looks at the place and expression of emotions within alternate art forms, such as painting and sculpture, and how these theories of expression from art are transferable into architecture. These see the manifestation of emotional transference successfully applied to art. Art's Expression Theory is relevant due to its argument of representation of emotion creating a transference. The writings of Nicolas Le Camus de Mézières and Jean-François Bastide discuss the emotional power of architecture through a medium of literature, where architectural concepts of decoration, progression and sequence of spaces is used to tell a story and create spaces of particular emotional resonance.

The second section provides a study of materials, forms, and proportions; here origins and characteristics of emotions can be equated to emotional states through symbolism and connotations imbued within the material. Rather than listing the connotations equated to particular elements, this section discusses the ability to manipulate and alter the material's state and also the impact the origin of the material has on its perception. Through the application of these elements, the expression theory and representation of emotions in art (discussed in the first section of this chapter) can be manifested in architecture. These studies begin the aesthetic language that will form the framework for the design of an emotionally stirring environment in the design process and which will be used to analyse case studies equated with the two chosen emotions in the following chapter.

3.1 Artistic Expression

a) Expressing Emotion in Art

To recognise the expression of sadness in a work of art one must first be able to understand and recognise sadness in oneself and others. It has been suggested that artworks “symbolize,” “resemble,” “imitate,” “refer to,” or “represent” emotions (Barwell, 1986, p. 176). The creator holds the key to making artwork express emotions, either through intention or personal emotional state at the time of creation. The expression of an emotion within a work of art has the capability of transferring that emotion into the imagination of the observer. Aesthetic and Expression theories provide an understanding of our experience of artwork. Aesthetic theory discusses phenomenological qualities, the perception of aesthetic qualities, the qualities imbued on objects, and the aesthetic significance in emotional arousal (Elliot, 1967). Aesthetic experience involves the reader or observer transferring themselves into the artist’s mind, and rather than recognising the emotional qualities possessed by an object, the emotion of the artist is transferred. In Expression theory, artworks are experienced as if they were human expressions (Elliot, 1967). The latter theory is of most relevance to architecture, as it is the elements themselves that must speak to the inhabitants, amalgamating into a total picture of the building, rather than a picture of the creator. With this, it is possible to say that the emotion is present in one, but not necessarily that it is assertable to one: “It is present in me because I do not merely recognise that the poet is expressing, for example, sadness, but actually feel the sadness...it would be false to say that I *am* sad or even, unqualifiedly, that I feel sad” (Elliot, 1967, p. 113). It is possible to experience the art work at a ‘distance’ where there is merely the experience of the expression, with no transference to believing it is one’s own. Expression theory was initially explored by Aristotle in *Poetics* with a focus on poetry, tragedy and comedy (Middleton, 1992). There

was an implication in painting and sculpture, but no mention of architecture itself. These became the basic texts of expression of emotion within the arts due to their “compelling analysis of the art of arousing and expression of emotions” (Middleton, 1992, p. 22). The translation of these theories to architecture was even ignored by architects such as Leon Battista Alberti and Leonardo da Vinci, where they transposed these notions to painting through the depiction of human forms, gestures and expressions (Middleton, 1992). This thesis argues that the same concepts are transferable to architecture, with architectural elements and qualities proposing the emotional expressions to be recognised.

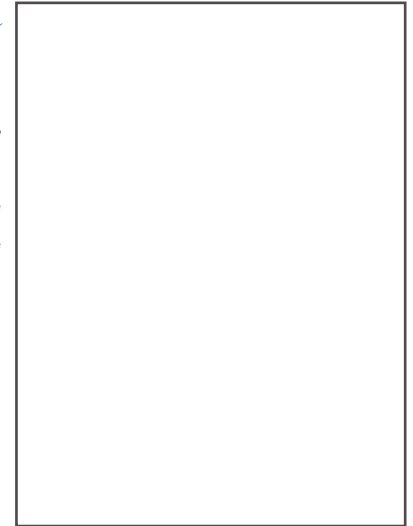
Qualities we relate to emotions are through their reference to the characteristics of a person in that emotional state. For example, “the music is sad, means that the forms or *gestalt* character of the music has a certain audible quality which we call ‘sad’ because the music has some of the characteristics of sad persons” (Elliot, 1967, p. 118). Accordingly, sounds are attributed to emotions because they are reminiscent of sounds characteristic to persons who are expressing that emotion. Emotional experience of artworks relies solely on the imaginative response to the work. It is argued here that these imaginative extensions and modifications of the reality of the work are what stir an emotional response. Painter Charles Le Brun visualised emotions through an analysis of human expression and an interpretation of these analyses transferring emotional expression into art and architecture (Middleton, 1992, p. 25) (Fig. 3.1). In opposition to Le Brun’s theory of expression, it is argued that the execution of the painting brings about the total emotional state of the artwork; it is the argument of the unity over the subject (Middleton, 1992). This thesis draws the link between Merleau-Ponty’s concept of ‘integrity of perception’ (as discussed previously in Chapter One) and the concept of expression in art, where the whole artwork, the context, content, execution and artist’s mind-set are brought together to form the overall emotional reading of the artwork.

*Fig.3.1 - Le Brun
drawings of expressions*

sourced from Mezieres, N.

L. C. d. (1992). *Le Genie de l'architecture*. Santa Monica, California: The Getty Centre for the History of Art and the Humanities. p. 24

Removed from pdf



It is noteworthy that the idea of objects holding emotional resonance was utilised in landscape painting. The idea of human expression was ignored and instead, the artwork relied on qualities imbued upon objects, usually elements of nature. Water, for example, was regarded as the 'soul of the landscape' and in its many states from turbulent to calm could stir passion (Middleton, 1992).

Along these ideas, the personification of architectural elements and qualities will be utilised in the following design, linking between particular states of emotion, the expression of these and the physical character of elements or spaces. In the second section of this chapter a discussion of characteristics and symbolism in materials furthers this idea.

6) Written Architecture

Nicolas Le Camus de Mézières wrote *Le Génie de l'architecture* (The Genius of Architecture), a treatise on the power of architecture to provoke particular reactions while outlining the design of the French *hôtel*. It draws upon the boudoir novel of *La Petite Maison*, by Jean-François Bastide, 1758, where the architecture is used as a tool of seduction (a project that will be analysed in the following chapter). These works are utilised in this research to illustrate the capacity of architecture and space to successfully transfer emotions to inhabitants, perhaps even going as far as to control the emotions in the case of *La Petite Maison*. Mezieres states the “fundamental assumption of [The Little House] is that architecture has the power to create feelings in its inhabitants that are equivalent in essence and intensity to sensations induced by a lover” (Mezieres, 1992, p. 155). *Le Génie de l'architecture* defines a theory of expression that assumes all shapes, colours, light and textures act upon the senses to induce ‘certain predictable sensations’ (Mezieres, 1992, p. 155).

The *hôtel particulier* is not described as a unified entity with a unified character; rather it is an intricate interaction of performing spaces, giving a reading that is created as one progresses. This is in agreement with the stance of this thesis that the reading of the architecture demands a coherency or communication across the whole project, a language that can be understood and elaborated on as one moves through and experiences the building. This same idea of progression and revealing of narrative elements will be utilised in the project created in the design stage.

The *hôtel* is defined through its decoration, where each room conveys a differing character; as a whole the project expresses a wide range of human emotions. *Le Génie de l'architecture* presents a clear narrative where the architecture of the *hôtel particulier* uses delayed fulfilment and extended thresholds to evoke

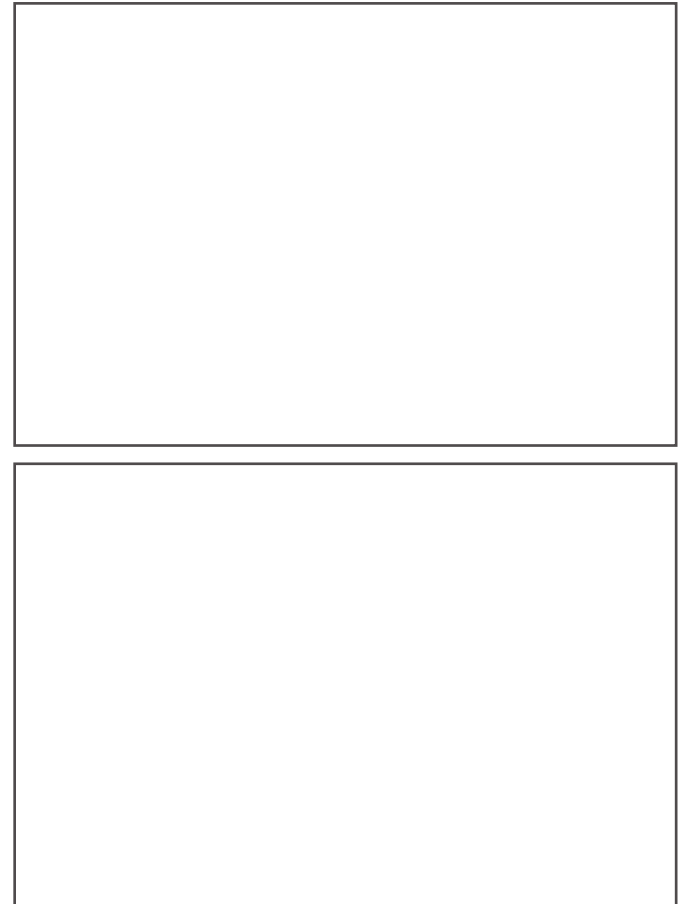


Fig. 3.2 - Jacques-François Blondel, d l'italienne house

sourced from Cleary, R. (1989). Romancing the tome: or an academician's pursuit of a popular audience in 18th Century France. *Journal of the Society of Architectural Historians*, 48(2). pp. 143

Project demonstrates 18th Century French concepts of layout and spatial organisation.

Blondel was said to have influenced the work of both Le Camus and Bastide.

Removed from pdf

the erotic tension between two lovers, “a tension that becomes palpable and that addresses all the senses while defying objectification” (Pelletier, 2006, p. 168). Delayed fulfilment and extended threshold emphasise the importance of the building as a whole with a final discovery and understanding being acquired at the conclusion or climax of the building experience.

This conveyance of emotions was said to happen directly through architecture acting on the senses (Pelletier, 2006). Therefore, along with progression and the sequence of space, Mezieres places heavy emphasis on the *tout ensemble*¹, the stimulation of all the senses through architecture (Middleton, 1992).

“Architecture, could express its destination by evoking specific emotions or sensations through its proportions, the modulation of its masses, the rhythm of its facades, and the variation of its rooflines, but like a poem in which the overall meaning cannot be reduced to that of the separate words, the character of a building resisted transparent language” (Mezieres, 1992, p. 54).

Le Génie de l'architecture states that the character and combination of forms produces illusion and it is this principle that architecture must begin with to create an arousal of emotions. Through this, architecture will “address the mind and stimulate the soul” (Mezieres, 1992, p. 71).

¹ A concept that is paralleled in phenomenological ideas, particularly those argued by Juhani Pallasmaa

3.2 Physical Expression

a) Materiality

"My experience of a building has an inherently interpreted character, and that 'interpretation' is inseparable from the way the building looks" (Pelletier, 2006, p. 74).

Referencing the previous quotation, the understandable impact and importance of aesthetic qualities in the experience of architecture is clear, the importance of material connotations and symbolism undeniable. The relevance of materials is discussed in relation to the manifestation of emotional resonance in art, and consequently architecture, through their symbolic and social metaphorical meanings. Materials can be used as a form of expression, utilising their inherent aesthetic and symbolic characteristics through the application of expression theory, previously explored. These ideas are transferable from their application in art, where for example, water is discussed in relation to its emotional impact. It is accepted that certain materials embody particular meanings and characteristics, even on the same level as animate objects or personalities. The symbolic significance of materials is constructed through geographical and social parameters suggesting that differing cultural groups will embody materials with altering meanings. Considering the impact of context on the meanings of materials, Peter Zumthor suggests that these are not static; in fact the characteristics of materials will change with varying contexts (Zumthor, 2006). Understanding this, the context of this study (and site for the design project) and the assumptions made in reference to architectural elements and materials will be focused in the design location of Wellington, New Zealand.

It is argued for this method of design that the physical qualities of materials have an impact on their social and symbolic meaning; therefore utilising the physical characteristics within the design of interior environments will enable the

Fig.3.3 - Photos of materials from around Wellington

photos taken by author

This upper series looks at the different finishes and textures of concrete. Transitioning the material from solidity and strength seen in the concrete paving and concrete block walls to more transparent applications in the split posts used as stair guards.

The lower series shows metal elements of rough and reflective treatments. The rough finish of the steel rails in reaction to the seaside environment. The glossy bottom image showing curving metallic members reflecting the sun.



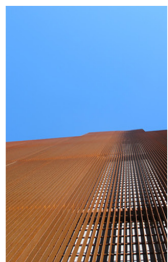
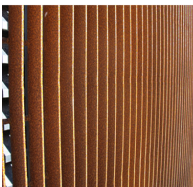


Fig.3.4- Photos of materials from around Wellington

photos taken by author

The upper series looks at the different finishes, textures and applications of timber in exterior environments. The rough sawn edges and worn textures of deck planking can be argued to bring comfort outside, a reflectance of their relationship with the site and weather.

The lower series shows iron elements as a screening device between the interior and exterior, also shielding some mechanical systems from the public. The rusted nature of the iron, brings a warmth to the site in its colouring but also in its reflectance of the impact of the weather.

production of emotively stirring atmospheres. Perception of these materials has the ability to resonate emotionally with a person, consequently converting the symbolic and social meanings to an emotional nature.

Traditional materials impose certain characteristics upon themselves. For example, some studies suggest that concrete is rated as being characteristically masculine (Zumthor, 2006). This thesis proposes that, through design application and the manipulation of materials in their natural state, materials such as concrete, could be altered to be either incessantly feminine or increasingly masculine. This idea is subjective and could be argued but within this context it is proposed within the realm of personification of characteristics previously discussed. Manipulating form, finishing, colour, and lighting all have the ability to construct a differing view or meaning onto the material. This manipulation, for example creating masculinity, could be achieved through rough finishes, large masses and orientations that force cool temperatures to be emitted from the concrete.

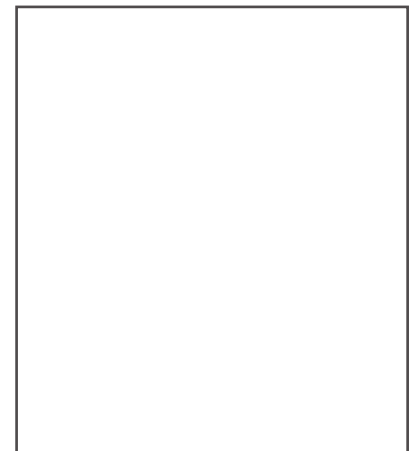
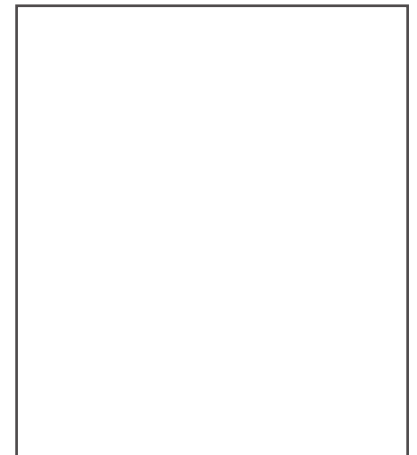
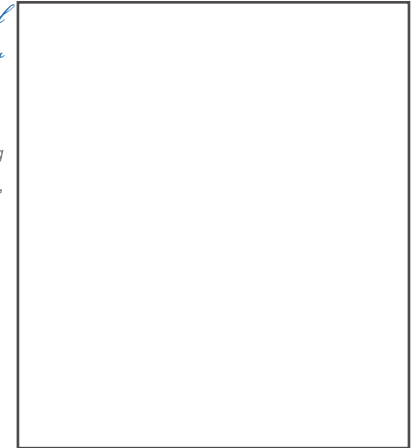
Foundation and formation of materials are responsible for presenting origins and processes of production throughout their qualities. The tactile characteristics present as a result of the formation process of a material possess the ability to resonate with a person viewing or in contact with it (Zumthor, 2006). Peter Zumthor attributes the following materials with characteristics that embody their processes or traditional formations: stone speaks of its geological origins, durability and symbolism; brick implies earth and fire, gravity and tradition; bronze embodies essences of heat, ancient processes and the passing of time; and wood speaks of two parallel existences, the first in nature and the second in reference to human craftsmanship (Zumthor, 2006). Additionally, brick tiles and timber with dark rich weaving possess qualities of warmth (Day, 1990). It can be equated that the knowledge and understanding of origins and formations of materials are comforting, preventing alienation between occupant and material which is possible to occur with man-made, unnatural materials.

Colours are associated here as a material finish. Colours are linked with psychological and symbolic associations, producing particular effects through their application. Colour is not given a position of importance within this work, although the natural colour of materials can be used to create these similar effects. For example, the natural colouring of concrete would present the same associations as grey, evoking sadness and melancholia (Day, 1990). Again, timber as yellow or orange in natural colouring, both colours exhibit connotations of welcome, joyfulness and brightening in a room dimly lit with natural light. These connotations are of equal importance in the choice of natural finishing for the materials used within the design of spaces.

This analysis of materials is applicable to this thesis through understanding that the choice of materials has a high impact on the eventual emotional atmosphere of a space. It is imperative to analyse the intended effect against the foundation, origins, aesthetic and textual characteristics. These characteristics can then, through Expression theory and the personification of architectural elements proposed in this thesis, create a spatial environment tailored towards a particular emotional atmosphere.

*Fig.3.5- Photos of
Materials in Peter
Zumthor's home*

photos by Laura Padgett from:
Zumthor, P. (2006). *Thinking
Architecture* (2 ed.). Basel,
Switzerland: Birkhauser. pp. 34.
Removed from pdf



b) Form and Proportion

"The arrangement of forms, their character, and their combination are thus an inexhaustible source of illusion. We must start from this principle whenever we intend to arouse emotion through Architecture, when we set out to address the mind and to stimulate the soul..." (Mezieres, 1992, p. 71).

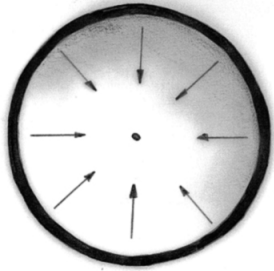


Fig. 3.6: Circular Plan
sketch by author, translated
from Christopher Day's 'Places
of the Soul'
The central force of a circular
plan.

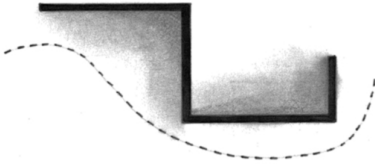


Fig. 3.7: Right Angles
sketch by author, translated
from Christopher Day's 'Places
of the Soul'
Right- angles contrast with the
flow of natural movement

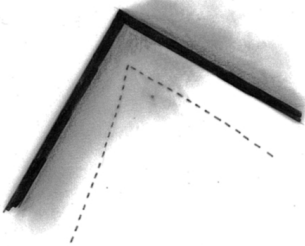
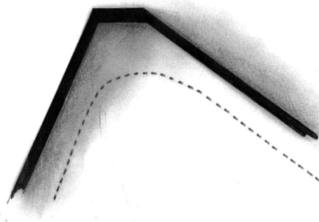


Fig. 3.8: Angles
sketch by author, translated
from Christopher Day's 'Places
of the Soul'
Sharp angles are abusive
(upper) and can be made more
inviting by truncating the corners
(lower).



Certain geometrical shapes have particular qualities that accompany them. The ideas of form and proportion are relative to the creation of a space that comforts the occupant, in safety, protection and intimacy, providing a positive emotional experience². In contrast, the forms chosen can distance the occupant from the space provoking a sense of solitude and isolation providing a negative or sombre emotional experience³. This thesis aligns itself with the formulations of architect Christopher Day, in agreement and commenting on the implications of forms expressed in his writings and designs.

Circles, for instance, are centrally focused making them ideal for group discussions and meditation (Day, 1990) (Fig. 3.6). However, due to this, they can be entrapping and inflexible in functionality. Squares lack a connection with the natural movement of persons and animals around a space; the right angles result in abrupt spatial experiences (Day, 1990) (Fig. 3.7 & 3.8). Positively, they provide perfect spaces for orientation; they are firm and balanced. According to Day, although the rectangular form is the most commonly used in building,

² Positive emotions are proposed here as being happiness, love and elation- relatable to pleasant- arousing emotions discussed previously (Dazkir & Read, 2011).

³ Sombre emotional experiences are proposed here as being sadness, grief and boredom- relatable to unpleasant-unarousing emotions (Dazkir & Read, 2011).

it creates an illusion of “boxes for storing people” only comfortably occupied through the furnishings that soften and create areas of habitation within (Day, 1990, p. 76). In opposition to this, it is questionable whether the familiarities that people have with ‘boxes’ can present a sense of comfort, rather than entrapment. In contrast to rectangular and square forms, entirely organic forms lack any connection with the human consciousness (Day, 1990). The fluidity of their forms is un-relatable to a mind that favours geometrical principles. This un-relatable nature does not resonate as an expression when utilizing the concepts of personification, a technique this thesis exploration is applying to architecture. Levels of pleasantness are associated with the relationship between square and rounded-off forms (Küller, 1980, p. 87). Rounded-off forms give a sense of comfort, warmth and protectiveness (Dazkir & Read, 2011). They evoke the connection of organic forms and therefore their connection with nature and the human body. In reference to this position, Christopher Day’s design of the Nant-y-Cwm Steiner School (analysed in the following chapter) is focused on geometrical circular central spaces, but irregular wall thicknesses create a form that does not present itself as entirely geometrical (Fig. 3.9). It is argued in this thesis that a space of comfort must be created somewhere between these two extremes- a space that can be pleasant and enjoyable and yet still retain a sense of firmness and solidity, resonating with the routine of daily life. This questions whether slight modification of rectilinear shapes, adding a gesture such as light curving at the junction of walls and ceilings, can soften the impact of the hard corners and lines.

Rigidity can be formed through rhythm and tranquillity, but if the rhythm is unvarying, it becomes boring and creates a dead space; the altering of rhythm produces freedom for the occupant (Day, 1990); subsequently these ideas of freedom can be linked to characteristics applicable to specific emotions (Fig.

Fig.3.9. Steiner School Plan

sketch by author, translated from Christopher Day's 'Places of the Soul'

This plan shows the application of Day's ideas of circular spaces in the Nant-y-Cwm Steiner School, Pembrokeshire.

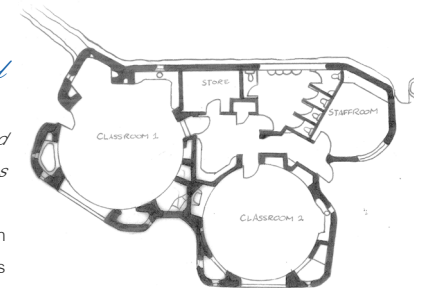


Fig.3.10. Rhythm

sketch by author, translated from Christopher Day's 'Places of the Soul'

Alterations of rhythm in elements allows freedom and interest in the spaces.

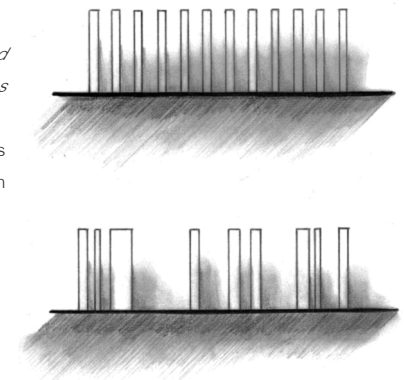




Fig. 3.11- Volume
 sketch by author, translated
 from Christopher Day's 'Places
 of the Soul'
 Expresses the differing effects
 of volume in relation to the scale
 of the occupant.



Tranquillity and living spaces are clearly reliant on scale and proportion; "if proportions, textures, light and other qualities are not just right, a small room is a trap, a larger one can often get away with it although you can start to rattle around, and its silence can begin to feel empty (Fig. 3.11). Too large a space can be too awe-inspiring" (Day, 1990, pp. 140-141). Enclosure is usually related to safety and security. Enclosure is a method of filtering impressions of the environment, raising or lowering one's level of arousal (Küller, 1980, p. 94). The directional dynamics produced in space by the form or material design produce particular feelings; awe, expectation and soothing are correlated, respectively, with upward, forward and horizontal emphasis (Day, 1990). These concepts can be seen in many buildings, particularly cathedrals where the architecture acts as a metaphor for spiritual fulfilment (Gouk & Hills, 2005). The extended forms and volumes, emphasising forward movement to the altar and vertical movement towards the sky through domes and spires, can be easily related to these ideas of awe, expectation and soothing, discusses of by Day. Accordingly, a space of intimate comfort, one that should soothe and provide safety, should not have a vertical emphasis; the addition of verticality would limit the position of the inhabitant and provide a hierarchy in space as it does in a cathedral.

These form and proportion studies have related to qualities such as safety, comfort, serenity and awe, which will subsequently, through case studies in the following chapter, be equated to particular emotional states to provide a focused exploration for the design stage.

3.3 Conclusion

Looking at concepts of expression of emotion in alternate art forms, such as painting and sculpture brings the theories of expression and aesthetics into the realm of representation. It is Expression theory that this thesis focuses on to produce a transference of emotions that is linked to the qualities of the space. This theory, therefore, proves the importance of the meanings of materials, forms and proportion. The main concept being extracted here is that of personifying the architectural elements. Through this personification, associations can be made between material characteristics and the human attributes of each emotional state. This concept will prove to be vital in the application of materials and forms in the design of an emotionally evocative architecture. The findings of this chapter will be used to analyse a series of case studies in reference to emotional qualities in the following chapter.

References

- Barwell, I. (1986). How does art express emotion? *The Journal of Aesthetics and Art Criticism*, 45(2), 175-181.
- Bohme, G. (1991). On synaesthesiae. *Daidalos*, 41, 27-36.
- Cleary, R. (1989). Romancing the tome: or an academician's pursuit of a popular audience in 18th Century France. *Journal of the Society of Architectural Historians*, 48(2). pp. 139-149.
- Day, C. (1990). *Places of the soul*. Northamptonshire, England: The Aquarian Press.
- Dazkir, S. S., & Read, M. A. (2011). Furniture forms and their influence on our emotional responses toward interior environments. *Environment and Behaviour*.
- Elliot, R. K. (1967). VIII- Aesthetic theory and the experience of art. *Proceedings of the Aristotelian Society*, 67, 111-126.
- Gouk, P., & Hills, H. (2005). *Representing emotions*. Aldershot, UK: Ashgate Publishing Ltd.
- Küller, R. (1980). Architecture and emotions. In B. Mikellides (Ed.), *Architecture for people: explorations in a new humane environment* (pp. 87-100). London: Cassel Ltd.
- Mezieres, N. L. C. d. (1992). *Le genie de l'architecture*. Santa Monica, California: The Getty Centre for the History of Art and the Humanities.
- Middleton, R. (1992). Introduction. In N. L. C. d. Mezieres (Ed.), *The genius of architecture; or, The analogy of that art with our sensations*. Santa Monica, California: The Getty Centre for the History of Art and the Humanities.
- Pelletier, L. (2006). *Architecture in words*. London: Routledge.
- Zumthor, P. (2006). *Thinking architecture* (2 ed.). Basel, Switzerland: Birkhauser.

4. *Architecturalising Emotions: A case study*

This chapter discusses two case studies for each of the chosen emotions: grief and love. Grief and love have been chosen for this experiment due to their interrelationship with each other, one being experienced in direct response to the other. They both exhibit long lasting effects and are generally present within a person for extended periods of time, in contrast to emotions such as happiness and sadness, which can be merely momentary. The case studies will be analysed in a framework that looks at qualities of the spaces relatable to either emotion or the associations discerned previously. Materiality, volume, light and overall atmosphere are the main elements that are associated with the creation of a spatial mood and will therefore be the main focus for the analysis. Through symbolism, meaning and atmosphere, elements imbue particular moods, and in collaboration with each other, have the ability to speak and present a particular emotion. Following each emotion's case studies, common themes will be developed, summarised or challenged. These resulting 'languages of emotions' will be used to design an emotional space in the next stage of this thesis.

4.1 An Architecture of Grief



Fig 4.1 & 4.2- Approach
Photos courtesy of Philippe Campays.

Top - viewing from ground level, structure appears hidden.
Bottom- entry stair descending into courtyard exterior space, grilled view shaft to Seine can be seen.

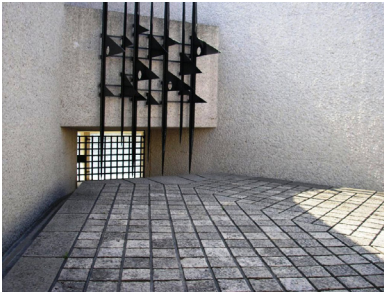
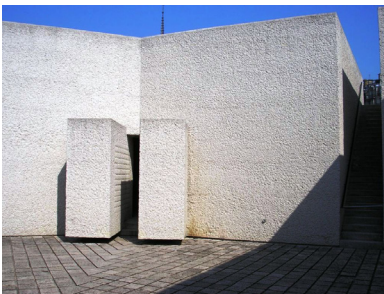


Fig 4.3 & 4.4- Courtyard

Photos courtesy of Philippe Campays

Top- Metal grill and sculpture mark the only association to the exterior when occupying the sunken courtyard.

Bottom- Mass concrete walls form the narrow entry to the interior spaces. The stairs descending to the courtyard are narrow and compressed between heavy concrete structures.



This section establishes a dialogue between emotions and architecture in reference to grief. Through the analysis of two architectural projects that exhibit characteristics or expressions of grief, a language of grief is written in communication with architectural qualities and elements. It is important to note here that grief is not being associated with discomfort or fear, rather it is linked to contemplation, distant hope and serenity. The qualities exhibited in these two cases are in direct dialogue with their intended function, one as a memorial, and the other as a crematorium. These two programs establish a prior expectation to atmosphere and emotional impact, while extending these characteristics through the physical and atmospheric qualities of the spaces they create. Despite this, the direct analysis of the techniques that are exhibited here can be utilised to form a grief based atmosphere in an indirectly grief loaded programme.

Le Mémorial des Martyrs de la Déportation, Paris

The memorial was built in 1962 by architect Georges Henri Pingusson (Conley, 1999). The structure memorialises the Parisian Jews who were deported by the Vichy government to Nazi camps during World War Two.

"Le Memorial de la Deportation in Paris provokes emotive experiences shrouded with an inexplicable veil of sadness, a sense of history, and reverence." (Campays, Liddicoat, & Randell, p.2)

"...a simple cut through the horizontally of the wall. On one side a few steps appear to invite me down...descend into a deep courtyard...open

to the sky, closed off from the outside except for a narrow view of the river through a small opening marred with a metal sculpture...Between two monolithic vertical masses...a tight opening...I slide between them...enter a hidden chamber...the coolth of darkness...the mood is sombre...in the centre of this underground space, a long dark chamber is lit by thousands of shattered pieces of glass...I exit, I am blinded by the sunlight” (Campays, et al., p. 2).

The general consensus provides descriptions of an experience of entering this space that forces feelings of empathy and sadness onto the inhabitants. Transference of historical grief is passed onto visitors through the architectural qualities embedded within the tones, materials and construction of the structural elements. It emphasises the isolation, silence and coolness required for spaces of grievance.

There is complete separation from the bustling city of Paris, enabled by the descent from the main ground plane of the public realm. The horizontal nature of the wall extending above into the public realm hides the existence of such a structure until one comes across the narrow stairs that descend into the open space below. The underground construction gives the impression of entering a holding cell, a brochure of the time describing it as a crypt (Conley, 1999).

The extreme narrowness of the stairs, the use of heavy concrete material and the strong textured nature of the concrete establishes the constricting and confining nature of the architecture from the beginning. The only glimpse beyond the memorial available is a narrow slit behind a steel sculpture, reminiscent of bars and barricades. The descent brings you to water level, where the water laps against the barred opening. This is described as bringing on a sense of abandonment (Koch, 2002).

Fig 4.5. Concrete Detail

Photo courtesy of Philippe Campays

Rough nature of concrete adds a hostile character to surface. Paving is directional, focusing visitors on the interior entrance and the stairway to the above ground level.

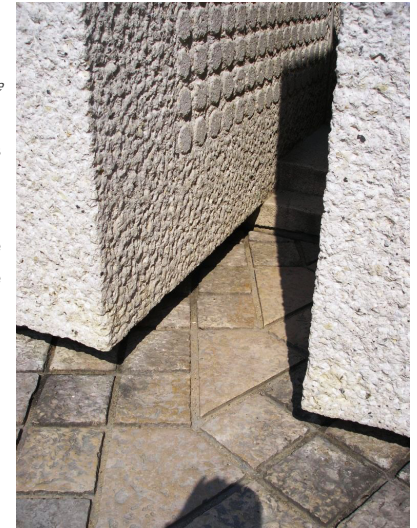
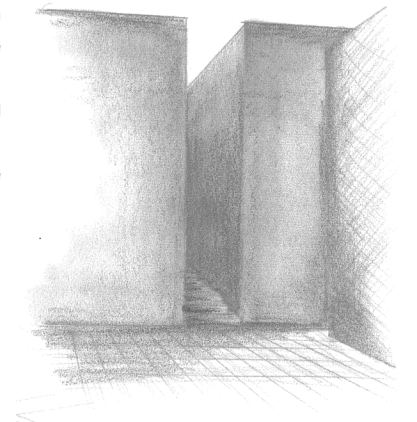


Fig 4.6 Stairway

Sketch by author

Stairwell is squeezed between two masses, towering above the visitor at the base and allowing the upper ground level to emerge as one ascends, releasing them from the structure.



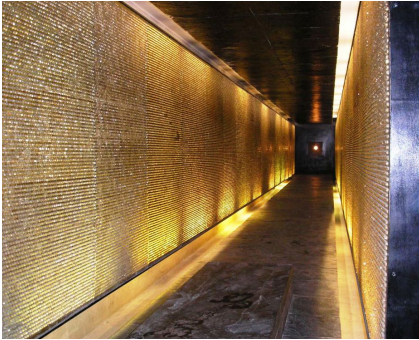


Fig 4.7. Interior Corridor

Photo courtesy of Philippe Campays

Interior corridor leading to main vault-like space. Walls are lined with lit shards of quartz crystal. An eternal flame beckons the visitor down the long narrow corridor.

Entrances and passageways continue in this language where entering into the long corridor is a squeeze between two formidable concrete pillars. The external qualities of the structure are severe and monochromatic; a brutalist language is created through the use of rough textured concrete walls and pillars. The solidity of the concrete is emphasised by the strength of the structure and the narrowness of the openings and entrances.

Internal qualities of the structure rely less on the solidity and strength of the concrete, and more heavily on the light qualities of the interior spaces to evoke a sombre and reflective mood. The long narrow tunnel walls, studded with two hundred thousand shards of quartz crystal, provide for an uneasy progression down the corridor and extend the perspective of this space. The large chamber focuses on a star resting on the ground. The light infiltrates from above and acts to diminish the boundaries around the edges, resulting in an extension of the room beyond the capacity of the viewer's vision.

Le Mémorial des Martyrs de la Déportation is charged with emotion, historical empathy and sorrow. The architecture speaks the language of sadness, emphasising oppression, contemplation and solitariness, through spatial qualities of separation, compression and darkness. It shows clearly the power of large masses in creating spaces that evoke feelings of abandonment and isolation. The limited lighting heightens the other senses, pushing perception further to extend the space's capabilities at evoking feeling in the inhabitant. The intent of this structure is to provide a level of empathy and understanding for the suffering of the people involved, an intention that requires a concept of entrapment and claustrophobia. These qualities are more related to the particular programme of memorialising a specific event than the general sense of grief that has been analysed for the purpose of this thesis.



Fig 4.8. Interior Vault

Photo courtesy of Philippe Campays

Entry to the main underground vault-like space. The concrete is the same treatment as the exterior, rough and lumpy.

Treptow Crematorium, Berlin *(Krematorium Baumschulenweg)*

"In the crematorium they succeed in touching an emotional chord" (Russell, 2000, p. 30).

The crematorium is designed by Axel Schultes and Charlotte Frank of Schultes Frank Architekten, completed in 1998 and is located just outside Berlin (Schultes, 2000). The poetic quality of the Crematorium relies heavily on the awe-inspiring capacity of extended height and volumes and the unexpected infiltration of light. The visitor is transported from the bustling everyday world to a realm of tranquillity and contemplation.

The external nature of the building presents a strong facade on approach, with dominance in the horizontal and vertical axes. There are contrasting blocks of solidity and void, with three tall recessed forecourts breaking up the dominating facade of alternating concrete and metal grilles (Stegers, 2008). On approach the scale is overwhelmingly large; there is strength and an overbearing nature implied through the solidity of these axes and the excessive scale of the structure. Materiality is kept simple and pure, with the expression of construction in the concrete being the only variation in texture. Additionally, weathering has been allowed to develop, resulting in variations on the monochromatic grey.

Internally, the dominating factor is the extensive volume of the space. The extreme height of eleven metres (Schultes, 2000) is awe-inspiring, signalling the connection between the living, the grieving and the process of cremation. This relationship is further expressed through the three colossal chimneys that extend from the otherwise rectangular block form and can be seen on the exterior of the building. The height also amplifies the feelings of isolation and solitude experienced in the space and suggests a humbling experience for the inhabitants, a reminder of their insignificance in a much larger world.

Fig 4.9. Approach

Photo courtesy of Andrew Charleson

Approach to crematorium. Surrounded by thick bush and an old cemetery the structure stands out as a momentous weight on the site.



Fig 4.10. Front Facade

Sketch by author

Front facade is a rhythmic combination of concrete mass, entry voids, and metal grilles.

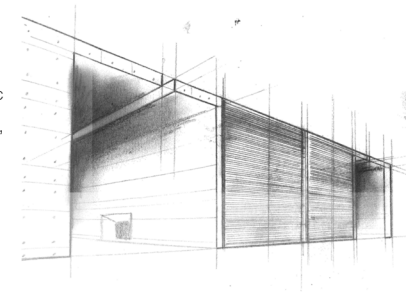


Fig 4.11. Chimneys

Sketch by author

Chimneys are prominent, extending from the side wall. The process of cremation is intended to be clear, challenging the societal expectations of a hidden event.

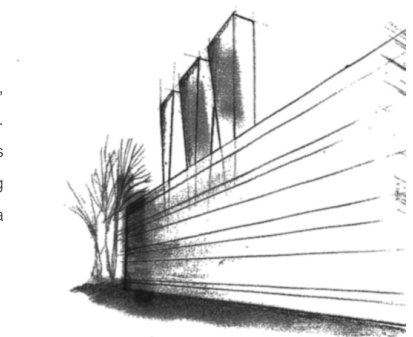




Fig 4.12-4.14. Interior
Photos courtesy of Andrew Charleson

Top- the 'Hall of Condolences' features 29 large concrete cylindrical columns.

Bottom left- columns are crowned with a ring of light.

Bottom right- indentations in the concrete walls, at the base, small pits are filled with sand, queried at being a reference to the state of cremation.

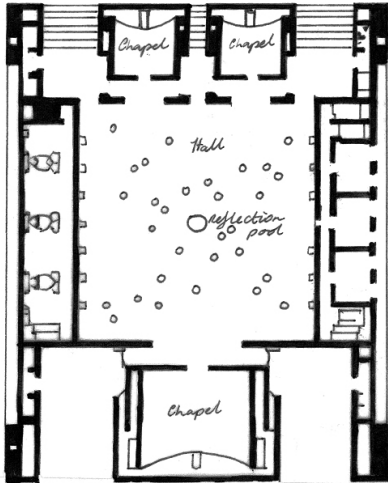
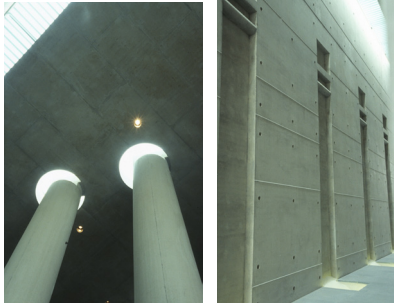


Fig 4.15. Plan of Treprow Crematorium
Drawn by author

The entrances break up the barrier of the front wall, positioned between the two small chapels. These chapels and the larger chapel branch off the main hall where the 29 columns are positioned at random. The centre is marked by a shallow reflection pool.

The scale of the space is carried through in every aspect, with 29 huge concrete columns extending to the ceiling in the 'Hall of Condolences,' heightened doors and large open spaces. The columns act randomly placed to create smaller areas within the larger enabling intimate experiences and smaller groupings of people. "What could have been a mere waiting room has been made into a metaphysical forest" (Russell, 2000, p. 228). Additionally, the hall incorporates a reflecting pool at its centre, where the columns are mirrored and a sense of emotional reflection is emphasised.

Light is a strong element in this building; it breaks up the large volume, puncturing through the solidity of the concrete planes. A slot in the roof extends the length of the joint between the 'Hall of Condolences' and the horizontal walls. This addition, according to the architect, has the result of relieving the weight as it is positioned where the pressure from the hundreds of tons of concrete should be at its highest, between the roof and walls of the 'Hall of Condolences' (Russell, 2000, p. 229). "There is something heartening about that sliver of sky, a harbinger of the end of grief" (Russell, 2000, p. 229). The columns, previously discussed, are crowned with a halo of light; almost invisibly connected to the concrete mass with steel plates, the light pours down the columns casting shadows on the floor far below. This heightened light source immediately connects with the ideas of death and the afterlife, while not limiting the building to any particular religious faith.

There is a strength and solidity in the material choice and scale that enables a connection with emotions that is required for such a programme. The presence of extended height and space results in domination over the user, diminishing their position within the space. It is a successful technique to impact upon the sombreness of the emotional state of grief. The light from above, brings ideas of enlightenment and hope; as noted in previous literature studies, verticality is linked to awe, a clear intention and result of the building. Following the integration of awe, a space of grief must disable the user from the exterior surroundings and from their own significance.

Findings of Grief

While these two cases exhibit quite differing spatial configurations, there are common denominators in the material usage and the spaces created. While the Memorial plays with ideas of compression and claustrophobia, these are related to the forceful nature of the event being memorialised, a sense of attempting to provoke a level of understanding. The higher volumes of the crematorium are more directly related to grief, promoting insignificance, while the general momentous nature of the volume provides serenity, calm and peacefulness.

Light is used in very different ways in both the cases; however, they almost produce the same effect. In the memorial, a flame at the end of a long tunnel draws one forward, through the space while the lit glass shard wall increases the extreme narrowness of the tunnel. The crematorium's use of light is more vertical, bringing ideas of awe and enlightenment; a sense of hope is provided. These two concepts together can be used; they both provide a focusing aspect bringing attention to the directionality that is in play in both spaces.

The material of choice in both cases is concrete. In the Memorial it is used in a rough form, heightening the harshness and brutality of the architecture. The crematorium uses concrete with a smooth finish. It is questionable what effect a rough concrete would have had on the slender elements with such a high extension, perhaps creating a space of extreme oppression rather than any serenity or peacefulness. Concrete itself, provides the characteristic of solidity and strength. Its embodied cooling character is applied in both cases to create cool environments.

Fig 4.16- Diagram of extension through verticality and horizontally

Drawn by author

Top- extended volume through height, shows the diminishment of the position of the person. The height exaggerates the building's relationship with the sky, ideal for spaces intending awe and spirituality, as seen in the crematorium

Bottom- lower ceiling, brings weight of structure down on the occupant, creating a space of discomfort and oppression, as seen in the corridor space of the Memorial.



Fig 4.17- Diagram of dissension

Drawn by author

Shows the concept of a hidden structure, alluding to obscured nature of memorialised event. Visitors descend below ground, to a structure almost hidden from view.

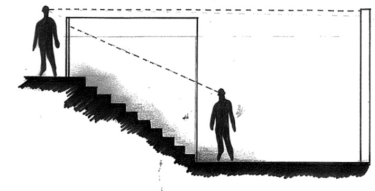
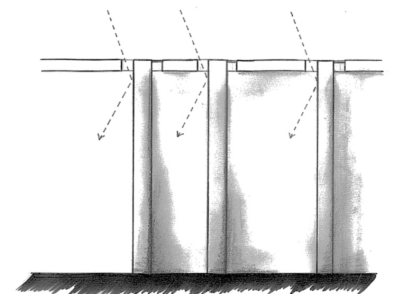


Fig 4.18- Diagram of light infiltration

Drawn by author

Looks at the techniques used in the Treptow crematorium, with light entering around columns at ceiling level and illuminating the column structure.



4.2 An Architecture of Love

This section discusses the creation of an architecture embodied with the spatial qualities of love. Associations have been made in connecting feelings of safety, homeliness and comfort. A space that evokes the qualities of love can be created through elements and architectural characteristics that speak of these same feelings. These qualities are investigated through the *Nant-y-Cwm Steiner School* in Pembrokeshire, England and the narrative project of *La Petite Maison* (The Little House) by Jean-Francois Bastide. It examines a fictional building designed to seduce a lover through the lavish decorations and sequence of spaces.

Nant-y-Cwm Steiner School, Pembrokeshire, England

This project is a collaborative concept between the ideals of Rudolf Steiner in regards to childhood development and education and the architectural language of Christopher Day. Many of Day's concepts discussed in the previous chapter regarding materials and forms are implemented in this project. The building aims to provide a comforting and nurturing environment in which children can learn. The kindergarten was designed to support imitative and imaginative activity, within a warm, secure, dreamy environment (Day, 1990).

The exterior form is based around integration into the surroundings; the natural elements override the man-made, with grass growing over the roof structure and dirt mounds pressing against the walls; it "...promotes a sense of harmony between the building and the bodies of the children...an idealized relationship among the landscape, buildings, and children..." (Kraftl & Adey, 2008, p. 216).

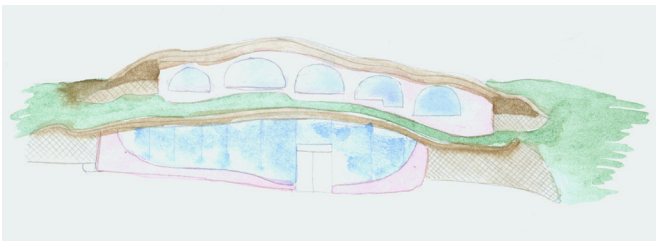


Fig 4.19- Elevation

Watercolour by author

The elevation shows the relationship between the building and the environment. The building looks to be embedded into nature with a grass roof and walls that seem to merge into the ground plane.

The organic forms mould into the landscape, creating a relationship of submission to the natural surroundings. The scale and proportions of the project are of domesticity, diminishing the possibility of large spaces or buildings dominating the user's relationship with the building. This limiting of scale is particularly important considering the main users of the facility are young children.

The interior is also based around domestic scale; small classrooms of circular plan embrace the central focus that is imminent in circles. The addition of alcoves and indentations around the circular plan prevent any feeling of entrapment and add interest with areas of stimulation for the children, whilst simultaneously providing spaces for individual interaction, spaces to play, rest and read.

There is a dominating effect of homeliness, which is supposed to stimulate and create the ideal environment for early childhood education. It creates a sense of familiarity incorporating warmth, safety and protection to portray this feeling of homeliness (Kraftl & Adey, 2008). The "focus on natural materials, the use of light, ambient heating methods, and a softening of harsh corners and straight lines" aids in creating the homely, comforting mood (Kraftl & Adey, 2008, p. 216).

"The notion of welcome, for instance, is created through a combination of architectural forms that should direct the active dwelling and performance of inhabitants, memory, and emotion, thereby encouraging an inhabitant to "feel welcomed" (Kraftl & Adey, 2008, p. 218).

The main spaces within the kindergarten are curvaceous forms with no straight walls or right angles. Walls curve into ceilings, enclosing the spaces within a womb-like form. Light enters through domestic-styled windows and plays on the dappled surface of the coloured render, infiltrating the many alcoves and nooks that break up the circular floor plans.

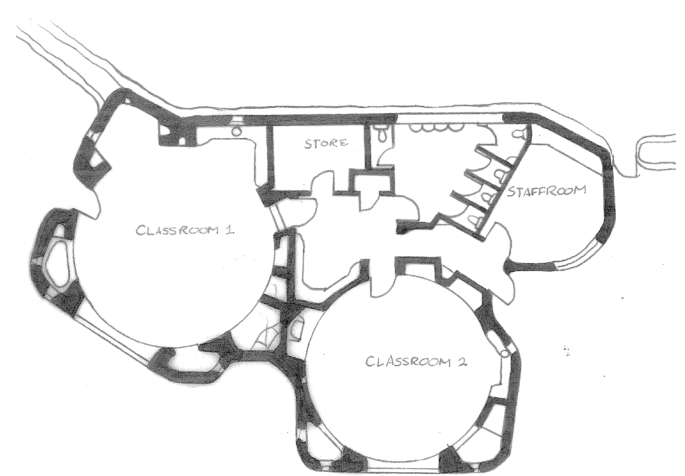


Fig 4.20. Plan

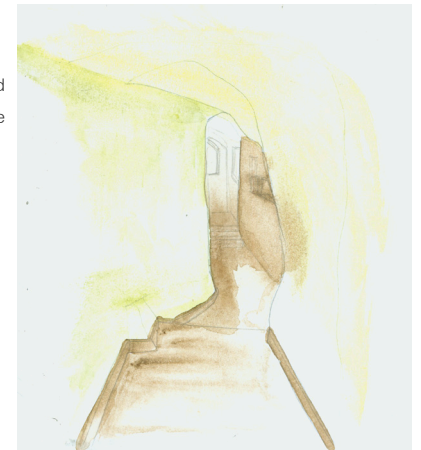
Drawn by author

Spherical forms incorporating alcoves form the classroom spaces, secondary facilities have curving walls, eliminating sharp edges.

Fig 4.21. Interior

Watercolour by author

Curvaceous merging walls and ceilings create a protective corridor.





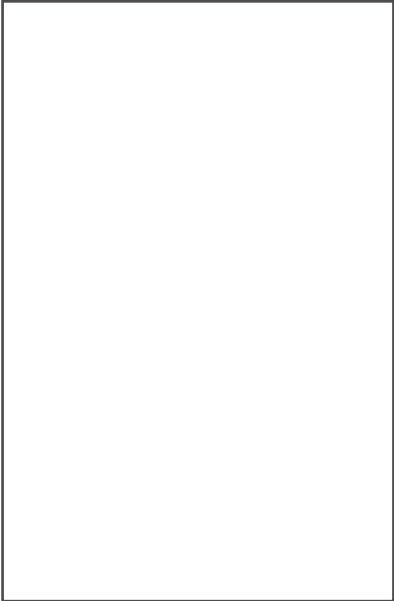
*Fig 4.22 & 4.23.
Classrooms*

Photo sourced Geograph
Project Limited. (n.d.). Retrieved
August 10, 2011, from ([http://
www.geograph.org.uk/
photo/579975](http://www.geograph.org.uk/photo/579975))

Top- alcoves can be seen at two
scales, one for occupying and
the other for keeping trinkets.

Bottom- classrooms are set
up as environments for play,
allowing imagination to reign.

Removed from pdf



Studying the building, one can see that the overall curvaceous forms of the building provide a protection, to emphasise the secure environment being housed. The subtlety of light entering, dappled tones of paintwork and warmth in the materials used provides the intended nurturing space for imaginative learning techniques embodied in the Steiner philosophy. The spaces exhibit readings of comfort, security, safety, nurture, welcome and homeliness that are eminent in the portrayal and understanding of love. Following these readings it is clear that intimacy is prominent in the expression of love.

La Petite Maison, *Jean-François Bastide*

La Petite Maison, by Jean-François Bastide, bridges between the two aims of a boudoir novel and an architectural treatise, “where architecture is conceived as a powerful device of seduction” (Mezieres, 1992, p. 155). Architecture plays an important role in the development of the narrative. The novel is a description of a fictional architectural work, one which is abundant with connotations, symbols and trickery. It is presented as a fictional tale, giving equal prominence between the architectural ideas and the characters and settings (Cleary, 1989). The story involves a bet between young, virtuous *Mélite* and the *Marquis de Tremicour*, over his ability to seduce her. The setting for this wager is *maison de plaisance*, a fictional house on the river Seine, said to be based on Jacques-François Blondel’s ‘*a l’italienne*’ (shown in Chapter Three); a house believed to have the power to impress and seduce. The house acts as a third character in this love affair, “the catalyst that would provide the optimal ambiance and the necessary lubricant for the machinations of seduction...” (Bastide, 1996, p. 32). The house uses a lavish array of spaces: stimulating all the senses, decorated in rich colours and materials, scented through infused paints and varnishes and serenaded by unseen musicians. The sequential nature of the narrative is calibrated to the spatial hierarchy of the apartments; length and detail of descriptions directly relate to the importance of each space. As is discussed by Nicolas Le Camus de Mézières, the sequence of spaces is given dominance; the decoration of each space is related to the particular function with each adjacent room consisting of contrasting tones and moods (Mezieres, 1992). The whole concept is based on a theory of sensation and effect. Dimensions, shapes, colours and materials are determined and composed according to desired effects and anticipated reactions (ed-Khoury, 1995). Overall *Mélite* “did not realise that no other place in Paris or all of Europe was as charming and as artfully contrived for love” (Bastide,

*Fig 4.24. La Petite
Maison book cover*

Book cover sourced from
Renaud Bray. (2008). *La Petite*
Maison. Retrieved November 15,
2011, from ([http://www.renaud-bray.com/books_product.aspx?id=926852&def=Petite+maison+\(La\)%2CBASTIDE%2C+JEAN-S+DE%2C9782743618094](http://www.renaud-bray.com/books_product.aspx?id=926852&def=Petite+maison+(La)%2CBASTIDE%2C+JEAN-S+DE%2C9782743618094))
Removed from pdf

*Fig 4.25- Image from
English translation,
1996, of La Petite
Maison*

*Book cover sourced Bastide,
J.-F. (1996). The little house:
an architectural seduction
(R. ed-Khoury, Trans.). New
York: Princeton Architectural
Press.
Removed from pdf*

1996, p. 58). She does not expect the house to have an impact on her but the beauty and seduction of it forces her emotions to become out of her control.

There are two editions of the story; in the first, the morals of *Mélie* conquer and she rejects *De Tremicour's* advances. In the second, the moral teachings are forsaken and Melite gives in to *De Tremicour's* attentions and loses the bet (ed-Khoury, 1995). In both editions the lesson about architecture is the same; however, it is the latter ending that seems to insist on the power of the architecture and proves the architecture's ability to seduce and suggest the feelings of the occupants. Although not a physical piece of architecture, the elaborate descriptions of the spaces and materials provide an imaginative picture of the project, relying on the readers' imaginative perception, but also giving a high enough level of detail to establish a general appearance. The following analyses two spaces within the descriptive building, the boudoir and the salon.

The *salon* is the first space to be entered. "So voluptuous was this salon that it inspired the tenderest feelings; feelings that one believes one could have only for its owner" (Bastide, 1996, p. 67). A combination of painted panelling, the circular shape, domed ceiling and the richness of gold sculptures contribute to the finery of the space. The space is lit by thirty candles held in a chandelier of porcelain and bronze that are reflected in the mirrors, a brilliance is added and the salon appears enlarged. Here it is noted that this space is dependent on a materialistic brilliance which creates the fine atmosphere- a mood correlated in the text to that of overwhelming affection. After experiencing this space, *Mélie* exclaims "this is so much more than just a little house; this is a temple of genius and taste..." *De Tremicour* replies "this is how the asylum of Love should be" (Russell, 2000, p. 70).

The *boudoir* is entered after the bedroom. It presents a strong contrast with the materialistic finery and beauty of the salon. The walls are mirrors, whose joinery is

concealed by decorative tree trunks (Bastide, 1996). The effect is a natural wood, where light is emitted from many candles. An ottoman covered by rich fabrics, hangings and pillows provides a resting bed. Paints in this room were mixed with the scents of violet, jasmine and rose (Bastide, 1996). Behind a screen musicians await for instruction to play (Russell, 2000). It is in this room that *Mélie* feels the first overwhelming power of the seductive house, an awakening of all her senses heightened by the scented paint and mystical music. This room is seen in this thesis, to rely on connotations from nature; with the introduction of flower scents and wood illusions, one is transferred to another world- a place of magic and natural beauty. The introduction of nature, here, is a man-made edifice that provides the beauty of nature while maintaining the construct of an interior environment.

These two spaces depict the richness in decoration and impact these decorations have on the moods of the room. The notion that architecture can inspire lust and love through design is foreign in contemporary society and this book is generally thought of as trivial and a fanciful narrative tale (Vidler, 1996). It is mainly used as a documentary on the decorative practises of the mid-eighteenth century, hardly mentioned in reference to the psychological process that propels the visit and the plot of seduction. Here, it provides a basis for an architecture of 'love' and 'seduction' that is a commentary on the sequence of spaces and the power of decorative qualities. This thesis uses these ideas in relation to their narrative impact. The decorations are duly noted as being far more lavish than is familiar in contemporary society, but the concept of decorative qualities implying moods and emotively impacting inhabitants is relevant. These concepts can be transferred into contemporary notions of ornamentation, material treatment and detailed connections. The use of the narrative in this case proves the assumptions made in the relationship between particular elements and moods under investigation in this thesis.

Findings of Love

The overall concepts relate to intimacy and comfort. In the Steiner School, circular spaces bring the focus internally, providing an environment of safety. Light is abundant but indirect and dappled, again allowing glimpses and brief connections to the exterior but preventing distractions from outside. *La Petite Maison* is also very internally focused, emphasising the intimate characteristics of the spaces.

Curving walls and ceilings that merge into one another reduce the severity of the spaces. The curving forms can be connected with ideas of protection and enclosure experienced in the womb. There is a mothering softness about the form which has the ability to provide these links to safety, homeliness and comfort. *La Petite Maison* does not suggest curvaceous forms, rather it uses decoration, ornate wall coverings and furnishings to soften the spaces.

The concept of a sequence of spaces existing in *La Petite Maison* applies the idea of thresholds and a totality to the architecture with each space providing a particular character while working towards a total language of the building. The sense of expectation and suspense is always present in this arrangement.

The constructs of nature differ between the two projects, while both maintain it as a key aesthetic conceptual driver. *La Petite Maison* expressed nature through the artistic decorations of its interior, alluding to a natural setting through artistry and sensory trickery. This concept relies on the connotations of comfort and beauty inherent in natural settings. In contrast, the Steiner School relinquishes its physical form to the natural surrounding - rather than adapting natural visions - allowing the building to become emerged in the landscape.

4.3 Conclusion

Grief and love have been developed here as 'languages of emotion' in reference to their case studies. The case studies were analysed through the characteristics exhibited in their writings and photos, and linked to the material, form and colour denotations of the previous chapter.

The emergence of light as a key atmospheric element was clear throughout the case studies. Therefore, light is established here as having a dominant role in the creation of these emotional environments and will consequently be adapted in the following chapter from the analysis here.

It is established that light, volume and materiality are very important in the creation of a 'grief' space. The light must be sparingly applied and filter through the space, reflected or emphasised on the surfaces of the materials. Volume is extended in both directions, vertical providing awe and forwards implying expectation; the former is noted here as being most related to a feeling of grief.

Love applies the same elements in a differing way; again, volume, light and material are of great importance. Love has a domestic scale linked to the associations of intimacy, comfort and safety. The forms are less rigid, either broken up by lavish ornamentation (a somewhat historic view) or curvaceous, relating to womb-like structures. Light is abundant while not intensely illuminating; comfort is created through the dappled light qualities and the slight disconnection with the external world.

These associations and connotations will be tested in the design stage, experimenting with the languages of the two spaces and the sequence of spaces creating a dialogue between them.

References

- Bastide, J.-F. (1996). *The little house: an architectural seduction* (R. ed-Khoury, Trans.). New York: Princeton Architectural Press.
- Campays, P., Liddicoat, S., & Randell, M. Memorial of Deportation Retrieved 15 July, 2011, from inter-disciplinary.net
- Conley, K. (1999). The Myth of the "Dernier poeme": Robert Desnos and French cultural memory. In M. Bal, J. Crewe & L. Spitzer (Eds.), *Acts of Memory: cultural recall in the present* (pp. 134-147). Hanover: University Press of New England.
- Cleary, R. (1989). Romancing the tome: or an academician's pursuit of a popular audience in 18th Century France. *Journal of the Society of Architectural Historians*, 48(2). pp. 139-149.
- Day, C. (1990). *Places of the soul*. Northamptonshire, England: The Aquarian Press.
- ed-Khoury, R. (1995). Introduction. In J.-F. Bastide (Ed.), *The little house: an architectural seduction* (pp. 19-54). New York: Princeton University Press.
- Koch, L. (2002, 1/27/2002). MEMORIALS; Feeling abandoned, *New York Times*.
- Kraftl, P., & Adey, P. (2008). Architecture/affect/inhabitation: Geographies of Being-In Buildings. *Annals of the Association of American Geographer*, 98(1).
- Mezieres, N. L. C. d. (1992). *Le genie de l'architecture*. Santa Monica, California: The Getty Centre for the History of Art and the Humanities.
- Russell, J. S. (2000). Evoking the infinite, Axel Schultes takes mourners at a crematorium from the clamour of daily life to a realm of calm and contemplation. *Architectural Record*, 188(5), 224-231.
- Schultes, A. (2000). Krematorium Baumschulenweg Retrieved 4/11/2011, 2011, from <http://www.schultesfrankarchitekten.de/>
- Stegers, R. (2008). Baumschulenweg Crematorium. *Design Manuals*, 9, 234-235.
- Vidler, A. (1996). Preface. In R. ed-Khoury (Ed.), *The little house: an architectural treatise* (pp. 9-18). New York: Princeton Architectural press.

5. *Design: Applying Emotions*

This chapter discusses the application of the 'language' that has been established through theory and case study research into a design programme that creates spaces of grief and love. Through design, a facility for a small scale theatre and dance troupe will be designed with particular emphasis on studio rooms that embody emotionally defined physical characteristics, experimenting with the physical representation of grief and love in multiple spaces. The spaces will test the capacity for architecture to have an ultimate manipulation on the emotional state of its occupants and stimulate the teaching and art of acting in its aim to emotionally involve the audience through performance. Site and programme will be established as the base layer of design. Following this, the associations and implications of the emotional characteristics are reiterated, outlining the limitations apparent in the experimentation of these concepts. Design process involves experimentation with sketches and maquettes of qualities and forms for the two emotions, initially from interpretations of literature and case studies, presented earlier, and further explored through architectural elements. The final design will be presented as an experiential journey of the building, describing the different spaces in general and elaborating on specific spaces and details through images and architectural drawings. Subsequent to the completion of design, reflection in the form of limitations and relation of design to theory is discussed.

5.1 Programme

The programme of a theatre is chosen to test the theoretical ideas presented in this thesis. The theatre is accepted as the traditional seat of emotions, where the art form of acting provided a medium for the transference of emotions to the spectators. Direct correlations can be easily seen between the implications and aims of theatrical performance and this architectural experiment. The main purpose equated to performance is to excite strong emotions in the spectator.

"The atmosphere inside a theatre was interpreted and described as highly infectious. Actors perform passionate actions on stage, whereas spectators perceive and are infected by them: they, too, begin to feel passionate. Through the act of perception, the emotion is transferred from the actor's present body to the spectator's present body" (Fischer-Lichte, 2010, p. 29).

The programme is established as a small scale, untraditional theatre for a private dance and drama troupe and training school, where the audience and actors utilise the same spaces at different times, rather than the traditional separation between the backstage and the performance. Following this untraditional nature, theatre requirements have been limited to allow for the experiment of emotions to take the dominating design focus. This can be seen in the extreme height differences between the spaces, some with low ceilings, and others with extremely high ones. These heights are relevant to the design concepts established rather than the pragmatic design of the theatre and studios. The actual theatre space for performance is also untraditional, challenging the relationship of the audience and actors by, for example, bringing both entrances around the stage.

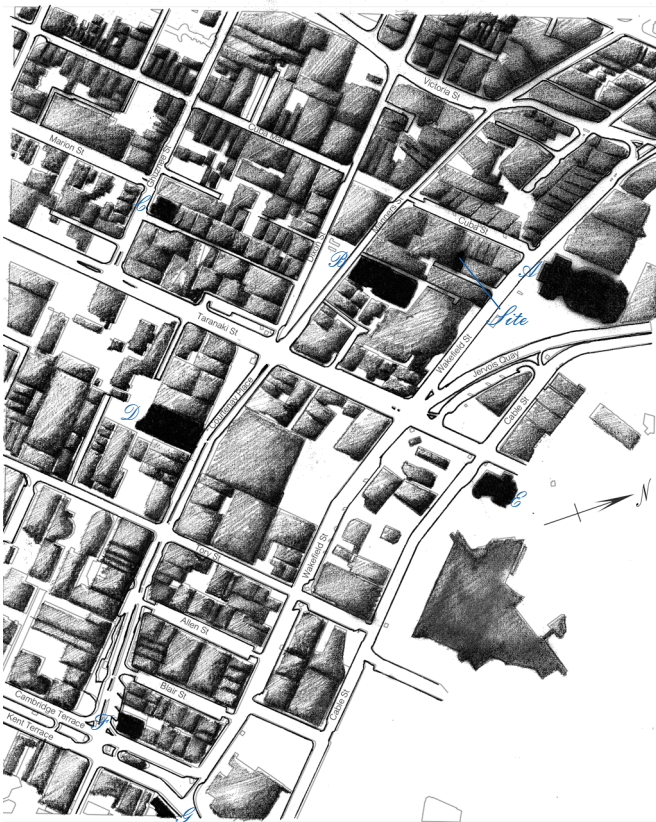


Fig 5.1. Site Map at 1:10,000 scale

Shows existing theatrical facilities in the vicinity of the chosen site for this design project. Marked in black are dominant facilities that attract broad audiences. Blue denotes small theatres of practice facilities utilised by small theatre and dance troupes. The area can be seen to be quite active in this area of entertainment, and thereby a perfect siting for this emotional theatre exploration.

A - Michael Fowler Centre

B - Opera House

C - Gryphon Theatre

D - St James' Theatre

E - Circa Theatre

F - Downstage Theatre

G - Bats Theatre

5.2 Site

The site is situated on Pringle Avenue, a small alleyway off Wakefield Street in Central Wellington. The site is positioned within a realm of theatrical and dance facilities, with a close proximity to Michael Fowler Centre, The Opera House and St James Theatre (Fig. 5.1). Also nearby are several private dance and drama troupe headquarters. The almost hidden nature of the site, with no thoroughfare, and set back from Wakefield Street (hidden behind Anvil House) provides a level of privacy and enhances the idea of discovery as one progresses- the journey beginning before one enters the physical confines of the building. The site is surrounded by three neighbouring buildings, allowing it only a single exterior facade, ideal for the intention of this project. Due to the interior nature of the investigation, dominance on interior design is advantageous. The site is only provided with direct light in the upper portion, with the ground and lower levels remaining in shadow.

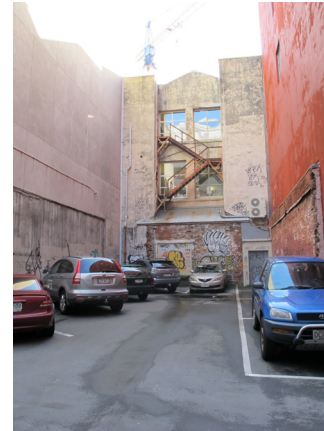


Fig 5.2-5.4- Site Photos

Photo by author

Top left - view from entry to site. Top right- view of south neighbouring building. Bottom- view of site entry from Wakefield Street end of Pringle Avenue

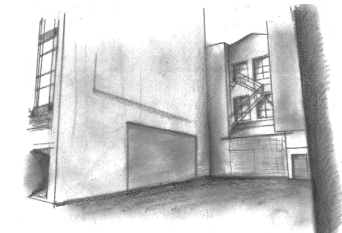
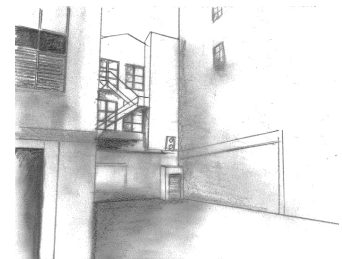


Fig 5.5 & 5.6- Site sketches

Photo by author

Top - view from south of site on Pringle Avenue.

Bottom - view site from north entry on Pringle Avenue.



5.3 Creating an Architectural Emotion

This design project aims to test the capability of architectural spaces to incorporate materials, textures, light, colours, geometrical symbolism and qualities that will create spaces structured by the qualities of their elements and evoke the feelings of grief and love in the inhabitants of the space. Initial sketches challenge and develop ideas expressed in literature and case studies and experiment with different architectural elements and compositions to present these ideas.

Grief

Associations have been made in regards to the correlation between the chosen emotions and atmospheric moods of spaces. Grief is ascertained here as being a solitary act, a state that is generally presented and explored within. This emotional state has been connected with isolation, solitude, darkness and serenity. These are aimed to be created through large volumes, solid walls and ceiling elements, limited light infiltration and a silence from the combination of these elements. The use of natural materials, chosen for their solidity and monochromatic qualities, provides a level of serenity, where a monochromatic colour scheme provides the silence. The following diagrams relate these concepts of grief to architectural proportion, light qualities and volume.

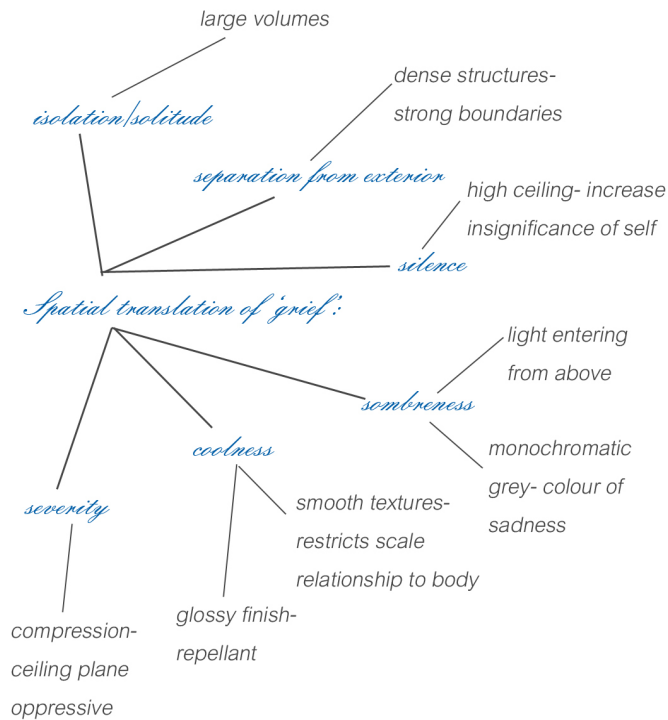


Fig 5.7 - Diagram of associated characteristics to grief

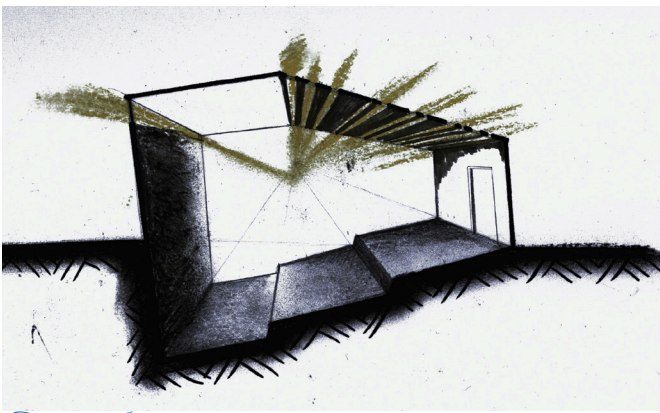


Fig 5.8 - Initial spatial construction of grief using translation of above associations

These spatial experimentations originate from the writings and philosophies of Christopher Day, commented on in chapter three.

Volume can create an atmosphere of either awe or oppression, as seen in either of the grief case studies (Fig 5.9). The large volume provides vertical emphasis giving a sense of awe, a lifting of hope towards the sky. Smaller spaces, combined with darkness, coolness and the solid materials ascertained as 'grief-like' could become oppressive and evoke fear rather than the serene or contemplative state of grief.

The ceiling is the main element of manipulation in the first series (Fig 5.10), where secondary planes are added to challenge the overall volume of the space, bringing the ceiling down on the inhabitant. Beams are added to the ceiling plane, these having the impact of extending the horizontality of the spaces and also diminishing the height of the ceiling.

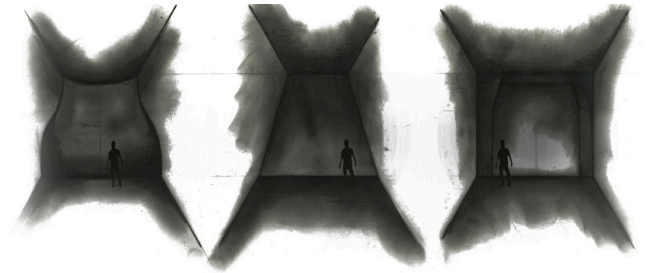


Fig 5.9 -Diagram of volume explorations-Grief

Sketches by author

Left- interpretation of diagrams from Christopher day literature, wider base, narrower top, concave ceiling = unnerving sense of overpowerment. Centre- translation of former, exploring linear elements to create same sense of compression from above. Right- second translation, exploring use of beams and columns to create same sensation.

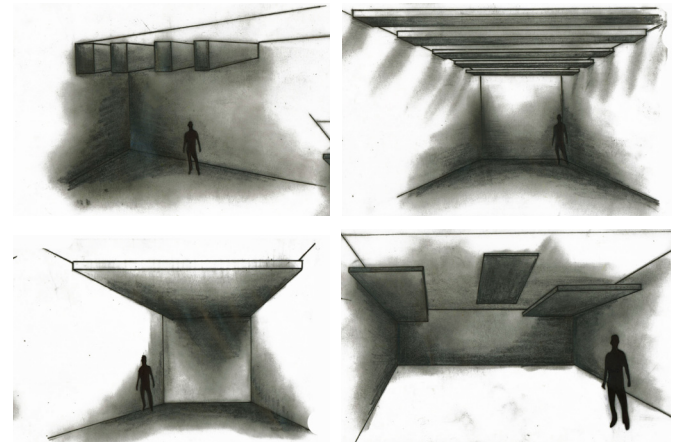


Fig 5.10 -Diagram of ceiling form, Grief

Sketches by author

Top images- use of beams to draw height of ceiling towards occupant, also creating weight in the upper portion of the space, a sign of oppressing the space below.

Bottom images- explore the use of secondary ceiling planes to enclose the space further, alluding to higher volumes but not allowing for this full understanding of the space. Left image uses a single ceiling plane suspended in the centre of the space, with gaps around the perimeter; light can therefore filter down the boundary walls from above. Right image uses multiple split ceiling plane elements suspended to create an uncertainty and instability in the space through a weight being introduced above the occupant.

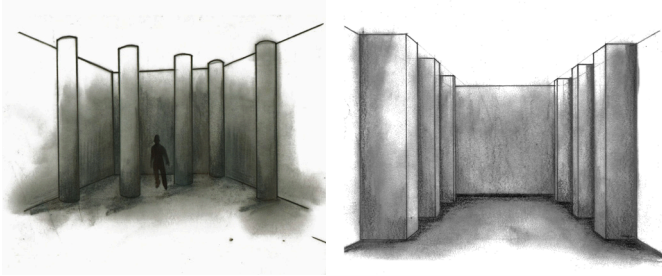


Fig 5.11 -Diagram of column use to increase verticality, Grief

Sketches by author

Left- random placement of columns increases uncertainty and irregularity in the space. It also provides a breaking up of the space and a creation of secondary spaces within the large volume.

Right- perimeter placement of columns increases verticality through compressing the horizontal volume of the space by creating alcoves along the wall boundaries.

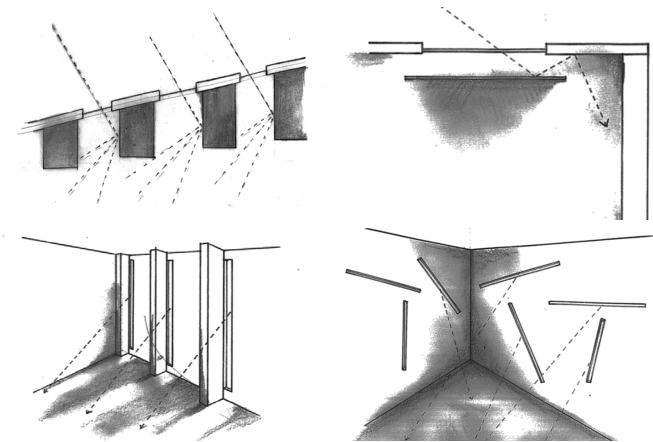


Fig 5.12 -Diagram of light penetration, Grief

Sketches by author

Top left- explores the use of beams to filter light into the space, decreasing direct rays that can be harsh and allowing for a lowered illumination of the space to occur. The beams are also emphasised with this technique, which if at a high level will heighten verticality.

Top right- use of horizontal elements to block direct light. No sign of the exterior is seen in this technique, with light only entering behind elements. The level of light will be further diffused, primarily relying on reflection of light of surfaces to light the space.

Bottom Left- light from the side enters between columns. Verticality is increased, emphasising the existence of perimeter columns.

Bottom right- random slices of light provide an uncertainty and disconnected relationship with the exterior.

Verticality can be emphasised through columns, either along wall planes or scattered within the space, as seen in the *Treptow Crematorium* (see previous chapter). Slender elements will emphasise the verticality further than wider elements, also applying an uncertainty in their structural capability due to the ratio of height and diameter. The placement of columns along the perimeter of the space could be used to apply the above concepts of an enclosing roof level, with columns tilting inwards on the space. Columns regularly placed through the space, would provide a regimented structure that would express solidity and strength, perhaps too conforming to be relatable to grief. In contrast, scattered placement of columns, breaks the space into smaller areas, and could have the impact of diminishing the strength of the volume (Fig 5.11).

Light is established as an important element for the creation of atmosphere (Fig 5.12). Within the 'language of grief' that is being created, light has a role of casting a somewhat spiritual glow over the space. It can be related to awe through vertical penetrations, (as in the crematorium) or as a beacon, drawing one forwards through a space (as in the memorial.) Generally, it has been inherent that low light allows for contemplation within the space, creating an inner focus, that allows personal reflection and distinction. Light is shown here as interacting with vertical and horizontal elements, being diffracted and manipulated to cast filtered glows through the spaces.

These sketches develop the previous experiments into a first design iteration, with volume and beam elements to present a space that exhibits grief (Fig 5.13 and Fig 5.14). The space is a studio, with a high ceiling height, contracting concrete walls and beams that span across the expansive space. The result is a space that seems to compress on the inhabitant whilst still remaining vast in its size. The compression of the walls brings the weight inwards, seeming to contract into the open space. The top-heavy walls create a discerning effect that oppresses the inhabitants. Light is limited, entering from above, between the beams.

However, this space was seen to be able to be strengthened through the further extension of the volumes. The volume covering multiple levels, and being accessed at differing heights would enhance the awe-inspiring height that was intended to create a feeling of diminishment and weakness in the inhabitant. The following development presented the space as a huge central volume where the other spaces interacted with it at suspended heights and the experience of the space was also expanded to be at several different levels. Also, although large concrete beams were included, the tapered walls were seen as not as strong as large concrete columns could be. Therefore, simple concrete plane walls were replaced with columns at intervals along the edges of the space, providing a rhythm along these faces and creating indentations and alcoves between them.

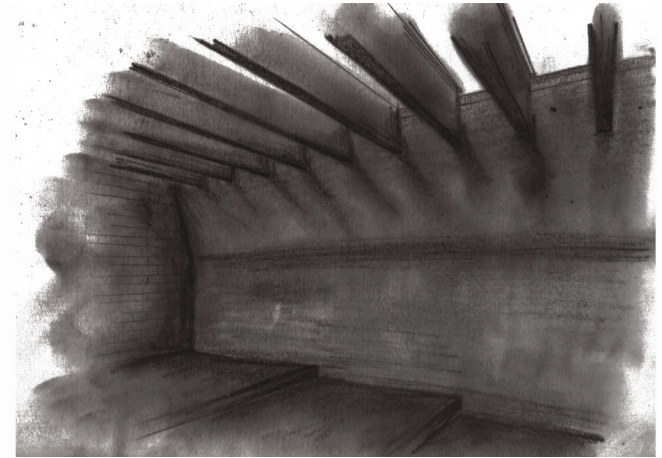


Fig 5.13- Initial sketch of space of grief.

Sketches by author

Beams at ceiling level were used to add weight above the occupant.



Fig 5.14- Initial sketch of space of grief.

Sketches by author

Mass walls, whose upper halves tilt inwards, add to the weighted ceiling of the space, architecturally presenting the ideas of concavity in volume previously explored.

Love

In reference to love, spaces of comfort, safety and beauty have been intended (Fig 5.15). Homeliness and welcome are easily relatable to love through their connotations of intimacy. Intimacy is understood here as being embodied in the expression of love. A level of understanding, by the occupant, in the construction of these 'spaces of love' is required for the spaces to be comforting. Therefore, the curvaceous forms (reminiscent of womb-like structures and spaces that embrace the body) retain their geometrical basis and a mathematical understanding that provides this level of comfort for the user. The use of materials, in their natural states aids in this understanding. The origin and form of the material is observable and explainable. Natural materials create a level of honesty, accepted as important in the creation of love.

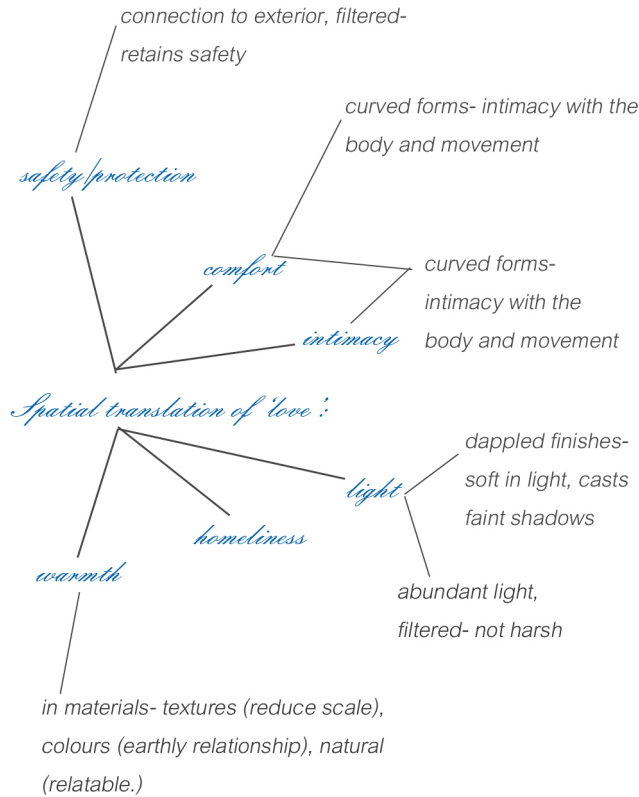


Fig 5.15- Diagram of associated characteristics to love

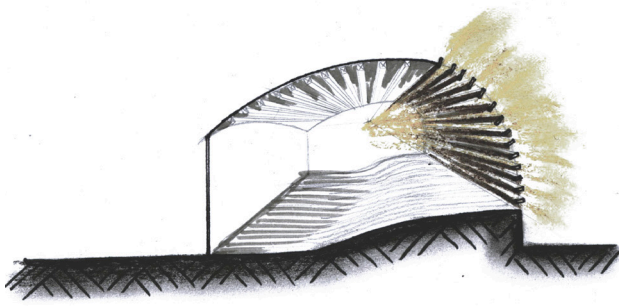


Fig 5.16 - Initial spatial construction of grief using translation of above associations

As with the development of spaces of grief, love was investigated through volumes and light. Sketches and diagrams that examined the forms and body relationship are featured here.

Volume was linked to domesticity through the associations of comfort and homeliness, particularly those inherent in the Steiner School project, analysed previously. Small scale spaces had the ability to interact closely with the singular inhabitant, seeming to embrace the person, thereby providing safety in a familiar scale and relationship. Contrasting with this, a space that was shorter than a normal domestic scale would seem oppressive, constricting and, consequently, uncomfortable. In communication with the grief volume- a space contracting at the roof level, a space of love is examined here as being contracted at the base and expanded at the top (Fig 5.17). With this, the base becomes solid and the upper portion more liberating and spacious.

Rather than follow the domestic theme through the aesthetic form of the spaces, a curvaceous structure is experimented with (Fig. 5.18). The idea that it is reminiscent of a cocoon or womb-like structure is relevant to the comfort available through domesticity while challenging the use of materials and light in a slightly unfamiliar, untraditional way.

Light is intended to be abundant, while not overly intense. It should spread through the space, illuminating the materials and brightening the furthest corners. As seen in the Steiner School, light enters through windows that do not allow a direct connection to the outside. Light is designed in these tests to enter between the main forming elements; therefore, no direct light portals are added, rather light is integrated into the overall system of the space (Fig. 5.19). A level of safety is maintained, while providing a connection with the exterior environment through the filtered penetrations.

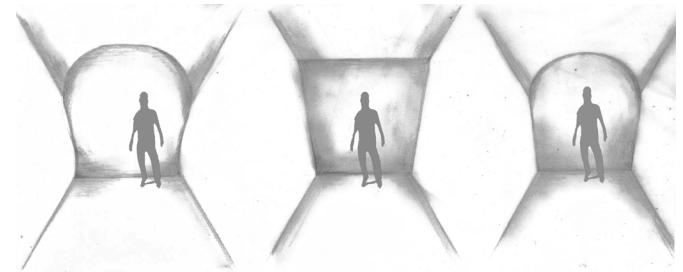


Fig 5.17 - Diagram of volume explorations Love

Sketches by author

Left- interpretation of diagrams from Christopher Day literature, supportive base, broader top, convex ceiling = sense of stability and security through strong base and expanding volume, curving wall planes and ceiling, add sense of nature and bodily relationship is heightened. Centre- translation of former, exploring linear elements to create same sense of expansion explored in previous sketch. Right- second translation, exploring use of linear wall elements, splaying outward at ceiling to meet a convex curving ceiling, creates a slight tunnel analogy, questionable whether this is comforting and intimate or entrapping.

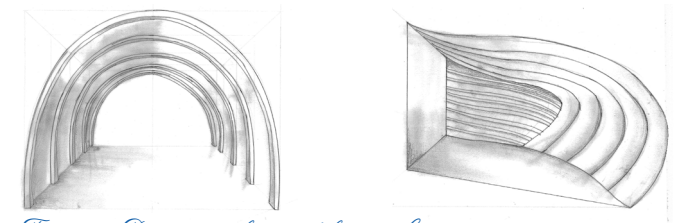


Fig 5.18- Diagrams of spatial forms, Love

Sketches by author

Left- tunnel like structure, presents a geometric curving form, understandable but too rhythmic for a space of 'love.'

Right- an irregular curving form meets a rectilinear wall, creating a space through the combining of geometric and natural forms.

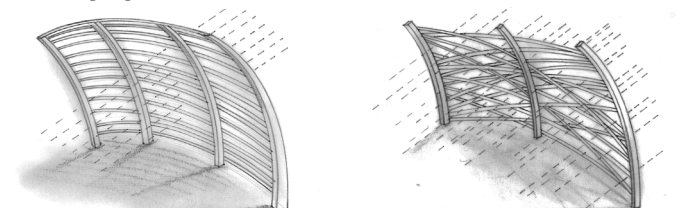


Fig 5.19- Diagrams of light penetration, Love

Sketches by author

Left- regular horizontal members form the facade, with shadows cast in regular strips across the floor.

Right- irregular horizontal members randomly disperse the light entering, casting unpredictable shadows through the space.

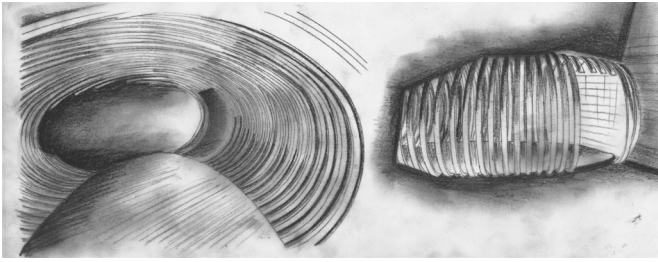


Fig 5.20. Initial sketch of space of love

Sketches by author

This space focused on the curvaceous arching forms creating a rhythmic boundary to the space. The simplicity and repetitive nature of the arches follows the concepts discussed previously of simple forms providing for a level of understanding that inherently maintains comfort.

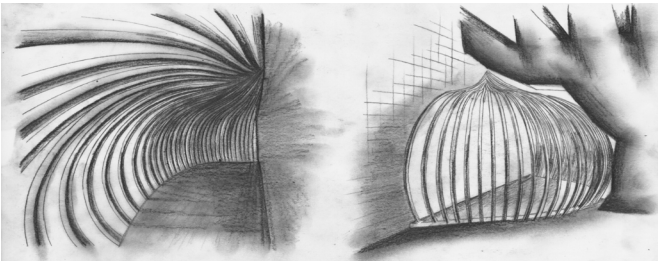


Fig 5.21. Initial sketch of space of love

Sketches by author

This space focused on the curvaceous arching forms creating cocoon that splayed outwards from a single point. The form creates a womb-like structure that encapsulates the occupant, providing protection and security through these connotations.

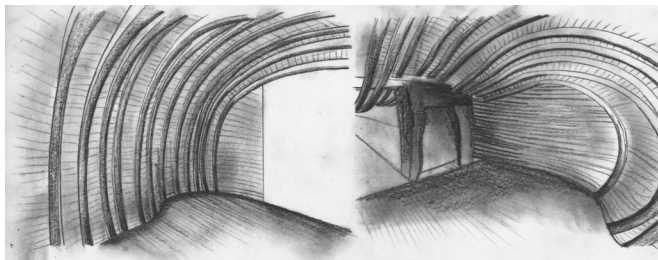


Fig 5.22. Initial sketch of space of love

Sketches by author

This space used curving timber arches, irregularly swooping, to form the front boundary of the space, utilising the solid neighbouring walls. The arches were in-filled with horizontal timber slats, punctured by light slits between, allowing a filtering of the outside world but no direct relationship.

These images show the first iteration of spaces within the programme and planning of the theatre. The spaces are constructed from curving timber elements cocooning the space. One forms a tunnel-like space, arching over the studio in a regular rhythm (Fig 5.20). Another uses the timber elements to fan out around the space and enclose it, forming a point at the top and base of the structure with the floor system sitting within this height (Fig 5.21). Light enters between the small timber ribs. The final space is formed by timber ribs that continue through the whole length of the building (Fig 5.22). The space is then clad with horizontal timber members, slits being cut within the cladding to allow slivers of light to enter. The clarity and expression of these timber elements provides the understanding of structural integrity and construction that is noted as assisting in creating a comforting space.

After the first iteration, two forms of spaces for love were developed through paper maquettes. These demonstrated the varying options for creating a timber curving cocoon as a form. The first shows a form where the timber elements create both sides of the shape, reminiscent of a tunnel in form (Fig 5.23). The elements are experimented with in the composition of their weaving and crossing between one another. This particular experiment was intended to maintain a level of geometric regularity, as argued by Day to provide comfort. Complexity was increased between the two sides, with the first regular, contorting into a more irregular second side. There are five versions of this space, each experimenting with different rhythmic compositions and contortions of arching members.

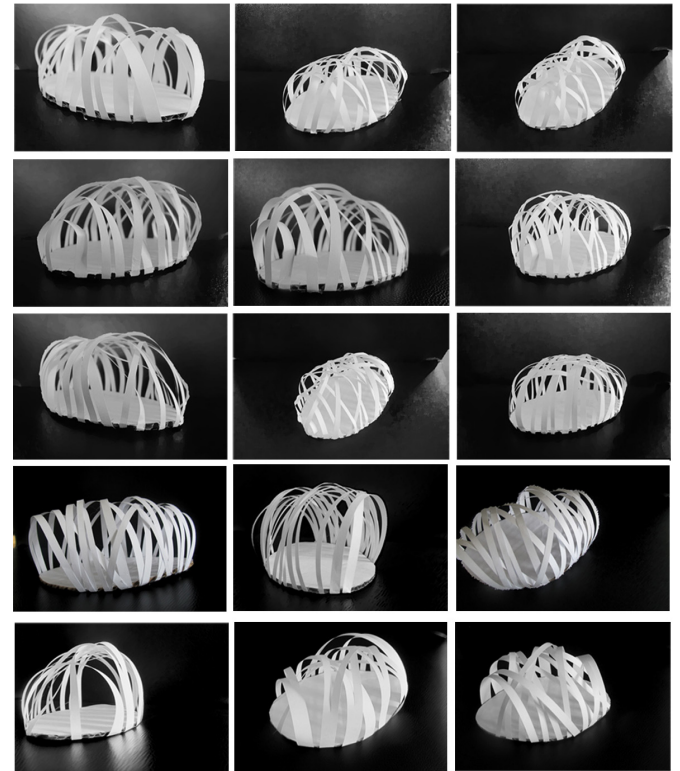


Fig 5.23- Model explorations of curving members forming one iteration of 'love'
models and photos by author

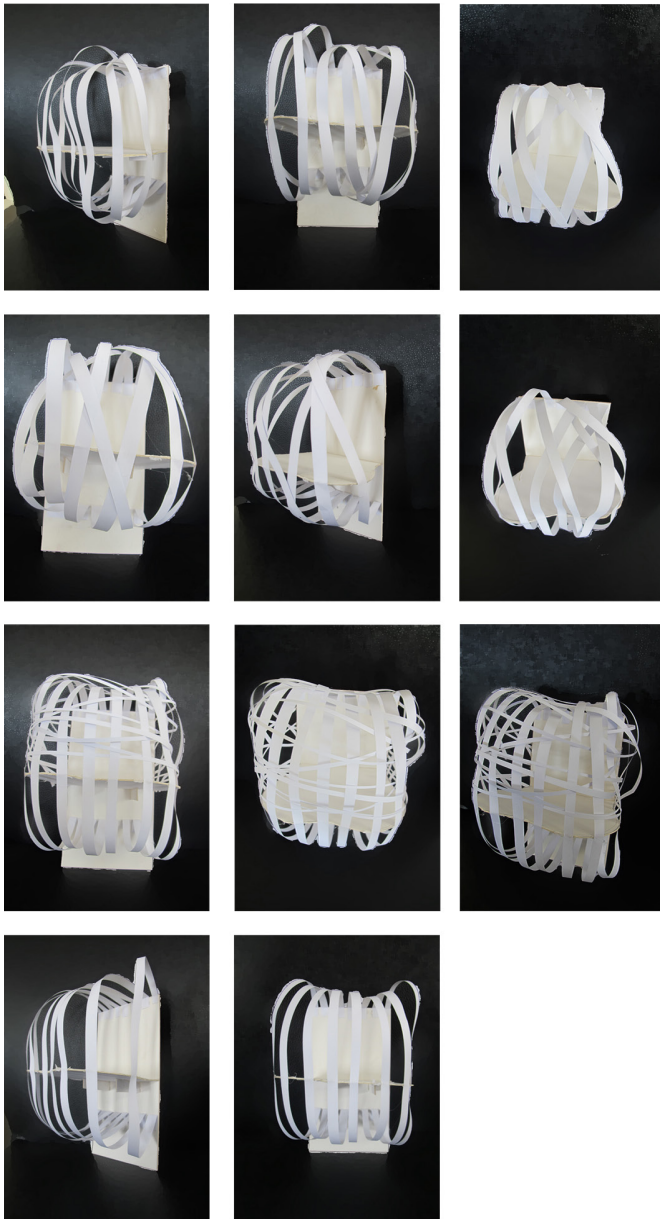


Fig 5.24. Model explorations of curving members forming one iteration of 'love'

models and photos by author

The second form shows a space that has a vertical plane wall (Fig. 5.24). Timber elements extend from this to the ground plane. The composition of these was also tested with secondary elements added to one to increase complexity in the weaving nature of the facade. The complexity of this space was tested with the crossing and merging of the main rib elements to form irregular patterns within the facade structure.

Movement

The concept of movement within this design is related to the dominating focus of emotional psychology previously established. It presents emotions as a state which we move in and out of, a transference and displacement where a disorientation or repositioning of oneself is essential. This links to the force of movement around the building designed, where a singular pathway of movement, passing through all the spaces, is emphasised. There is a forceful, controlling nature to the movement pathway, leaving little option of different channels, only providing a secondary access way for the exiting inhabitants. A narrative, as mentioned previously, is created through this sequential movement, relating to the ideas of sensation which were inherent in the case study of *La Petite Maison* and the writings of Nicolas Le Camus de Mézières. The transitions between the spaces exhibiting emotions become important within this concept of movement, providing thresholds that create a sequence of spaces, collated together to create a singular journey of emotional experience.

5.4 Architecture of Emotional Evocation

The design will be demonstrated through the narrative progression of movement, explaining the concepts and details of each space as it would be approached by the occupants.

The movement pattern, as mentioned previously, relating to the transitioning nature of emotional states, is important in the building of a total experience of the architecture created here so that the two emotional spaces are read as singular parts of an entire journey. It is both a circular and vertical movement, where the final experience is the theatre at the uppermost level. The movement areas have been designed to impinge on neither language experienced in the studio spaces, with steel and glazing being used to denote movement. The steel is exposed and creates an auditory impression when being used. This link between the performance of the architecture in emotional transference and the ultimate experience of performed emotions in the theatrical event culminates in this final space.

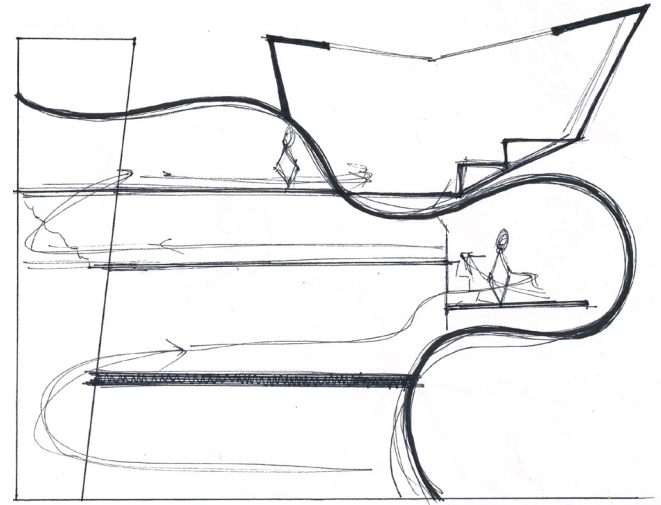


Fig 5.25. Initial planning of movement
sketch by author

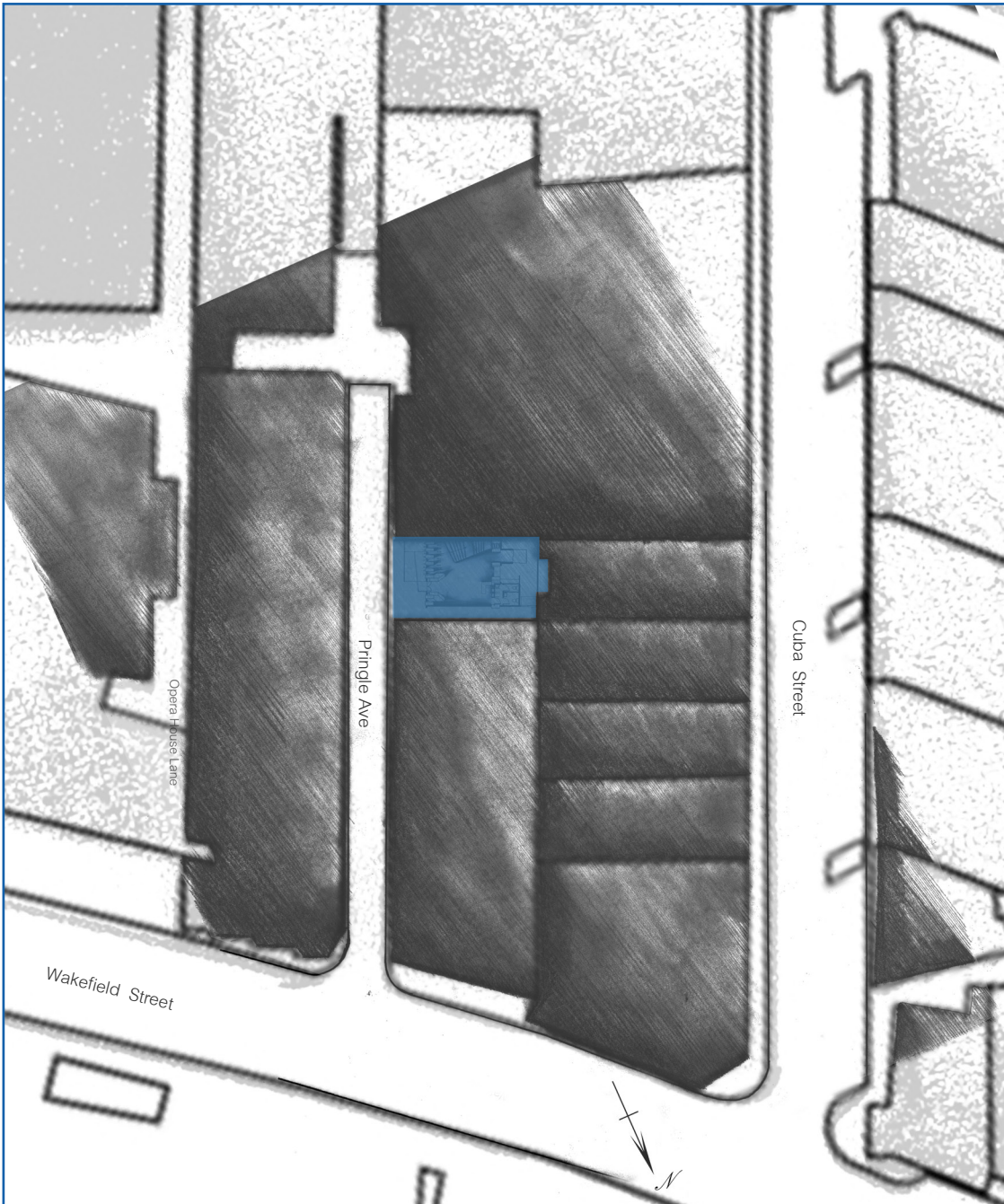


Fig 5.26 Site Plan _ Scale 1:1000

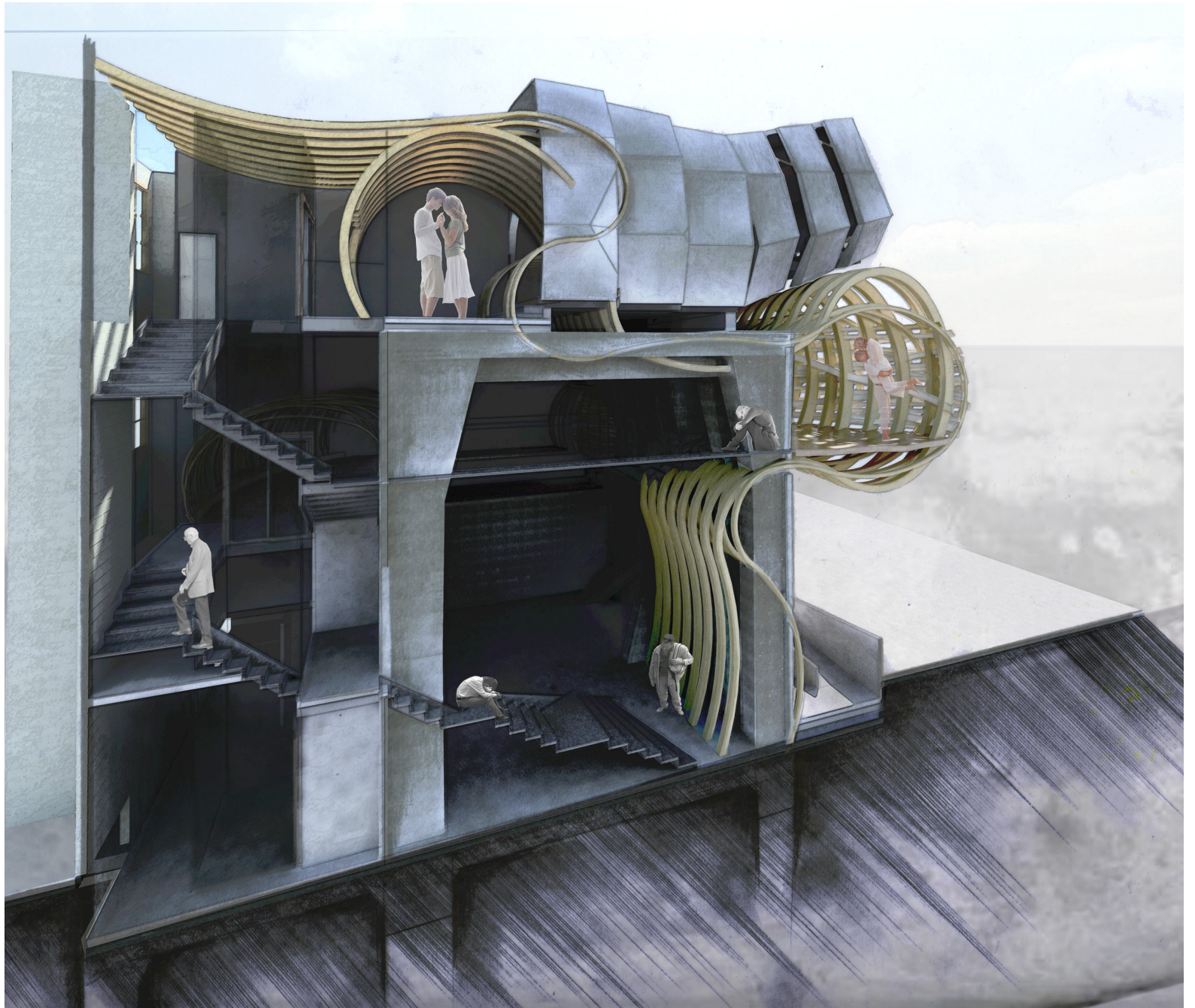


Fig. 5.27 3D sectional perspective

Fig 5.28. Ground Floor Plan Scale 1:100

The ground floor houses the main entrance and additional storage entrance via a side passageway. The entry opens into the large 'grief' volume, where the public facilities are situated: toilets, ticket booth and bar. These utilities are compressed beneath the overbearing columns, preventing them from impacting on the overall volume of the space. A glazed elevator is also accessed from this level. Behind the bar and elevator is space for storage and deliveries. Ascending up the steel stair one enters the main stairwell. The glazed lift is centred in this stairwell with the stairs wrapping around the lift shaft.

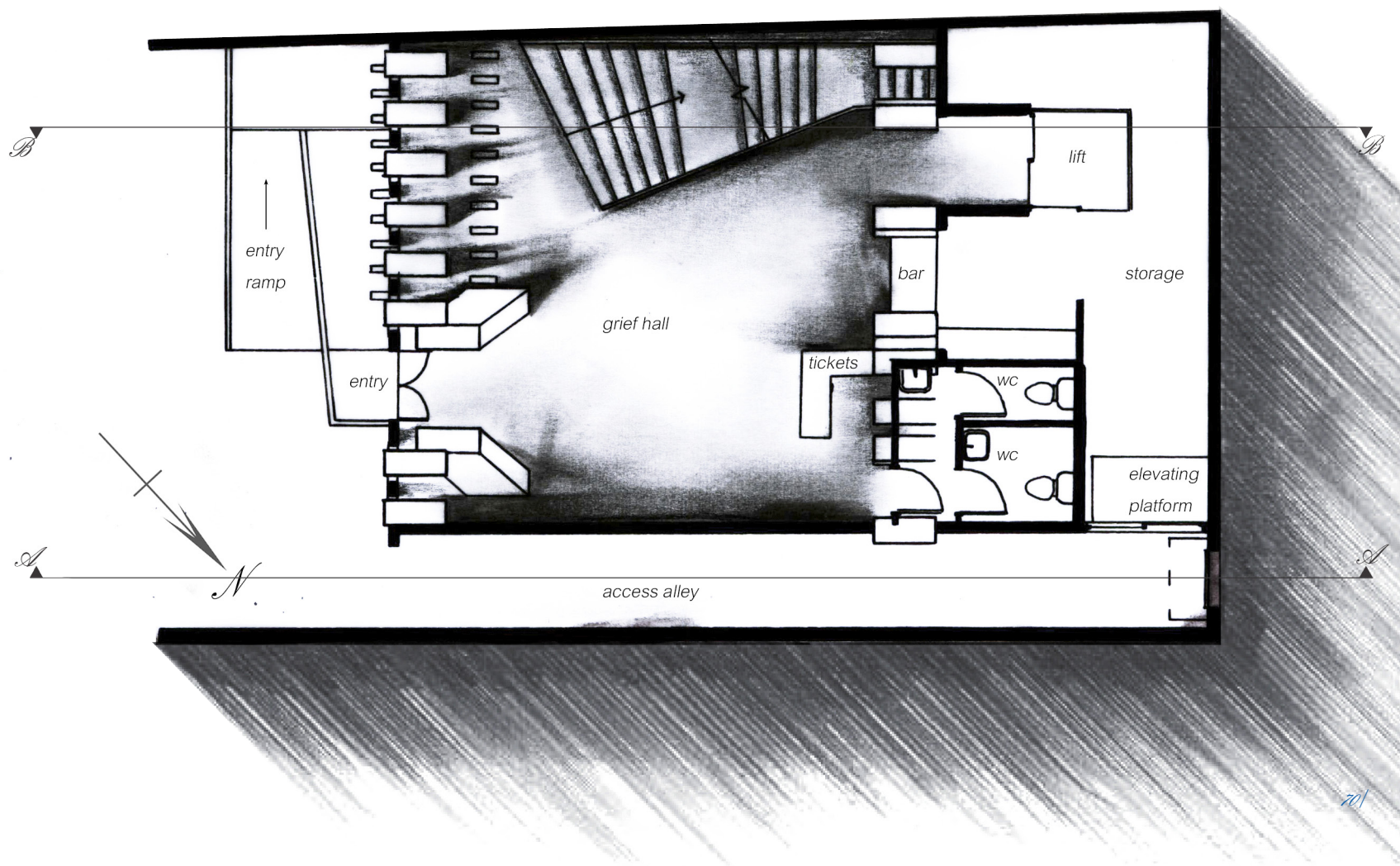


Fig 5.29. First Floor Plan Scale 1:100

The main stairwell approaches the first space exhibiting love qualities. This space is journeyed through to a steel suspended walkway across the 'grief' volume. It connects to the second 'love' space, which must be entered to access a second steel bridge pressed against and impinged by the concrete columns along the front facade. A short flight of stairs takes people up to the third 'love' space.

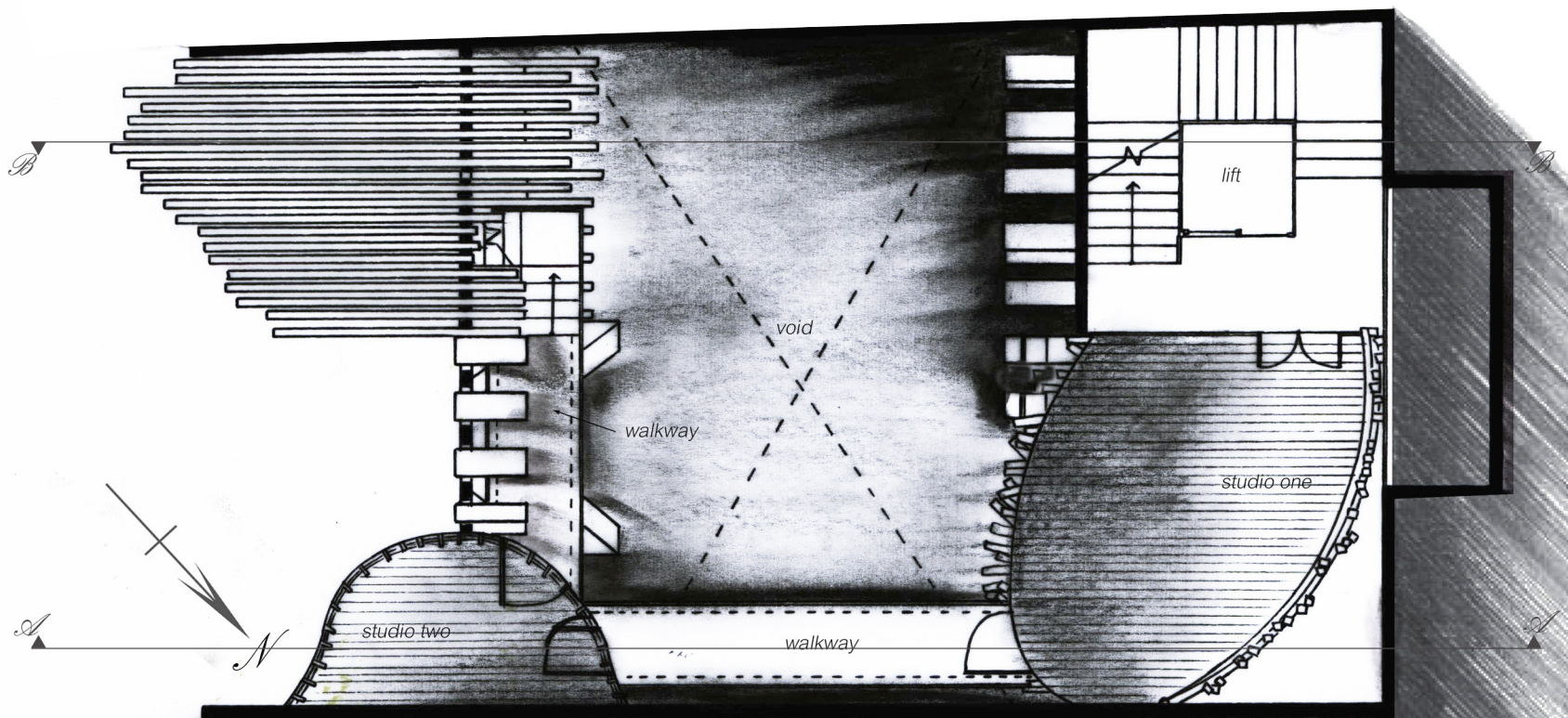


Fig. 5.30 Second Floor Plan Scale 1:100

This space is 1.75m raised from the level of the previous 'love' spaces. After entering this 'love' space, a third suspended walkway takes people from this space directly across the grief volume to the main stairwell. A steel stair ascends to the uppermost level.

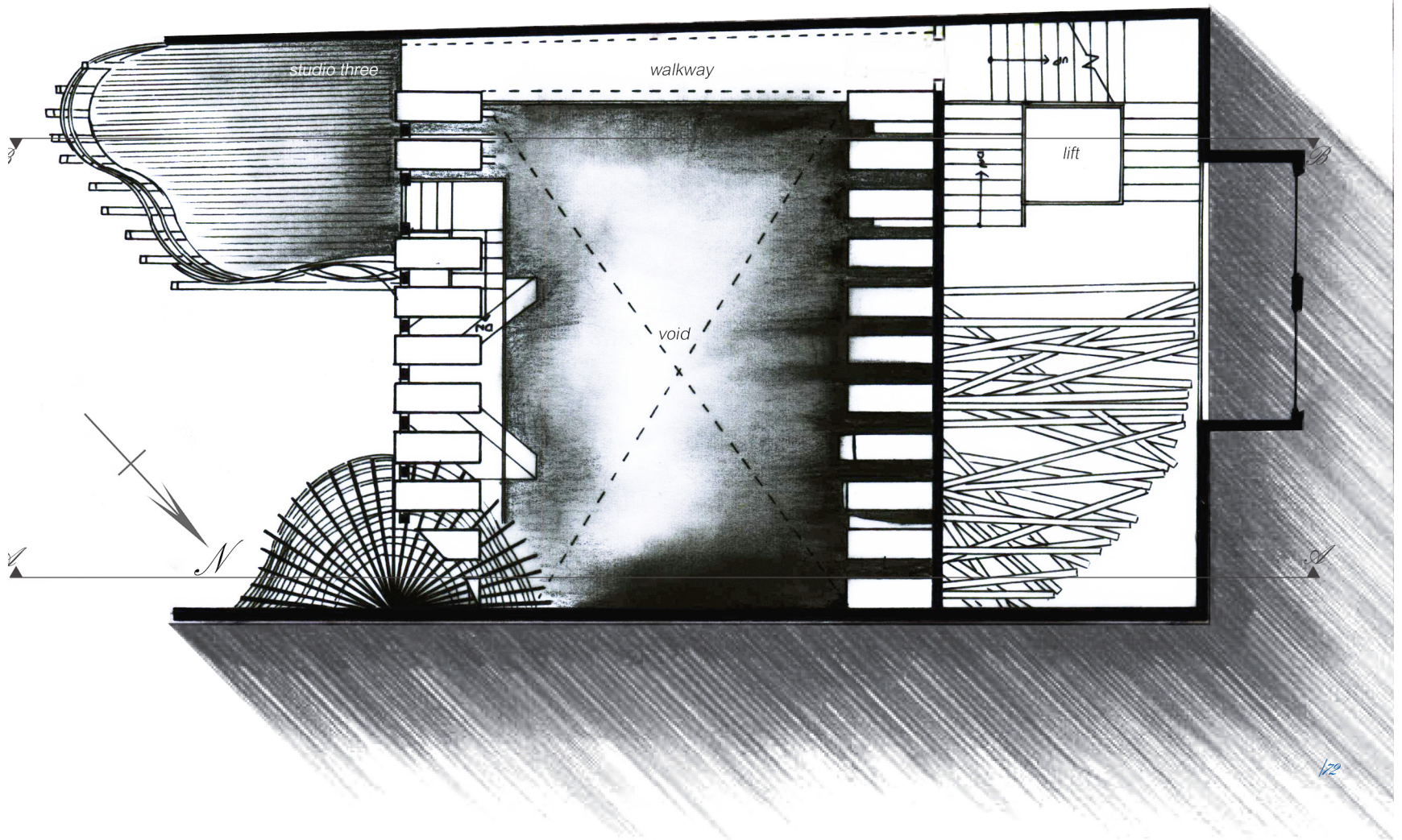
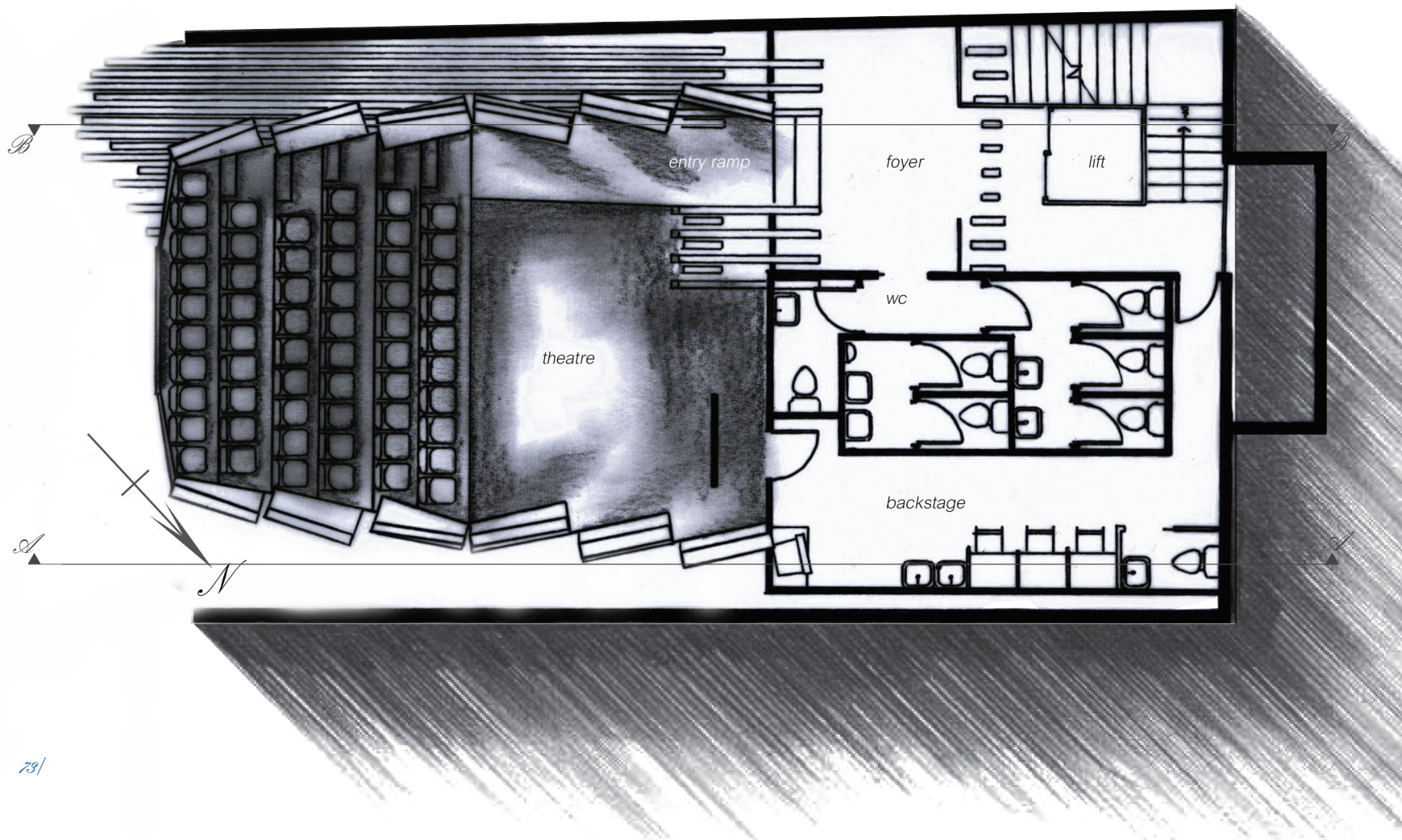
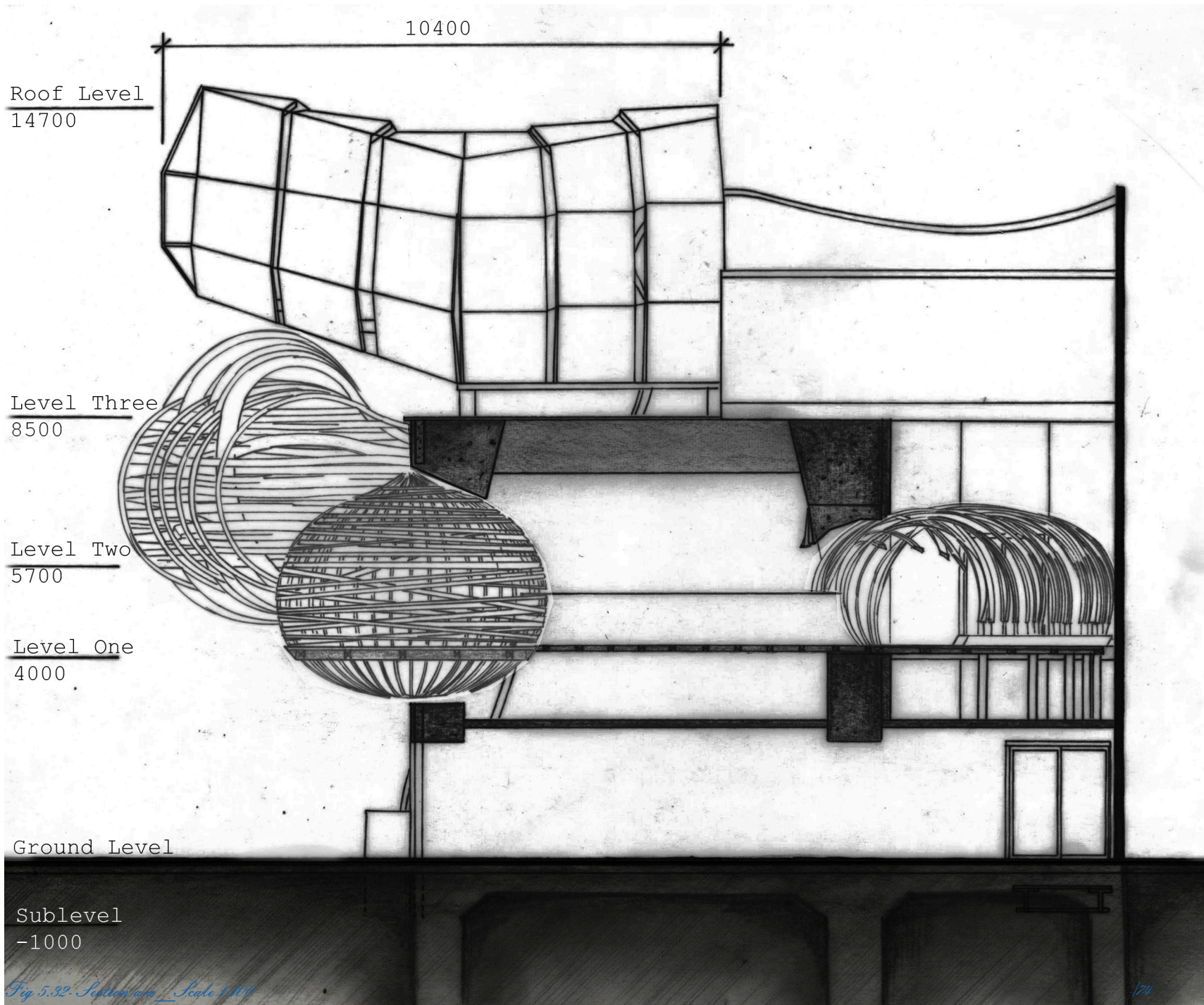


Fig 5.31. Third Floor Plan Scale 1:100

The top floor holds the theatre, with a bright foyer and toilet accessed between the stairwell and main theatre. The backstage is accessed from the stairwell at the site's rear. Backstage is limited in size due to the space-sharing nature of the theatre, primary use being immediately prior to performance. The backstage and foyer both connect with the stage end of the theatre, the audience bypassing the stage over a sloping ramp to elevated seating. Theatre capacity is 58. Exiting the building is not a repetition of the arrival journey, rather the main stairwell allows the audience to descend directly down and re-enter into the main 'grief' volume at ground level.





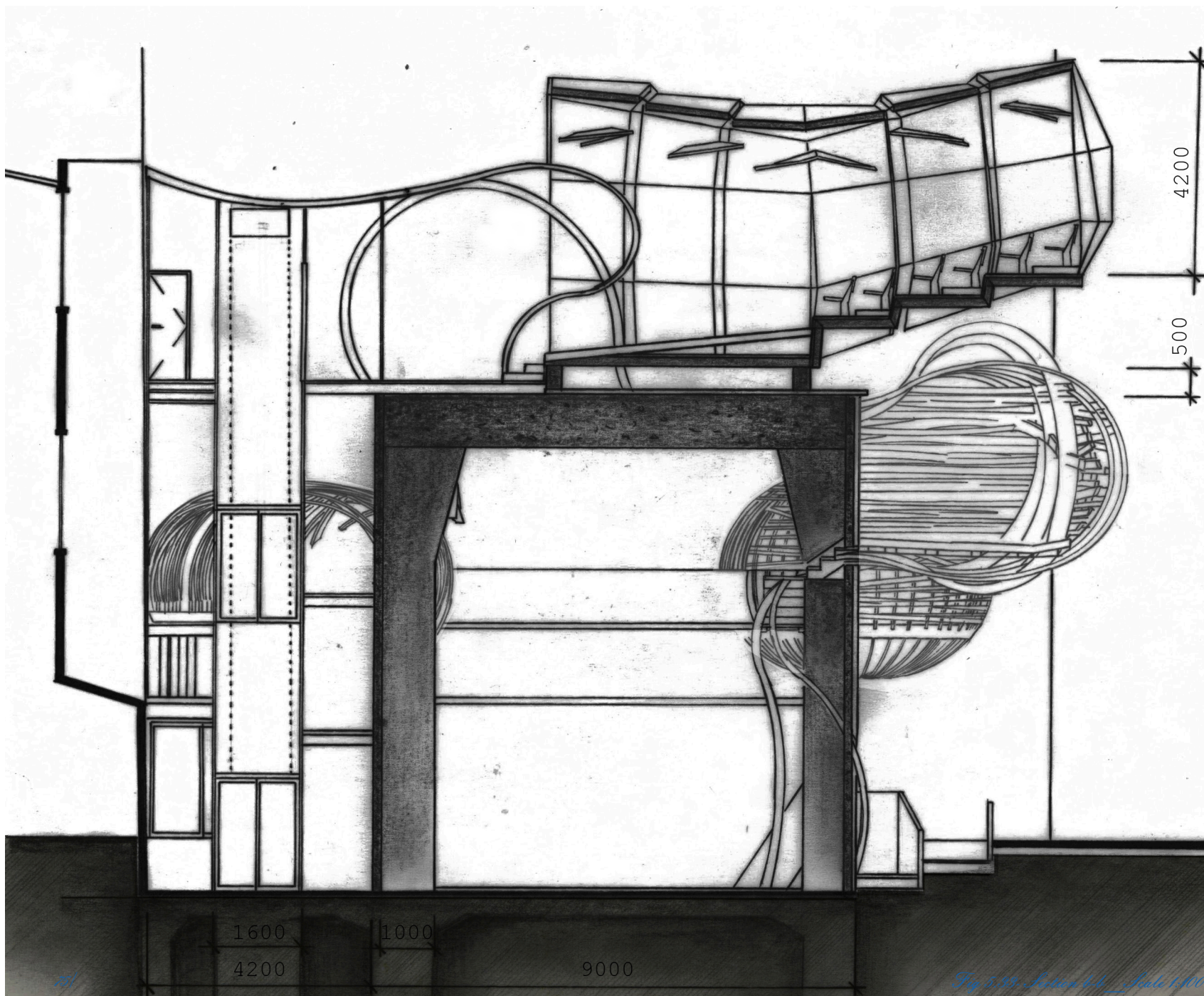


Fig. 3.58. Section 4-4, Scale 1/100

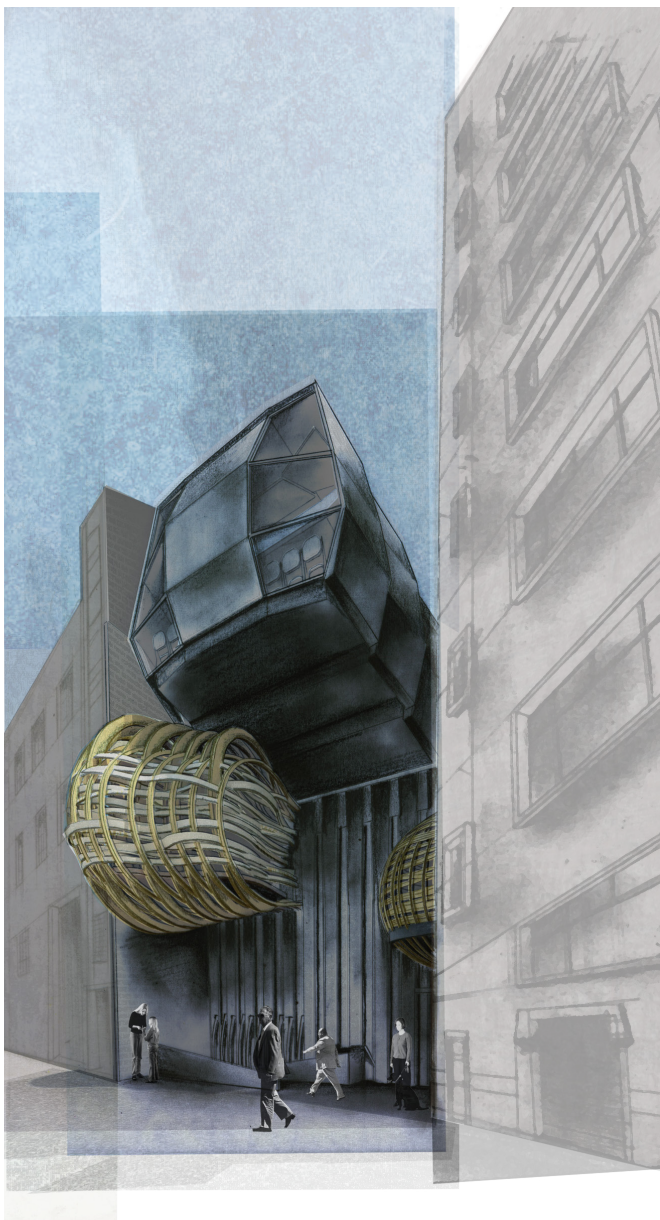


Fig 5.34. View from Pringle Ave

Initial experience of the building comes from the single facade that appears from behind the neighbouring buildings. The facade incorporates a melding of the two languages created and explored inside the building, introducing at first glance the juxtaposition of the two emotions. The strong structure of the 'grief' spaces and the flowing timber cocoons of the 'love' spaces are both extruded through the front facade. The strength of the 'grief' space is emphasised further through the extension of the concrete columns from the concrete front wall, introducing the verticality of the space immediately. The entry descends below street level, the ramp passing adjacent to the extruded timber curving elements. One enters the 'grief' space through two diffracted concrete columns that have been diffracted out of regular position by the force of the movement pathway, a concept that will continue along the whole of the journey. In the evening, when the building will have most interaction with the public, given its programme, the 'love' spaces glow from a severe facade, beckoning people to come and explore the elation of these spaces. The light qualities are almost reversed between day and night with the light coming out of the form at night, rather than the role it plays in illuminating the interior during the day.



Fig 5.35- Evening view from Pringle Ave

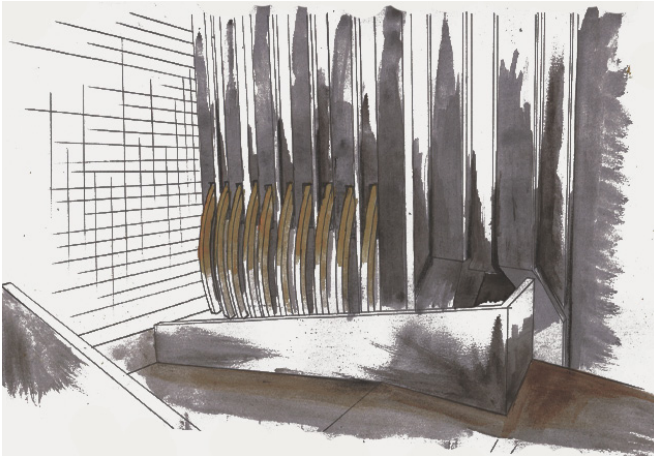


Fig.5.36. Entry from Pringle Alcove

A large volume dominated by huge concrete columns and beams is first to be experienced. The extended height of nine meters towers above, triggering a sense of insignificance in the occupant, the volume and structure dominating the space. This in itself forces a particular feeling of awe upon the occupant. Combined with the material choice of concrete and the limited infiltration of light, a sense of grief is created. The concrete is cast in place to allow for penetrations required regularly and is textured to a small granular finish. This produces a slight roughness than can be appreciated at the smaller scale but appears to be smooth when seen from a distance as the large volume insists. Bright reflections of light that would repel are eliminated by this texture. Light enters the space through narrow slits in the roof and front facade. These front perforations are elongated either side of the dense columns, emphasising their verticality and the depth of the members. The light is lost in the alcoves created by the columns. Similarly, the ceiling penetrations are aligned to the beams, producing a streaming of light along the edges of these elements, emphasising their existence and mass above the inhabitant.

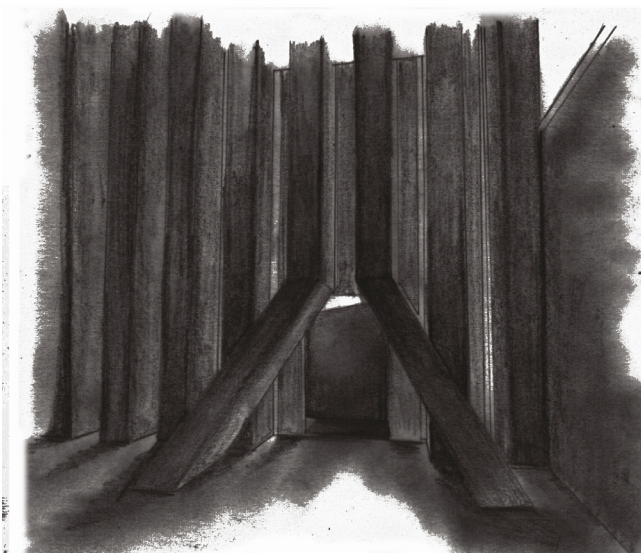


Fig.5.37. Interior entry



Fig. 5.38. Grief space from entry



Fig.5.39. Grief space, leading up stairs

Where movement or other structure is required to pass through these columns, they are diffracted and forced aside. Punctures are made where the 'grief' language connects with the 'love' language; the latter overpowering the former and again deforming the solid elements creating the 'grief' space. Where an impact occurs a shaft of light is created between the two spaces, illuminating the 'love' spaces in the greater central space, a creation of lanterns, beckoning and lighting the movement.



Fig.5.40. Initial sketch of grief space, exploring volume and impact of beams and columns

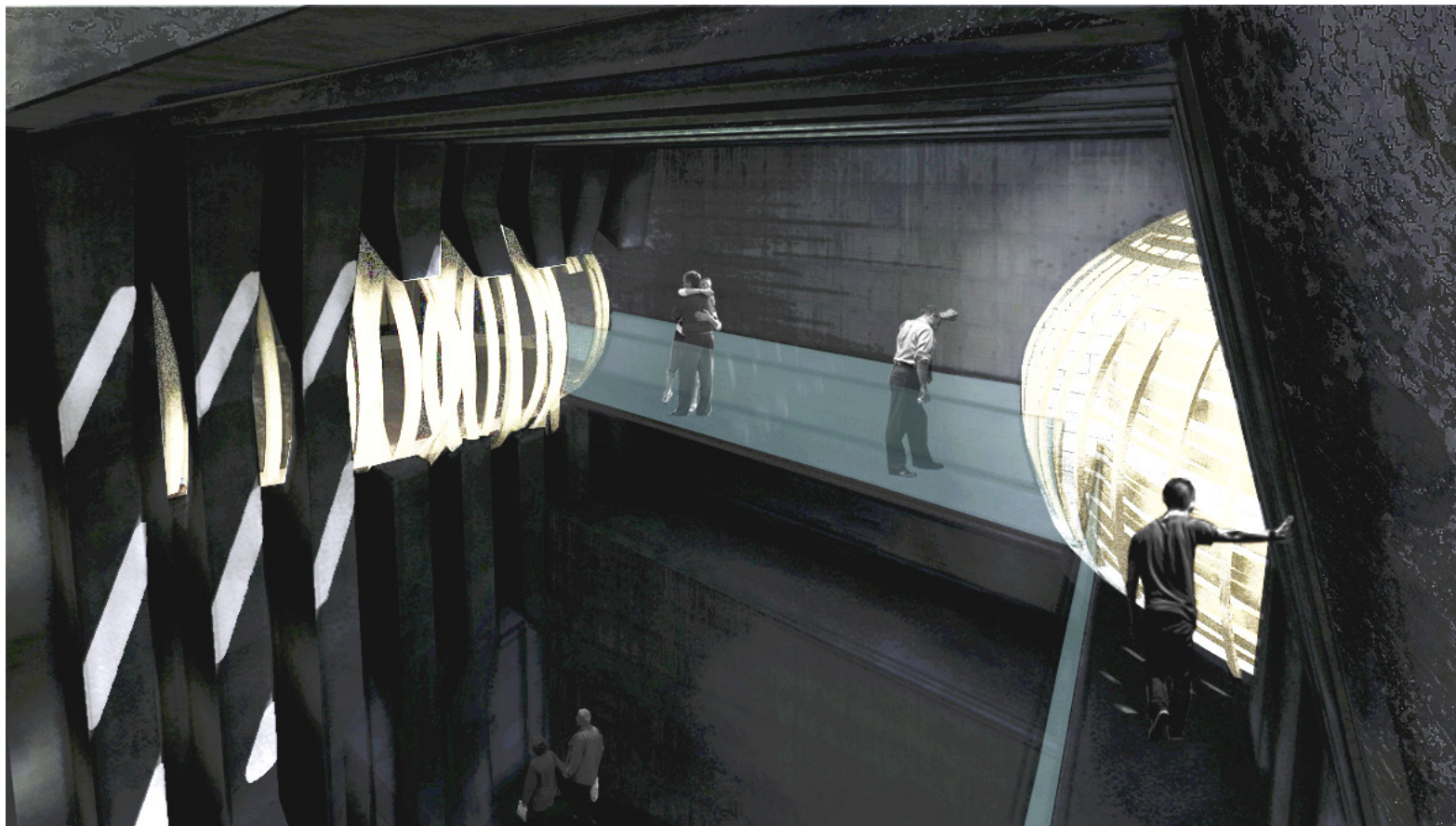


Fig.5.41- Grief space from studio three

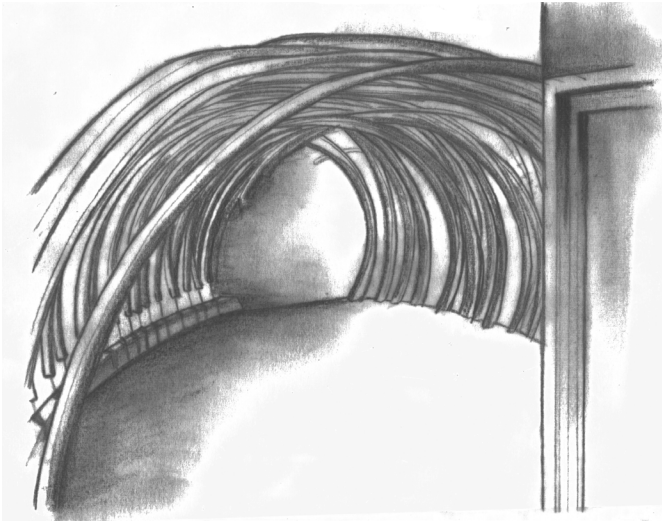


Fig. 5.42. Initial sketch of studio one

The first floor incorporates the first encounter with 'love.' This space is designed as a small studio and establishes a language of arching timber members, creating curving forms. The floor plan of this first space is simple, two curving 'parallel' walls, a clear pathway through and a linear floor. Light enters through the slits in the timber members which are internalised and isolated by glazing on the exterior.



Fig. 5.43. Walkway between studio one and two

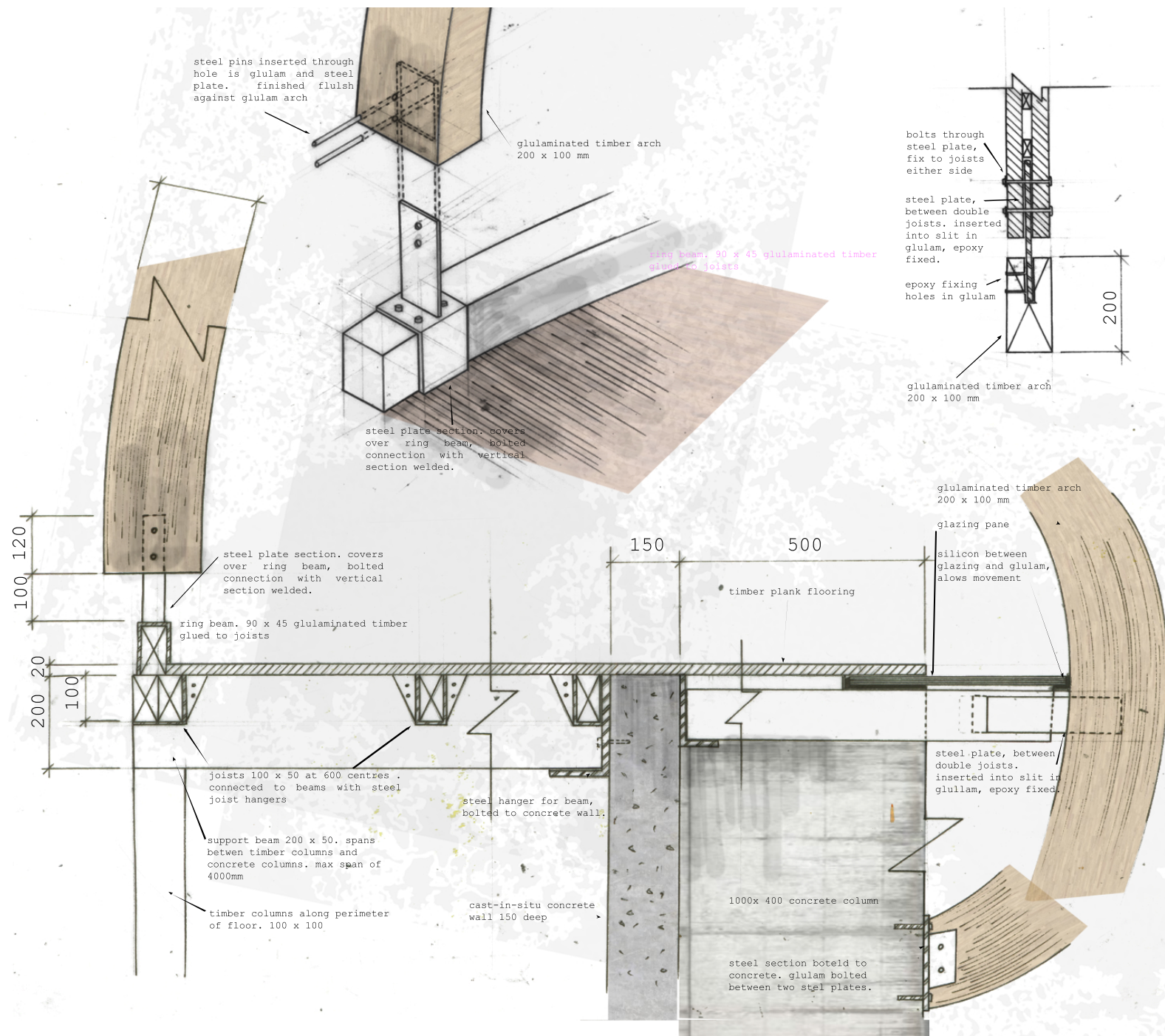


Fig.5.44- Studio one from stairwell entry

The curving of the members maintains regularity on the rear facade, branching from a rhythmic positioning, while crossing each other in an irregular pattern to create a somewhat chaotic connection of arches to the floor structure on the other side. This irregularity occurs on interaction with the 'grief' space, reflecting the relationship and dialogue between the two emotions.

*Fig. 5.45- Detail of arch connections in studio one_ Scale 1:5
(opposite page)*

The aim of this detail is to present the treatment of each end of the arching glulam members differently with the left connection expressed openly and regularly, emphasising the rhythmic positioning of the arches. The right connection emphasises the continuation of the arches below floor level, incorporating a glazed slit around the floor edge. The random placement of the arches as they form the right boundary is a result of the spaces' impact with the 'grief' space.



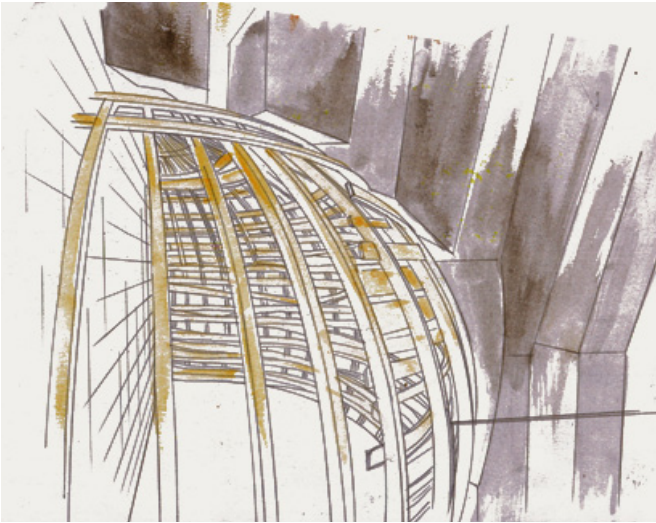


Fig.5.46. Watercolour of second love space

The impact of the 'love' form on the concrete members is shown here to deform the concrete columns, breaking their continuation and diffracting the angles of positioning

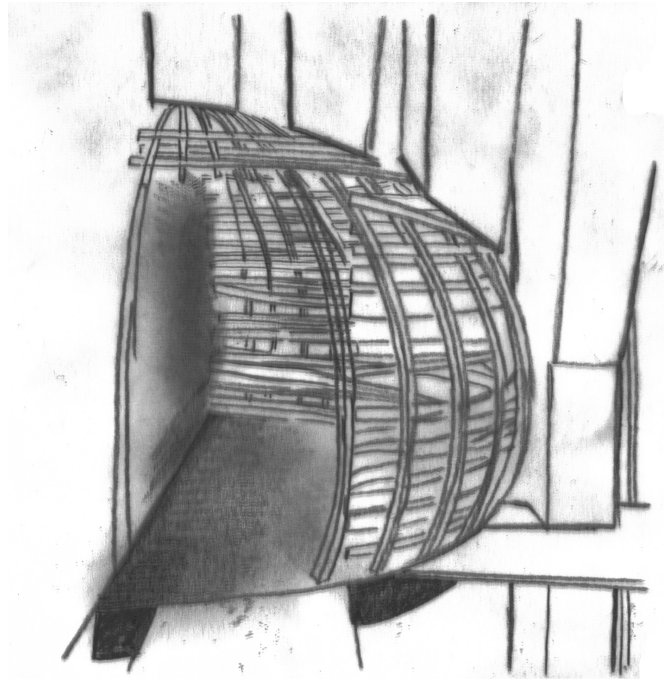


Fig.5.47. Initial sketch of second love space from interior

Leaving this space, one re-enters the large 'grief' volume. Suspended on a steel bridge with glazed barriers, a new experience of this space is provided: an experience of tension, unease and instability. This bridge connects to another 'love' space where the language previously established is slightly altered, through regular curving vertical elements, wrapped in winding horizontal members. The vertical elements stem from a singular point and fan out to create the space, also extending below the floor level. The horizontal members are angled to wind through the vertical elements and each other.

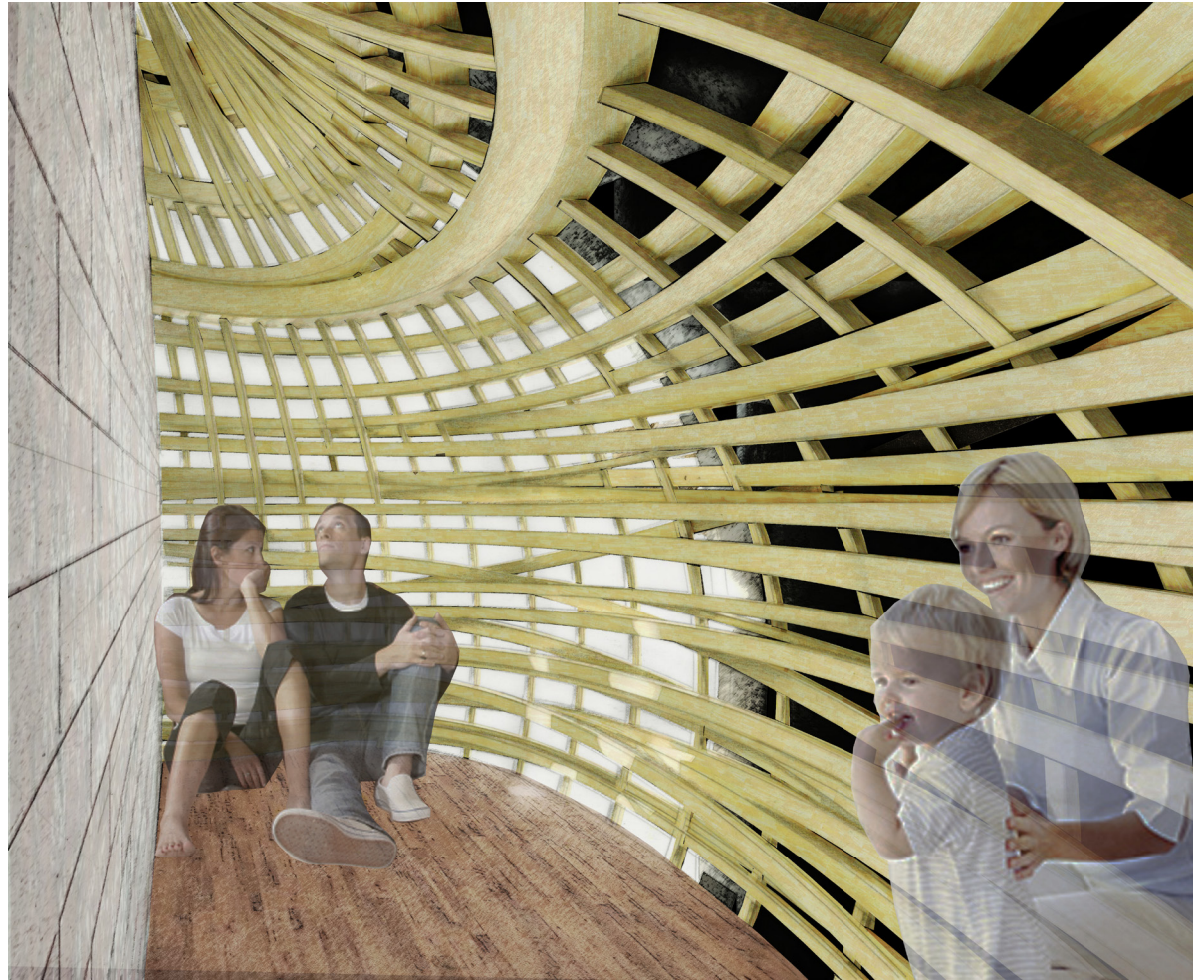


Fig.5.48- Second 'Love' studio

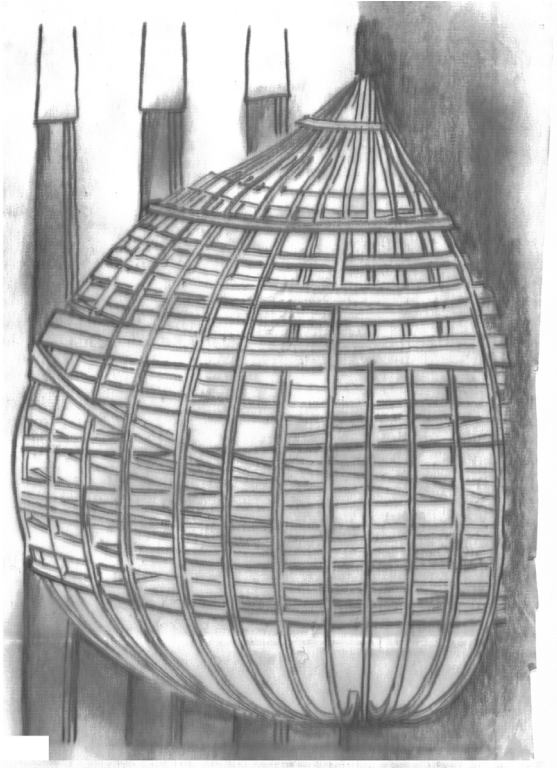


Fig.5.49. Initial sketch of second love space from exterior

*Fig.5.50. Detail of studio two facade _Scale 1:5
(Opposite page)*

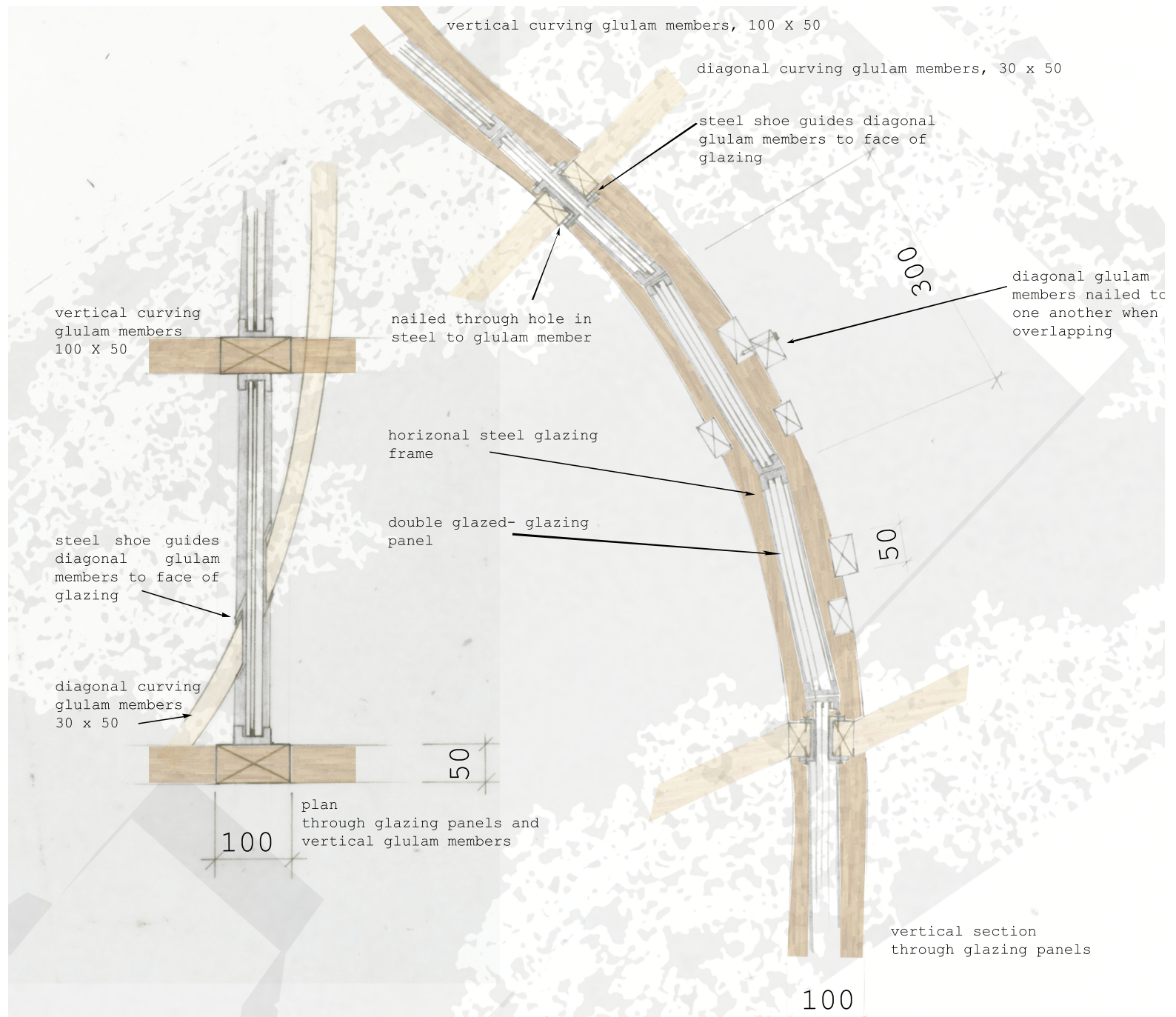
This detail must allow for the vertical and horizontal timber elements to dominate, with the glazing primarily existing as a weathering element; therefore the glazing could not encase the exterior or sit on the interior, instead positioned within the depth of the timber facade elements.

The glazing is fixed to the vertical members with thin steel sections. The glazing sits within the profile of the timber to allow for the full face of the timber to be clear on the interior and exterior.

The glazing is fractured into 300mm sections allowing for the curve of the facade. Horizontal steel sections hold the panes together.

Where non-structural diagonal timber elements look to penetrate the glazing, there is a thin steel shoe to encase the end of the timber on either side, hold it in place and allow it to begin again on the other side of the glazing.

A layering system of timber members and glazing cocoons the space, illuminating it with a soft light, filtering through the gaps in the timber members. This space encapsulates the idea of a cocoon, clinging to the neighbouring boundary wall. It appears through the front facade, breaking the structural linearity of the facade's vertical members.



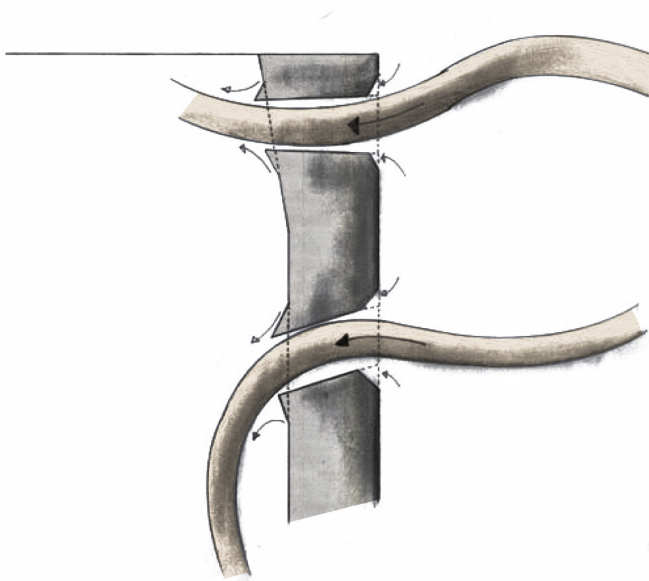


Fig.5.51- Initial sketch of intentions of beam detailing

This space is exited via a steel bridge and short stair around the perimeter of the 'grief' space to a third studio, again a space of 'love.' This is the most complex space, with timber members that wind through the entire structure, beginning at roof level and descending to the ground, appearing adjacent to the entry. The members puncture through the concrete ceiling and walls, allowing light to surround the members at this point. There is regularity at the top and base with two collections of glulam members winding in and out of each other in section. Where they form the third small studio space, the two glulam types split further and form a double cage which is wrapped, irregularly, by winding diagonal timber members.

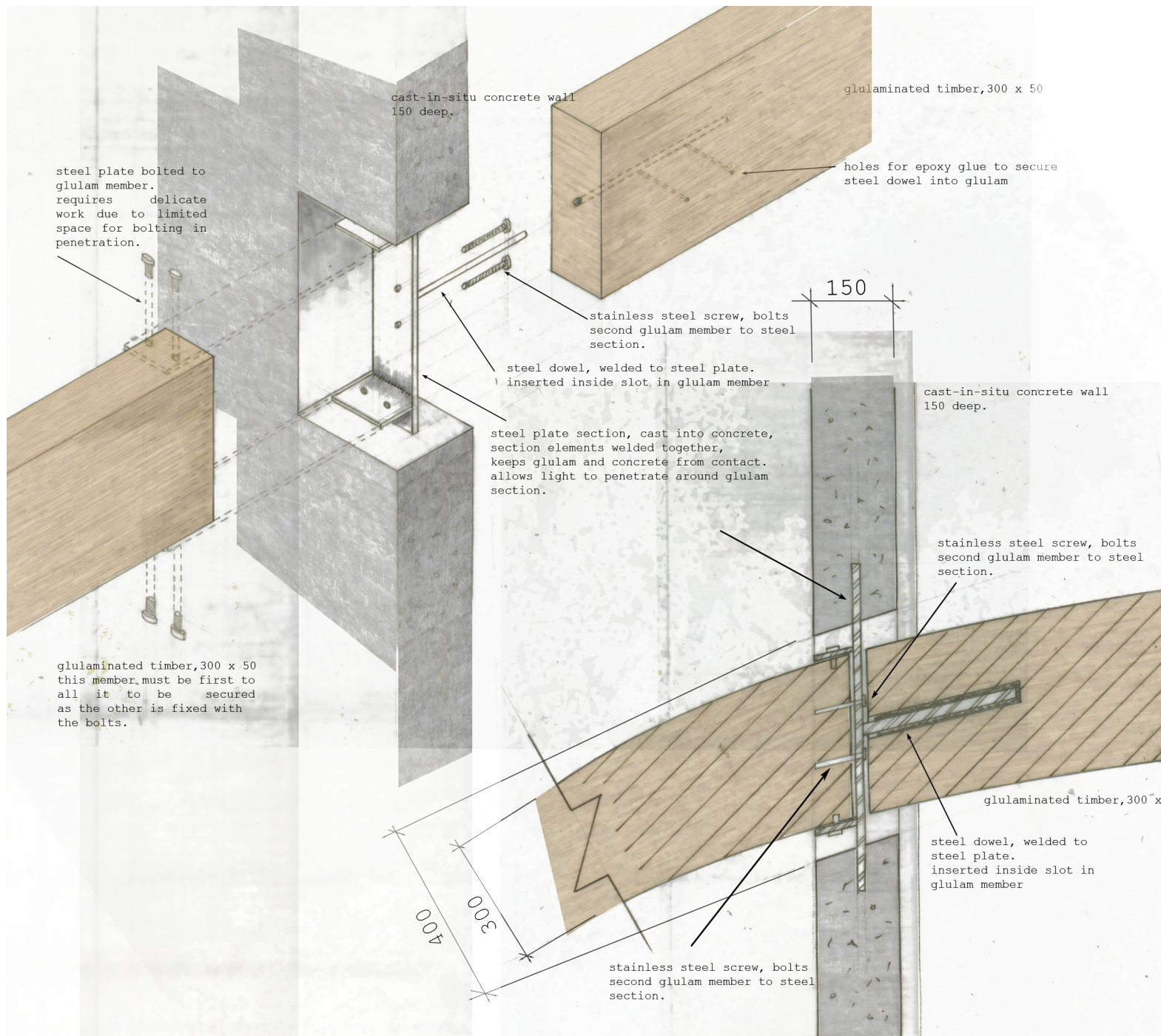
Fig.5.52. Detail of timber penetrating concrete _Scale 1:5

(Opposite Page)

This detail must retain the continuity of the glulam members, seeming to be a single piece, therefore all connections must be concealed within width of concrete. A gap must be retained surrounding the members for light to filter through.

Penetration is included in concrete cast. Steel section is cast into concrete on pouring. Lower glulam member is secured into penetration, being held by steel section on face and upper and lower edges. Bolted to steel with stainless steel screws.

Upper glulam member is guided onto steel dowel, attached to steel section. Epoxy is used through drilled holes to seal the dowel into the glulam.



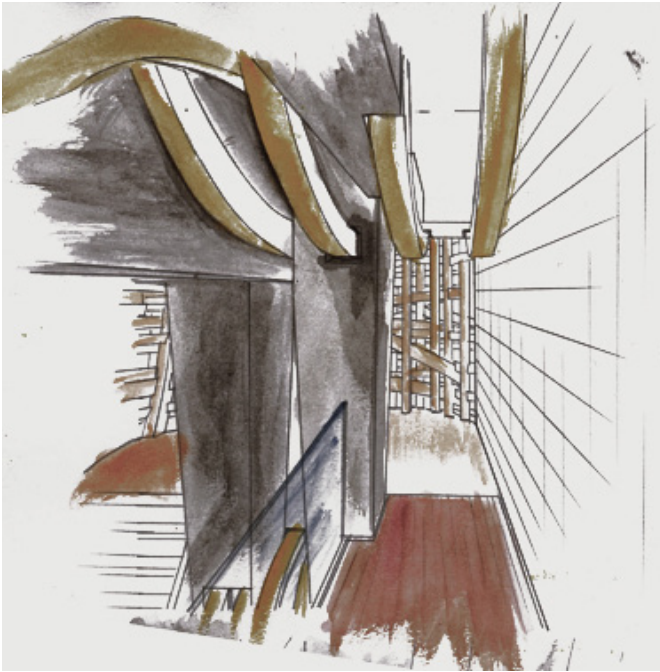


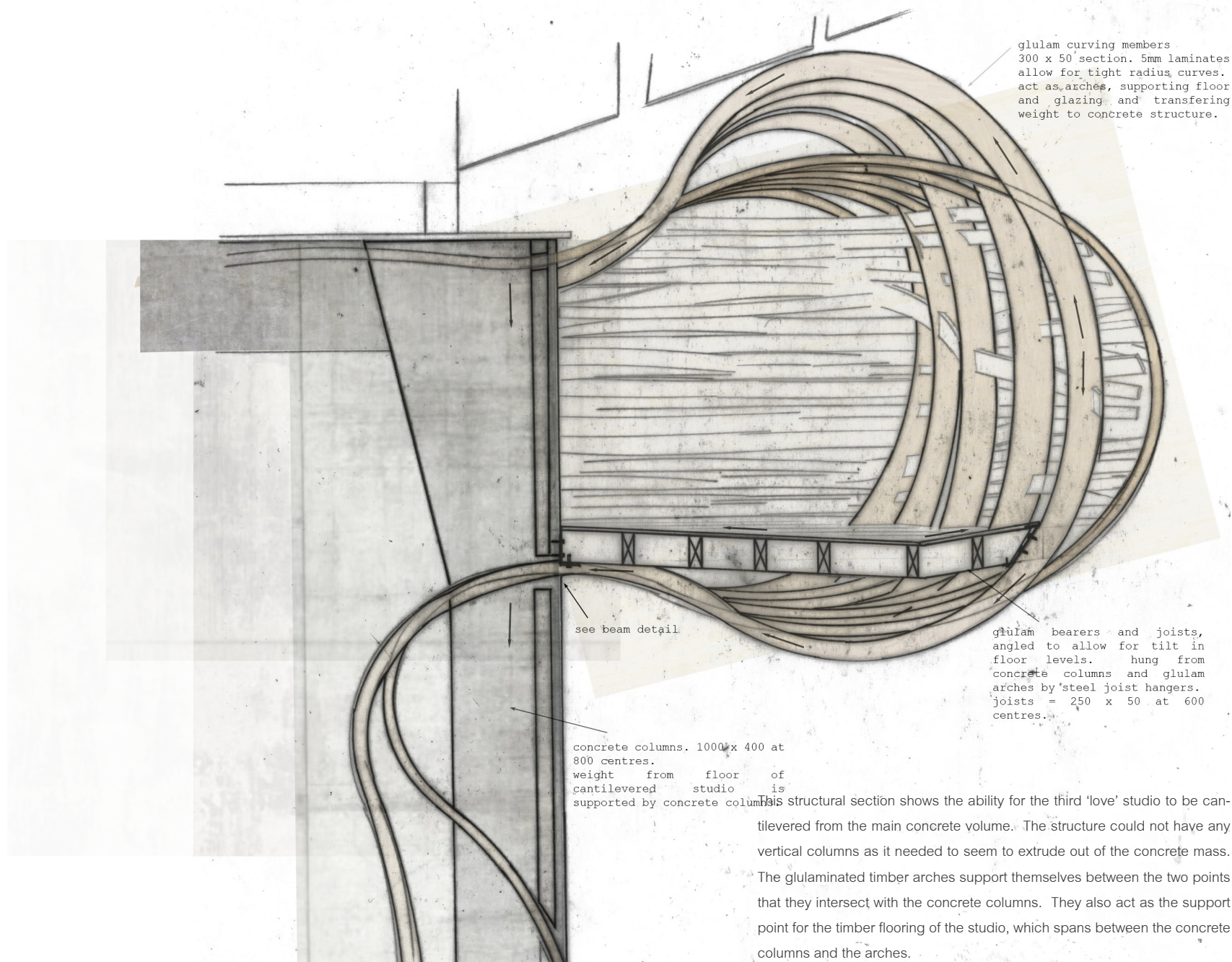
Fig.5.53: Watercolour of walkway viewing third 'love' studio

This view shows the curving glulam beams extruding from the 'love' space and impacting on the ceiling of the 'grief' volume. The timber weaves between the concrete beams and punctures the ceiling plane to continue to the level above. The intention of this is to emphasise the forcing nature of the timber within the stronger concrete structure.

A glazed system operates between these layers to waterproof the space, similar to that demonstrated in the previous studio. Light enters the space through the voids created by the wrapping timber members, producing a fractured view of the exterior as discussed previously that will provide the desired level of connection with outside, while retaining the comfort and safety inside. The increasing complexity of this overall form, winding through the building, has a reference to the complexity and altering emotional state of love and the varying levels that are encapsulated by the term, from familiar love to romantic love, introducing passion and spontaneity. It is this latter type of love that is addressed in the final studio space and represented through the complexity described above with the multiple layering and weaving nature of the timber members. This studio utilises an asymmetrical floor plan to challenge the geometric restraints discussed in the chapter involving form and structure and advocated by architect, Christopher Day.



Fig.5.54- Third 'love' studio



This structural section shows the ability for the third 'love' studio to be cantilevered from the main concrete volume. The structure could not have any vertical columns as it needed to seem to extrude out of the concrete mass. The glulam timber arches support themselves between the two points that they intersect with the concrete columns. They also act as the support point for the timber flooring of the studio, which spans between the concrete columns and the arches.

Fig. 5.55. Structural section of third love studio Scale 1:20

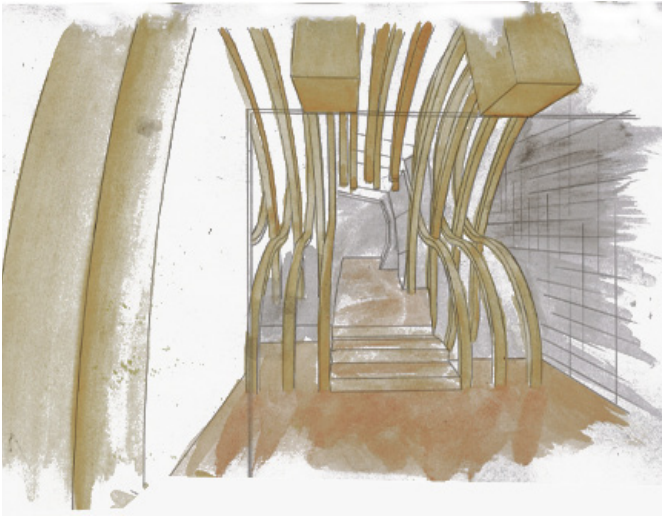


Fig.5.56: Watercolour of theatre entry foyer

The theatre space is accessed through a foyer created from the upper extension of the main glulam timber elements that wind through the entire height of the building. This space is very brightly lit, establishing clearly the positioning of the space at the highest point of the building - the enlightenment and finalisation of the relationship between the performance of architecture and the transference of emotions. The theatre takes this relationship further, by commenting on the relationship between the two emotions explored through this thesis. Incorporating the aesthetic languages of the two emotions together in a slightly differing composition changes the atmospheric connotations of the materials to create a space where the power of performance is transferred to the actors. Tilted, fractured thin concrete precast panels are staggered around the theatre plan, reminiscent of the curving forms of the 'love' spaces below but with the strength and linearity that the concrete provided in the 'grief' space. The staggering and skewing of these walls creates areas for light to enter between them. Light entry follows these lines over the ceiling plane, where it is diffused by suspended timber planes.

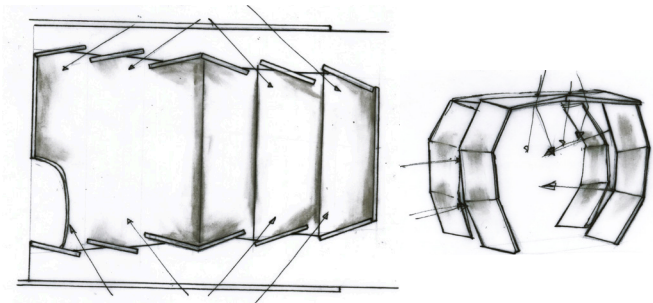
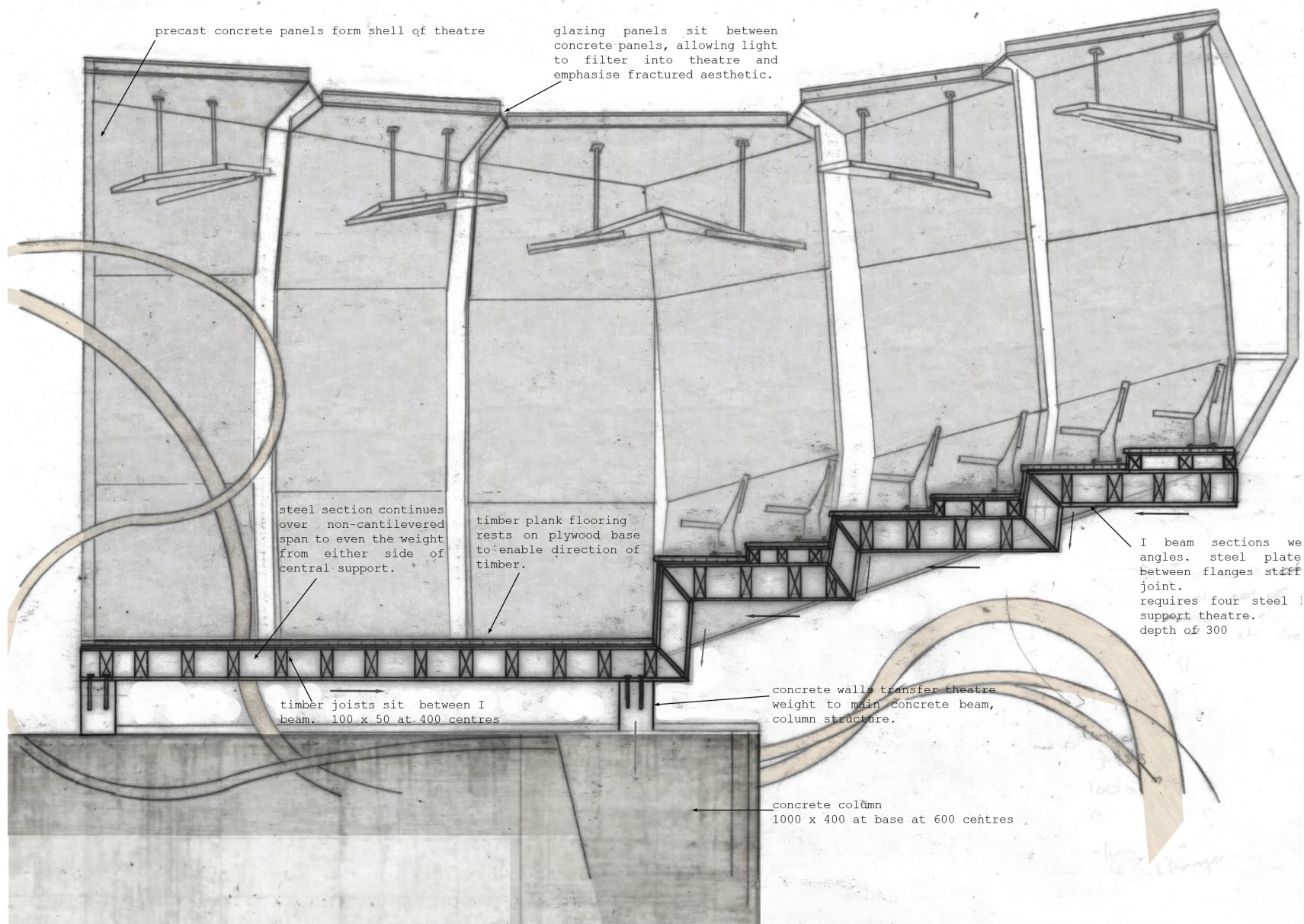


Fig.5.57: Sketch of light entering theatre

The front facade, behind the audience, is partially glazed, emphasising the finality of the space and the connection to the exterior that has otherwise been filtered through the building. This glazing also illuminates the theatre in the evenings, allowing passersby or audience members approaching the theatre building to view the final point of their journey.



Fig.5.58. Inside theatre, viewed from stage



5.5 Reflection & Discussion

This design experiment has aimed to prove the possibility of architectural qualities to be personified and linked to emotional states. Through these links, recognition can be used to transfer the emotional state to the inhabitant. The over-arching ideas of performing emotions associate the programme of the theatre with the design intention. The process of design related to interpretations of claims made in literature, with particular emphasis on the writings of Christopher Day and the qualities analysed in the case studies. These concepts were explored, altering volumes, ceiling treatments, light penetration and material characteristics, through sketches and modelling to understand the implications of such spaces. These were applied to the design of the theatre where particular spaces were attributed to one of the two chosen emotions and designed in reference to the explorations previously undertaken.

Several limitations are discussed below as reflections on the design process.

The initial main aim for this design experimentation was to control emotions. This aim has changed slightly through the progression of design and the introduction of art expression theories and studies of form, material and colour. These concepts lead to an understanding of the representation of emotions having the power to transfer and imprint emotional states on the viewer or, in the application of architecture, occupant. Through the ideas of personification of art or architectural qualities and the resonance of these to emotions, there is a transferring of these emotions to the inhabitants but it is more closely relatable to ideas of recognition than a forcing act. Here, the term 'evocation' defined at the introduction of this work, takes a dominating role in focusing the intentions of this project.

The success of the design, in exhibiting the emotional states within the architectural project of a theatre, relies heavily on associations presented earlier.

These associations can also be equated to limitations in the capacity of the design experiment. For example, in relation to grief (the same concept applying to love), the study of architectural cases associated serenity, silence, volume and solidity to the emotional state of grief. These qualities were manifested architecturally through the use of large volumes, limited light levels, solid material choices and dense boundaries. These characteristics were all present in the case studies of grief. The use of these associations was imperative to the success of the design, as a tangible atmospheric quality had to be defined in reference to each emotion to be able to produce the affects of each space. Without the associations, an atmospheric reflection of grief (or love) would have been impossible.

The link to Expression theory in art is imperative in the application of the research to a design project. This involved the argument for a personification of atmospheric qualities, for example, linking a spatial quality to a familiar sign of a person in that emotional state. The limitations of this are linked to the concept of universality of emotions, discussed in the initial research on emotional psychology. The universality of emotions is a questionable area of psychology debating whether emotional reactions and representation of emotions are the same across different cultures. It was stated that this thesis was not embarking on this debate. However, Paul Ekman was quoted in his argument for a universality of emotions, where the only difference between cultures is the acceptability in expressing that emotion within particular social situations. Therefore, the personification of emotions utilised here was related to western society.

The success of the two languages is increased through the contrast of the two emotions. It is debatable whether the strength in the two aesthetics and atmospheres is gained through this reaction between the two types of spaces. Whether they would speak as strongly in separation is questionable as they definitely respond to each other in their recognition. However, it is arguable that

this relationship mirrors the emotional states in people; for example, sadness is only recognised in relation to happiness. In addition to this, the process applied to developing the spaces that correlate to each emotion progresses as two separate 'languages,' although they utilise the same categories, such as volume, light and material,

Case studies were a highly important part of the design process. They were key in the creation of the 'languages' that were experimented with through the design. Unfortunately, the accounts of these buildings were secondary, relying on visual representations of the spaces and the words of others regarding the experiential qualities of the spaces. A general understanding of the affect that particular spatial arrangements, material and light qualities have on people assisted in validating the accounts of these spaces. Also the use of literature discussing the projects and photos, plans and sketches could be cross referenced to create a cohesive understanding of the spaces and spatial composition.

Perception was initially the key base theory for this investigation. However, as the thesis has progressed, the ideas of materiality, form and architectural composition, in addition to the analysis of case studies, has taken a dominating role. The main theory that was extracted from the overall theory of perception was the 'integrity of perception,' the dominance of the whole over the parts. This concept was brought to the forefront again through the writings of Le Camus de Mézières in *Le Genie de l'architecture*, where he discussed the importance of architecture to create a total experience through the combination of all the sensations and the sequence of spaces working together. Perception has returned through the reflection and discussion of this design and process, acknowledging the subjectivity of this piece of work. The personal nature of experience is undeniable, particularly regarding its reliance on memory and feeling, therefore, it is understood that the interpretations and associations gained through the literature and case studies have a personal element to them, and consequently, may not be applicable to all.

References

Fischer-Lichte, E. (2010). Performing Emotions. How to conceptualize emotional contagion in performance. In S. Flach, D. Margulies & J. Soffner (Eds.), *Habitus in Habitat I: Emotion and Motion* (pp. 25-40). Bern: International Academic Publishers.

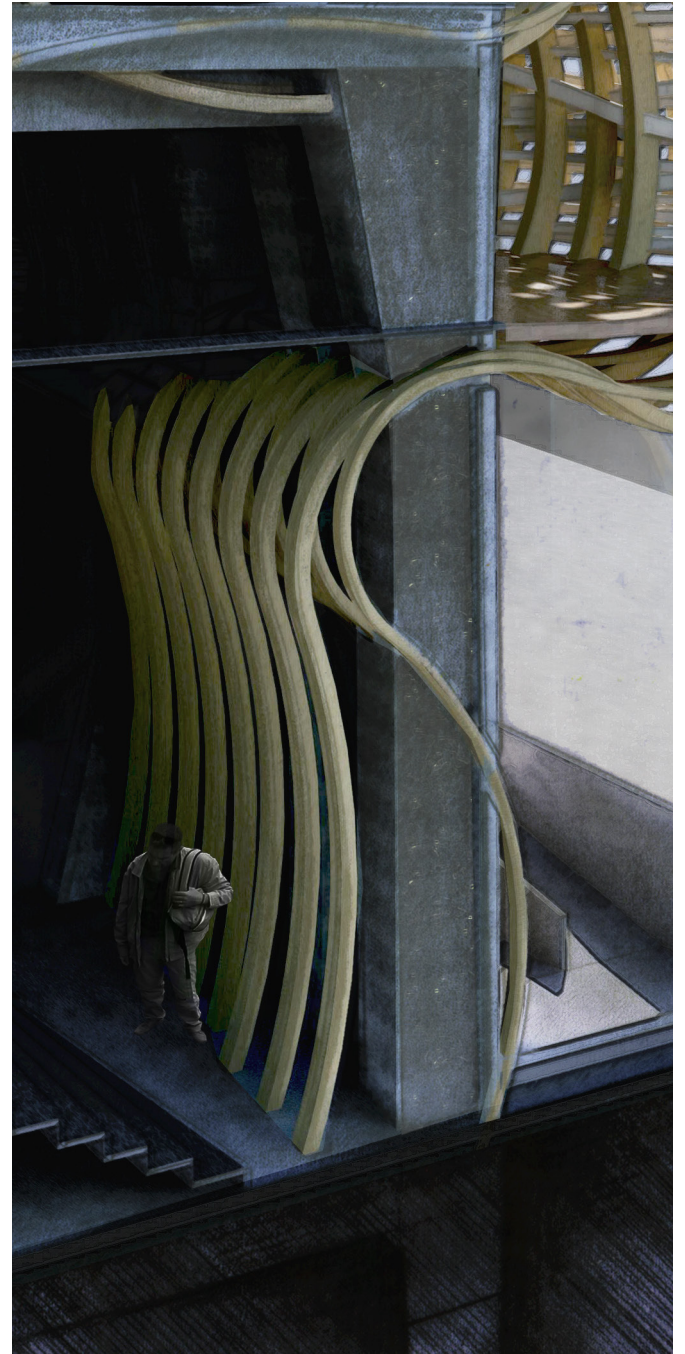


Fig.5.60. Contrasting spaces 'love' intersect with 'grief' volume

Conclusion

This thesis aimed to explore the representation and transference of emotions within the realm of architecture, creating an *architecture of emotional evocation*. In response to understanding the impact the built environment has on the emotions and moods of its inhabitants, this work questions how far this ultimate manipulation can be pushed, extending into the evocation of particular emotional states through a design project. The use of the word 'evocation' was vital in this thesis, focusing the aim towards design that resonates emotionally with its users or occupants, rather than forcefully acting on them - an aim and intention defined through this term in the introduction of this thesis. Initial aims were focused on a control or manipulation that was almost forceful. In contrast to this, a variation on the original intention was established in the final aim of this thesis, where the architecture is used passively. This was done to suggest and represent characteristics that would resonate as emotional, and through this resonance, become transferred and felt by the occupants.

Historical and contemporary architecture can be argued to evoke particular feelings; awe and serenity are commonly experienced. However, the direct evocation of particular emotional states has not been explored in isolation. This thesis, in its compilation of initial research bridged the gap between passive emotionally stirring architecture and an active awareness of emotional transference. An architectural representation of emotions was used as the technique of transference in this design project to create spaces that exhibited characteristics and qualities relatable to two specific emotions: grief and love.

Design was constructed through the understanding of materials, forms and proportions. Translation of these into case studies enabled analysis of four

projects, two for each emotional state. Case study analysis developed a framework for the exploration of spaces of grief and love. At this point, light became an added focus for design. It was discovered through the case study analysis that light was a key element in the creation of atmospheric environments and would be imperative in the creation of two emotional 'languages'. Design procession was based around developing these 'languages' through sketches and diagrammatic concepts of volume, form and light. Analysing these concepts in the same way as the previous case studies, techniques and affects could be understood in reference to their resonance as an emotional quality. These drawings provided a spatial translation of concepts discussed in the research while addressing the emotional qualities they were required to develop.

The design of a theatre created a connection within the performance of emotions, mirroring the emotional transference in performance to the aesthetic and atmospheric performance of the architecture. Studio spaces exhibiting qualities of 'love' expressed warmth, comfort, safety and homeliness. A single large volume presented qualities of 'grief' through darkness, coolness, solidity, solitude and serenity. The success of these spaces was through the combination of theory and practical projects, linking translations from literary research to the characteristics of the case studies. Within the established programme, spaces were developed using sketches that took the ideas presented through the procession of the 'languages' into a more realistic spatial capacity.

Outcomes from design showed the strength of the two 'languages' working together. The integration of the two, casting a second dialogue into the narrative created through movement in the experience of the spaces. The love spaces were positioned as the stronger of the two, given its enduring and varying role in a person's lifetime, contradicting the structural, aesthetic and atmospheric appearances of the spaces. The associations linked to each emotion became increasingly important as the design stage progressed. They were formed through the analysis of case studies and became a necessary element in the

constructing of an architectural emotion. Without these associations it would have been impossible to spatially explore these emotions.

The subjective nature of this topic is undeniable, but this thesis has aimed to broaden the applicability of the concepts through understandings of perception and emotions. These topics which were discussed at the forefront of the thesis structure, diminished in their importance through the design stage, which focused more on tangible ideas of creating space. The concept of perception has regained its necessity in reflecting on the success of the design, understanding the elements of subjectivity within the thesis outcome. Perception's main theory applied to this design was the theory of 'integrity of perception' where all sensations and elements in the space are combined to create a total experience of the space. Additionally, the combination of all spaces combines to provide a perception of the architecture in its totality. The sequence of spaces, transitions and hierarchy, established through particular case studies and concepts, further linked the 'integrity of perception' to architecture in the actual planning and implementation of movement through the building. Both these ideas were imperative in the detailing and planning of the final design project.

This thesis created a design that tested the capability of the built environment to have a deliberate and manipulating effect on the emotional states of people. Through the construction of two 'languages' attributed to emotional states, the strength of representation of personified emotional qualities and associated characteristics in the creation of space is demonstrated. As mentioned as an issue in the introduction, this challenges the lack of focus in the use of particular forms, materials and spatial qualities in the current building of our environment that ultimately have a decided emotional effect on the users. The design has created a movement and dialogue through the two 'languages' of each emotion that create an emotional journey of experience through the building. The design project of this thesis is intended to be considered as a case study for an

Bibliography

Works cited:

- Barwell, I. (1986). How does art express emotion? *The Journal of Aesthetics and Art Criticism*, 45(2), 175-181.
- Bastide, J.-F. (1996). *The little house: an architectural seduction* (R. ed-Khoury, Trans.). New York: Princeton Architectural Press.
- Böhme, G. (1998). Atmosphere as an aesthetic concept. *Daidalos*(68), 112-115.
- _____. (1991). On synaesthesiae. *Daidalos*, 41, 27-36.
- Campays, P., Liddicoat, S., & Randell, M. Memorial of Deportation Retrieved 15 July, 2011, from inter-disciplinary.net
- Cataldi, S. L. (1993). *Emotion, depth and flesh: A study of sensitive space*. Albany: State University of New York.
- _____. (2008). Affect and sensibility. In R. Diprose & J. Reynolds (Eds.), *Merleau-Ponty key concepts* (pp. 163-173). Stocksfield, UK.: Acumen.
- Cerbone, D. R. (2008). Perception. In R. Diprose & J. Reynolds (Eds.), *Merleau-Pontykey concepts* (pp. 121-131). Stocksfield, UK.: Acumen
- Conley, K. (1999). The Myth of the "Dernier poeme": Robert Desnos and french cultural memory. In M. Bal, J. Crewe & L. Spitzer (Eds.), *Acts of Memory: cultural recall in the present* (pp. 134-147). Hanover: University Press of New England.
- Cleary, R. (1989). Romancing the tome: or an academician's pursiut of a popular audience in 18th Century France. *Journal of the Society of Architectural Historians*, 48(2). pp. 139-149.
- Day, C. (1990). *Places of the soul*. Northamptonshire, England: The Aquarian Press.
- Dazkir, S. S., & Read, M. A. (2011). Furniture forms and their influence on our emotional responses toward interior environments. *Environment and Behaviours*.
- ed-Khoury, R. (1995). Introduction. In J.-F. Bastide (Ed.), *The little house: an architectural seduction* (pp. 19-54). New York: Princeton University Press.

- Ekman, P. (1984). Expression and the nature of emotion. In K. R. Scherer & P. Ekman (Eds.), *Approaches to Emotion* (pp. 319-343). New Jersey: Lawrence Erlbaum Associates, Inc.
- Elliot, R. K. (1967). VIII- Aesthetic Theory and the experience of art. *Proceedings of the Aristotelian Society*, 67, 111-126.
- Evans, D. (2001). *Emotion A very short introduction*. New York: Oxford University Press, Inc.
- Fischer-Lichte, E. (2010). Performing emotions. How to conceptualize emotional contagion in performance. In S. Flach, D. Margulies & J. Soffner (Eds.), *Habitus in Habitat I: Emotion and Motion* (pp. 25-40). Bern: International Academic Publishers.
- Gouk, P., & Hills, H. (2005). *Representing emotions*. Aldershot, UK: Ashgate Publishing Ltd.
- Hill, J. (2006). *Drawing forth immaterial architecture*. UK: Routledge.
- Kraftl, P., & Adey, P. (2008). Architecture/affect/inhabitation: Geographies of being-in buildings. *Annals of the Association of American Geographer*, 98(1).
- Koch, L. (2002, 1/27/2002). MEMORIALS; Feeling abandoned, New York Times.
- Küller, R. (1980). Architecture and emotions. In B. Mikellides (Ed.), *Architecture for People: Explorations in a new humane environment* (pp. 87-100). London: Cassel Ltd.
- Langer, M. M. (1989). *Merleau-Ponty's phenomenology of perception: a guide and commentary*. Basingstoke, UK: Macmillan.
- McCarthy, C. (2005). Towards a definition of interiority. *Space and Culture*, 8(2), 112-125.
- Mezieres, N. L. C. d. (1992). *Le genie de l'architecture*. Santa Monica, California: The Getty Centre for the History of Art and the Humanities.
- Merleau-Ponty, M. (1962). *Phenomenology of perception*. London: Routledge and Kegan Paul.
- _____ (1964). Eye and Mind. In J. M. Edie (Ed.), *The primacy of perception*. Evanston, Illinois: Northwestern University Press.
- Middleton, R. (1992). Introduction. In N. L. C. d. Mezieres (Ed.), *The genius of architecture; or, The analogy of that art with our sensations*. Santa Monica, California: The Getty Centre for the History of Art and the Humanities.

Norberg-Schulz, C. (1965). *Intentions in architecture*. Cambridge, Massachusetts: M.I.T. Press.

Palasmaa, J. (2005). *The eyes of the skin : architecture and the senses*. Hoboken, New Jersey: John Wiley & Sons.

Pelletier, L. (2006). *Architecture in words*. London: Routledge.

Protevi, J. (1998). The "sense" of "sight": Heidegger and Merleau-Ponty on the meaning of bodily and existential sight. *Research on Phenomenology*, 28(1), 211-223.

Reynolds, J. (2001, 27 June 2005). Maurice Merleau-Ponty. *Continental Philosophy* Retrieved 5 June, 2011, from <http://www.iep.tum.edu/merleau/>

Russell, J. S. (2000). Evoking the infinite, Axel Schultes takes mourners at a crematorium from the clamour of daily life to a realm of calm and contemplation. *Architectural Record*, 188(5), 224-231.

Schultes, A. (2000). Krematorium Baumschulenweg Retrieved 4/11/2011, 2011, from <http://www.schultesfrankarchitekten.de/>

Shouse, E. (2005). Feeling, emotion, affect. *M/C Journal*, 8(6).

Stegers, R. (2008). Baumschulenweg Crematorium. *Design Manuals*, 9, 234-235.

Vidler, A. (1996). Preface. In R. ed-Khoury (Ed.), *The little house: an architectural treatise* (pp. 9-18). New York: Princeton Architectural press.

Weiss, G. (2008). Ambiguity. In R. Diprose & J. Reynolds (Eds.), *Merleau-Ponty key concepts* (pp. 132-141). Stocksfield, UK.: Acumen.

Zumthor, P. (2006a). *Atmospheres. Architectural environments. Surrounding objects*. Basel, Switzerland: Birkhäuser.

_____ (2006). *Thinking architecture* (2 ed.). Basel, Switzerland: Birkhauser.

_____ (1997). *Three concepts*. Berlin: Birkhauser Verlag.

Other influential works (un-sited):

Bannan, J. F. (1967). The philosophy of Merleau- Ponty. New York: Harcourt, Brace & World, Inc.

Katz, J. (1999). How Emotions Work. Chicago: University of Chicago Press.

Merleau-Ponty, M. (1948). Sense and non-sense. Evanston, Illinois: Northwestern University Press.

Merleau-Ponty, M. (1964). The Visible and the invisible. Evanston, Illinois: Northwestern University Press.

Pallasmaa, J. (2005). The eyes of the skin : architecture and the senses. Hoboken, New Jersey: John Wiley & Sons.

Pallasmaa, J. (2006). An architecture of the seven senses. In S. Holl, J. Pallasmaa & A. P. Gómez (Eds.), Questions of Perception: phenomenology of architecture. San Francisco: William Stout.

Reynolds, J. (2001). Maurice Merleau-Ponty. Continental Philosophy Retrieved 5 June, 2011, from <http://www.iep.utm.edu/merleau/>

Ekman, P., & J. Davidson, R. (Eds.). (1994). The nature of emotion. New York: Oxford University Press, Inc.

