A PROJECTIVE SITE

Inhabiting the metaphorical interval between the instrumental and symbolic meanings of architecture.

A MASTER OF ARCHITECTURE (PROF) THESIS

Nick Roberts | 2010

A PROJECTIVE SITE

*Inhabiting the metaphorical interval between the instrumental
and symbolic meanings of architecture.*

Nick Roberts

*A 120-point thesis submitted in partial
fulfilment of the requirements for the degree of*

Master of Architecture (Prof)

VICTORIA UNIVERSITY OF WELLINGTON

Supervisor: Linda Wong

2010

What we normally refer to as reality, believing that it is something fixed and absolute, is always a result of our ability to experience, visualize, and articulate - in other words, to represent.

Dalibor Vesely, 2004

ABSTRACT

Historically, there have been two ways of perceiving space that have been considered opposed to one another and that have significant implications for the way in which architecture is understood. The first is *real* space, which relates to the direct, sensory and embodied perceptions of architecture as built. This space generates the *symbolic* meanings of architecture and is understood as our primary way of understanding space. The Second is the analytical, measured space of *representation* - the drawings and models architects make, which have historically been called the *instrumental* as they are instruments in the description of architecture. This work challenges that these are independent and oppositional ways of understanding space. I argue that this perceived separation perpetuates the notion of the instrumental and symbolic meanings of architecture to be held in a dichotomous relationship.

The aim of this research is to reorient the instrumental and symbolic meanings of architecture toward a reciprocal relationship by examining their presence within both real and representational space. The research first explores the distinct characteristics of real and representational space that have perpetuated the notion they are distinct entities. Once these characteristics are identified, two central case studies explore ways in which they are translated through real and representational space in order to engender a more meaningful reciprocity. Referencing Michael Webb's *Temple Island* (1966 - ongoing) and Guarino Guarini's *Santissima Sindone* in Turin (1667-1694) as revealing examples, this thesis argues that the qualities of real and representational space are constantly permeating the assumed boundaries of each other, and that consequently, an architectural space exists between them. Indeed, this thesis aims to examine the existence of a metaphorical interval between a physical building, and its representation in drawings and modeling.

This research proposes that pure instrumentality is an illusion, maintaining its legitimacy through a self-imposed autonomy. The research concludes in a design project that suggests a more complex form of inhabiting architecture may challenge the gap between real and representational space, and by extension the separation of the instrumental and symbolic meanings of architecture. It sets out to achieve this through an allegorical investigation exploring a more complex way to occupy architecture - where both real space and the space of representation can be occupied simultaneously. The design research seeks to dissolve the distinctions between how architecture is designed and represented, and how it is understood experientially as built. The thesis concludes that by collapsing the sensory, embodied complexities of real space, with the abstract, analytical characteristics of representational space, the instrumental and symbolic meanings of architecture can be understood in a reciprocal relationship, where one gives structure and meaning to the other.

TABLE OF CONTENTS

ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF FIGURES	viii
ACKNOWLEDGEMENTS	xv
INTRODUCTION	1
SECTION 1 - <i>Thinking Inside / Outside Site</i>	9
CHAPTER 1.0 Post-Critical – <i>Transformations of Instrumental Thinking</i>	14
1.1 <i>Digital Space as Site</i>	17
CHAPTER 2.0 Symbolic Thinking – <i>From Inside Site</i>	24
2.1 <i>Embodied Space as Site</i>	28
2.2 <i>Plural Reality</i>	33
SECTION 2 – <i>Site Translation / Site Projection</i>	43
CHAPTER 3.0 Drawing the Virtual	48
3.1 <i>Reorientation</i>	49
3.2 <i>Michael Webb’s Oneiric Trip through Temple Island</i>	52
CHAPTER 4.0 Baroque Projections	68
4.1 <i>Live Geometry</i>	70
4.2 <i>Projective Space - The Role of Infinity</i>	72
SECTION 3 - <i>Explorations of Projective Space</i>	85
CHAPTER 5.0 Inhabiting A Projective Site	90
5.1 <i>Real Site</i>	93
5.2 <i>Site Reconstruction</i>	96
5.3 <i>Wood Block Model</i>	104

5.4 <i>Photogram Model</i>	108
5.5 <i>Isometric Studies</i>	115
5.6 <i>Section Model</i>	124
5.7 <i>Cumulative Section Study</i>	134
5.8 <i>Inhabitation Model</i>	136
5.9 <i>Design Conclusion - Critical Reflections</i>	144
CONCLUSION	148
BIBLIOGRAPHY	152

LIST OF FIGURES

Introduction

figure i | Le Corbusier - Plan Voisen

Section 1 - Chapter 1.0

figure 1.01 | Bernard Tschumi, Advertisements for Architecture (1 of 9 parts), c. 1975.

figure 1.02 | Zaha Hadid Architects, Masterplan Competition, Appur, India, 2008.

figure 1.03 | Reframing the Post-Critical.

figure 1.04 | Jean-Nicolas-Louis Durand. Précis des leçons d'architecture données à l'Ecole Royale Polytechnique (1819), pls. 11, 17.

Section 1 - Chapter 2.0

figure 2.01 | Melanie Young, metaphorical study of the design studio.

figure 2.02 | Mark Rothko, Untitled (South Wall Painting), 1964-1967.

figure 2.03 | Rothko Chapel interior with original skylight grid, 1971.

figure 2.04 | Howard Barnstone and Eugene Aubry, Scale Model of Rothko Chapel, 1970.

figure 2.05 | Rothko Chapel, interior view facing north - Photograph by Hickey & Robertson.

figure 2.06 | Commissioners' proposal for Manhattan Grid, 1811.

figure 2.07 | Skyscraper under construction, New York 1963 - photograph by Andreas Feininger.

figure 2.08 | Empire State Building, New York 1940, photograph by Andreas Feininger.

figure 2.09 | 6th Avenue Station, New York 1940 - photograph by Andreas Feininger.

figure 2.10 | Zaha Hadid Architects, Kartal-Pendik Masterplan, Istanbul, Turkey, 2006.

Section 2 - Chapter 3.0

figure 3.01 | Jun Yu: Forms of Cellular Aggregation (2005) SCI-Arc 2GBX Studio.

figure 3.02 | Eisenman Architects: Site plan and study models (2002) City of Culture of Galacia, Santiago de Compostela, Spain.

figure 3.03 | The Museum of Modern Art, New York - photograph by Michael Wesely.

figure 3.04 | Facade of the ‘real’ temple, shown partially veiled – Michael Webb.

figure 3.05 | Map of Henley Royal Regatta, observed through intermittent cloud cover – Michael Webb.

figure 3.06 | Marcel Duchamp - The Bride Stripped Bare by Her Bachelors, Even (The Large Glass), 1915-1923. Photograph by Graydon Wood.

figure 3.07 | Early Perspective of the Regatta – Michael Webb.

figure 3.08 | Plan of Cone of Vision – Michael Webb.

Section 2 - Chapter 4.0

figure 4.01 | Portrait of Guarino Guarini – Architettura Civile (1737)

figure 4.02 | Architettura Civile frontispiece (Turin: 1737).

figure 4.03 | Plactica Philosophica frontispiece (Paris: Denys Thierry 1665).

figure 4.04 | Ortografia Gettata (Guarini’s theory of parallel projection) applied to stone cutting (stereotomy) – Architettura Civile (1737), Lastra V, Tratt. IV.

figure 4.05 | “Method of uniting the inner and outer surfaces of a cylinder segmented obliquely” – Architettura Civile (1737), Lastra III, Tratt. IV.

figure 4.06 | Projection and its analogues: The Arrested Image – Robin Evans.

figure 4.07 | Plan of the Cathedral of Turin and the Chapel of the Holy Shroud (SS. Sindone).

figure 4.08 | Turin, SS. Sindone. Stairs from Cathedral.

figure 4.09 | SS. Sindone Plan (Architettura Civile, tav. 2) – Guarino Guarini.

figure 4.10 | Demetrio Festa, Chapel of the Holy Shroud (SS. Sindone), lithograph, 1833 (from L.G Piano, Comenarii critic-archeologici sopra la SS. Sindone... , Turin, 1833, II, 394; photo: Biblioteca Reale, Turin).

note: all figures are credited at the conclusion of each chapter and those not credited are produced by the author.

figure 4.11 | Section of the SS. Sindone – Section, Turin, 1667-1694 (Architettura Civile, tav. 3) – Guarino Guarini.

figure 4.12 | SS. Sindone, Interior of the Dome – Guarino Guarini. Photograph by Elwin C. Robinson.

figure 4.13 | Parametric variations of scripted geometry for Santissima Sindone. Script written by Jess Maertterer.

figure 4.14 | SS. Sindone dome, “weave” of light and stone. Photograph by Janine Debanné.

figure 4.15 | Friedrich Gilly, perspective study with landscape scene (1799).

Section 3 - Chapter 5.0

figure 5.01 | Where is a *Projective Site*?

figure 5.02 | Shipwright building - Shelley Bay, Wellington | 01

figure 5.03 | Shipwright building - Shelley Bay, Wellington | 02

figure 5.04 | ‘Real’ Site Plan.

figure 5.05 | Site Reconstruction | 01

figure 5.06 | Site Reconstruction | 02

figure 5.07 | Sketches of construction details.

figure 5.08 | Site Reconstruction | 03

figure 5.09 | Site Reconstruction | 04

figure 5.10 | Site Reconstruction - perceptual data field.

figure 5.11 | Inside/Outside Blur.

figure 5.12 | Site Reconstruction | 05

figure 5.13 | Inside-Site drawing.

figure 5.14 | Truss drawing.

figure 5.15 | Details of Site Reconstruction.

figure 5.16 | Study drawing of Wood Block Model.

figure 5.17 | Wood Block Model | 01

figure 5.18 | Wood Block Model - acrylic plane close-up.

figure 5.19 | Wood Block Model | 02

figure 5.20 | Photogram Model | 01

figure 5.21 | Recording shadow as analogous to individual perception.

figure 5.22 | Photogram Model - real shadow interacting with the virtual.

figure 5.23 | Photogram Model | 02

- figure 5.24 | Photogram process - the real and the virtual shadow.
- figure 5.25 | Photogram Model | 03
- figure 5.26 | Dark room sequence of exposure.
- figure 5.27 | Photogram Model | 04
- figure 5.28 | Isometric Study | 01
- figure 5.29 | Virtual floor plan detail.
- figure 5.30 | Isometric Study | 02
- figure 5.31 | Exponential curve / line of vision composite detail.
- figure 5.32 | Isometric Study | 03
- figure 5.33 | On-site sketches.
- figure 5.34 | Sketch detail.
- figure 5.35 | Isometric Study | 04
- figure 5.36 | Film positives taken on first visit to shipwright building.
- figure 5.37 | Section Model | 01
- figure 5.38 | Scan overlay of on-site sketch.
- figure 5.39 | Section Model | 02
- figure 5.40 | Section Model - inverted one-point perspective as viewed from behind.
- figure 5.41 | Section Model | 04
- figure 5.42 | Section Model | 05
- figure 5.43 | Section Model | 06
- figure 5.44 | Section Model | 07
- figure 5.45 | Section Model | 08
- figure 5.46 | Section Model - photographed in VUW atrium.
- figure 5.47 | Section Model | 09
- figure 5.48 | Section Model | 10
- figure 5.49 | Cumulative Section Study.
- figure 5.50 | Examples of iterative study sketches.
- figure 5.51 | Inhabitation Model | 01
- figure 5.52 | Rapid-prototyped model emerging as the structure slips out from the picture planes.
- figure 5.53 | Translation of Isometric Study.
- figure 5.54 | Inhabitation Model | 02
- figure 5.55 | Inhabitation Model | 03

figure 5.56 | Inhabitation Model | 04

figure 5.57 | Inhabitation Model - shot from the VUW atrium.

figure 5.58 | Inhabitation Model - views illustrating the parabola carving out the space created by the picture planes.

figure 5.59 | Inhabitation Model | 05

figure 5.60 | Detail of steel - acrylic connection + mirror grid.

figure 5.61 | *A Projective Site* - presentation 01

figure 5.62 | *A Projective Site* - presentation 02

ACKNOWLEDGEMENTS

I would like to thank the following people for the important roles they each played over the course of this thesis:

Paul James for guiding me in the right direction in the early stages, and to Phillipe Campays and Jan Smitheram for helping to identify what was essential to the project and also how to communicate it.

Mark and Jo Roberts for their continued support throughout my time at university.

Jimmy Gray, Jansen Aui, and Henry Stephens for the many discussions, reading of work, and interest in the project.

Simon Twose for the generous time given and insightful comments that contributed significantly to the development of the design project.

Jessie Davis, for her patience, love and support during my time studying architecture.

Linda Wong, my supervisor, for her continued involvement and guidance across all aspects of this thesis.

INTRODUCTION

This thesis explores the supposed gap between the way architecture is designed and represented, and how it is experienced in built form. The purpose of this is to explore the possibility of reorienting the instrumental and symbolic meanings of architecture toward a concomitant relationship - where one cannot be separated from the other. This research challenges the notion that these meanings are independent to one another. It is suggested that this reorientation can be achieved by engaging the two primary ways of understanding space. These two ways of perceiving space are imbued with instrumental and symbolic characteristics and are also conventionally understood as oppositional:

The first is *real* space - that which is characterised by the sensory and embodied complexities of inhabitation, resulting in a direct experience of architecture as built. Real space, in the context of this thesis is framed as the space from which *symbolic* meanings of architecture are generated - in other words, perception not bound to singular or transparent interpretation, but toward continually reproduced meanings as architecture becomes integrated into a wider cultural context.

The second is *representational* space. The conventional understanding and role of representational space is that it serves to communicate the measurable, defined and quantifiable characteristics of architecture. This conception of architecture presents its *instrumental* nature - a singular and transparent reading of architecture. The conceptual purity of instrumental architecture that is achieved in the space of representation is argued to break down in the translation to real space¹.

The basis for this criticism and hence the challenge set out for this thesis, is a deeply historical one. Prior to the '17th century, the 'primacy of perception as the ultimate evidence of knowledge', was never challenged (Perez-Gomez, 1983: 9). In other words, our existential condition was central to the production of knowledge. However, the emergence of non-Euclidean geometry in mathematics 'argued the possibility that the... world of man could be effectively controlled and dominated', through a 'functionalized theory subsumed by technology'. As a result, autonomous representation driven by an instrumental imperative came to be seen as the 'only serious and legitimate' (Perez-Gomez, 1983: 11) understanding of external reality.

¹ Communicating only the instrumental characteristics of architecture has been described not to expose order, but rather to 'conceal' (Wigley, 1992: 376) the disorder that occurs in real space. Ironically, the more transparent and neutral these representations become, the more opaque the relationship to real space is to discern.

[fig i] Le Corbusier - Plan Voisen. One can see from this image, the imposition of a master-narrative establishing new order that is indifferent to its existing context. It is suggested that this level of conceptual purity is only available through idealised representations such as fig i - the complexities of real space appearing immobilised and suppressed. Extending this criticism of the master-narrative, and the autonomy of instrumental representation from which it dervies, Manfredo Tafuri writes: 'First among the intellectual illusions to be done away with is that which, by means of the image alone, tries to anticipate the conditions of an architecture "for a liberated society"' (Tafuri, 1976: 179).

This emancipated conception of architecture as a purely instrumental discipline is a pervasive trend throughout architectural history and can be more recently witnessed in the Post-Critical movement. The Post-Critical agenda is designed to liberate architecture from the weight of theoretical discourse toward realising a purer 'specificity of architecture' (Allen: Hight, 2009: 43). Such 'specificity' becomes highly problematic as architectural representation inevitably becomes distantiated from the complexities of real space and deferred to a *master-narrative*. Purely instrumental architecture inevitably refers to a master-narrative - a guiding set of idealiesd principles that become universally applied universally, without regard for the specifics of site or context. This is because such a conception of architecture defines its effectuality solely through quantifiable parameters [fig i]. This inward turn toward the self-referentiality of a master-narrative suggests the advancement of architecture is only achieved through subordination to an instrumental imperative, an illusion of progress maintained through 'the routinization... of the developments of technology... that, while continuously renewed, nevertheless stay the same' (Vidler, 2000: 247). The uncritical faith in the universality of such a narrative creates an illusion that there are 'no limits to its application' (Vesely 2004: 195). While this may be beneficial to technological advancements, it becomes disastrous in 'those areas of culture' (Vesely, 2004: 195) that resist the narrow parameters of mathematical accuracy.

Instead of perpetuating the 'dialectical split between abstract accuracy and perceptual reality' (Davidson, 2009: 53), this thesis insists on the notion that real and representational space are constantly operating within and through one another's implied boundaries. In seeing these perceptions as overlapping it is possible to challenge the traditional gaps between the internal, esoteric nature of the architectural discipline, and the external understanding of architecture that is inhabited in everyday sites and situations. If our direct inhabitation of space is that which disrupts the conceptual purity of representational space², then this research suggests the notion of inhabitation can be a more complex one than the merely physical. By inhabiting the space of representation as one would real space, it is suggested that a more meaningful reciprocity can be achieved between the way architecture is designed and how it is understood experientially. In practice, this thesis aims to bring awareness to a space that exists between the instrumental image of representation 'devised by the architect' (Fascari, 1990: 15), and its symbolic reception within the collective space of culture.

² In contrast to the stable, distanced characteristics of representational space, when one is situated within an environment, our knowledge of it is determined by the fact that 'we are not standing outside it and hence are unable to have any objective knowledge of it' (Ciborra, 2006: 109).

Thesis Structure

This thesis is arranged in three main sections, the first two are dedicated to establishing a theoretical framework to understand both the split of the instrumental and symbolic, and the reorientation of these terms toward a relationship that is concomitant. The third section is the application of this framework in a design project. The thesis is then concluded with a brief series of discussions concerning the outcomes and speculating on the placement of the research within architecture as both discourse and practice.

Section 1 – *Thinking Inside / Outside Site* sets out the basis for this research. It addresses why this perceived split between real and representational space is being challenged. The treatment of real and representational space as *sites* is also introduced. The intention of this is to frame our bodily relationship to *site* as central to the perceptual split of the instrumental and the symbolic.

Chapter 1 | Post Critical - *Transformations of Instrumental Thinking* aligns with the *Outside Site* aspect of the Section title. When one exists outside site, it is argued that the complexities become reduced to a set of measurable, stable and defined instrumental factors. This chapter analyses the Post-Critical movement as contemporary framework, by which to critique the notion of architecture as a purely instrumental discipline. It is suggested that the Post-Critical places architecture within external reality by establishing its effectuality as limited to measurable and quantifiable characteristics. It is then suggested that this attitude reduces architecture to a discipline where meaning is derived only via self-referentiality through a hegemony of representational conventionality. Furthermore, it is suggested that this hegemony creates an arbitrary classification of a new 'avant-garde' – as Patrik Schumacher suggests, 'it is impossible to compete within the contemporary avant-garde without mastering these techniques' (Schumacher, 2010: 267). By defining the avant-garde through universal design and representational methodologies, one establishes a conventionality that is reductive to the very ideals of avant-garde discourse itself.

Chapter 2 | Symbolic Thinking - *From Inside Site* presents an alternative to the consideration of architecture as a purely instrumental discipline. If the apparent transparency of Post-Critical representation explicitly eliminates 'from design everything that cannot be calculated or controlled' (Vesely, 2004: 313), then this chapter presents the gap between this concept and the direct experience of space, in other words - existing *inside site*. It argues for a greater con-

nection between the way space is inhabited in everyday sites and situations. It does so by questioning the distance between the concepts that form these spaces we inhabit, and the way they are understood experientially. Dalibor Vesely's, *Architecture in the Age of Divided Representation* is introduced to provide a theoretical framework for articulating this 'gap between our ability to form concepts of totality, wholeness and infinity and our incapacity to experience them on a level that is finite and stable' (Vesely, 2004: 333). To explore the nature of our relationship to built space, David Antin's reading of his experience of the Rothko Chapel in Houston, Texas is used as a further textual reference for articulating the phenomenal connection between subject and space. The directness of inhabitation resulting in an inability to gain complete objectification of the chapel directs the narrative of the chapter to question the alleged distance, and indirectness that representation operates at. To close this chapter, a close reading of Michel de Certeau's influential text, *Walking in the City*, is employed to introduce a reciprocity between the *perception* of space and the *conception* of space. This is described as the 'plural' nature of reality (de Certeau, 1984: 94) and the challenge is laid out as how to articulate this plurality in order to form meaningful connections between site and representation.

While Section 1 initiates the specific characteristics of real and representational space; the sensory, embodied complexities of the former and the precise, instrumental characteristics of the latter - Section 2 - Site Translation / Site Projection is dedicated to seeing the supposedly discrete characteristics of one, as constantly present in the other. In doing so, it is argued that the instrumental and symbolic understandings of architecture are inherently bound to one another and that treating them as discrete entities is merely a form of suppression. The entropy of this search for transparency is argued to always be revealed in the collective inhabitation of real space - the complex social and ecological forces that disrupt the conceptual purity of instrumental representation.

Chapter 3 - *Drawing the Virtual* questions the understanding of representation as that which serves to communicate singular and transparent meaning of built space. A set of ideologies are established that provide a framework for a reconsideration of the *function* of representation. These concepts are established in three categories: *Techne - The Technological Image*, *Angel/Angle and the Instrumental Thesaurus* and *The Virtual*. These three terms develop a case for the presence of the instrumental and the symbolic as simultaneous presences within the space of representation, thus forming an allegorical connection to real space. The focus of the chapter is then directed to Michael Webb's *Temple*

Island (1966-ongoing). The project is significant in that it inverts the conventional relationship of architect to building. Instead of designing an architectural *object* using the space of representation as a *site* for conceptual purity - the project is about the *subject*. As a result, the architecture is only understood through the specific perceptions of the individual. However, instead of crafting an isolated and opaque piece of work, Webb's project is important to the thesis in that he creatively appropriates the existing instrumental structures of architectural representation and physical science in order to communicate outwardly again - to a wider sphere of discourse. In doing so, Webb explicates a meaningful reciprocity between the internal and esoteric constructs of representation and the collective and symbolic understanding of space in a wider cultural framework.

Chapter 4 – *Baroque Projections*, is located anachronistically within the thesis structure as an active historical analysis. Guarino Guarini is framed as an interstitial figure located at a crucial time period for understanding this historical nature of this perceived divide. Guarini's Santissima (SS.) Sindone chapel in Turin (1667-1690) provides a contextual base for identifying the underlying values for this divide. While Webb's project involves an *inward* translation of real space to question the neutrality of representation, Guarini's work is analysed in terms of an *outward* projection, from the drawn to the built. The most salient characteristic of his instrumental representations is that they are framed as being conceived in direct relation to the perceiving subject in space, rather than as autonomous self-referential entities. The drawings do not attempt to idealise the experiential aspects of the chapel, rather they foreground a framework for achieving the transcendental nature of the full scale space. Observations made in the conclusion of this chapter prompt the subsequent design exploration of Section 3: the chapter suggests that radical transformations and overlaps are occurring between representational and real space of the chapel, which raises the question of a space, or *site* of transformation that exists between - a metaphorical interval where the instrumental and the symbolic are equally present.

To conclude, Section 3 - *Inhabiting a Projective Site* begins with a brief introduction that frames the preceding four chapters in terms of their influence on Chapter 5 - *Inhabiting a Projective Site*. This chapter concerns the documentation and analysis of the design project. The design project develops the notion that real and representational space are not discrete entities and does so by proposing architecture is able to be inhabited in more complex ways than the merely physical. The design is of a space that exists between a physical buildings and its representation in drawing and modeling. I have called this

metaphorical interval *A Projective Site* - which is developed through a process of inhabiting real and representational space simultaneously. The function of this space is to provide an argument for re-examining the gaps between how architecture is designed and represented, and how it is understood experientially. Following the documentation and analysis, a series of critical reflections expound what the Projective Site attempted to achieve and also its practical application. A formal conclusion to the thesis then follows, extending the tone of the design conclusion toward a more inclusive one on the thesis as a whole.

References

Ciborra, C. (2006). Situatedness Revisted: The Role of Cognition and Emotion. In S. Bagnara, Crampton Smith, G. (Ed.), *Theories and Practice in Interaction Design* (pp. 107-116). London: Laurence Erlbaum Associates Publishers.

Davidson, B. (2009). Schizophrenia and Compromise. In R. Glynn, Shafiei, S. (Ed.), *Digital Architecture - Passages Through Hintlands* (pp. 52-55). London: www.digital-architecture.org

de Certeau, M. (1984). *Walking In The City The Practice of Everyday Life* (pp. 91-110). Berkeley: University of California Press.

Frascari, M. (1990). The New Angel/Angle in Architectural Research. *Journal of Architectural Education*, 44(1), p. 11-19.

Hight, C. (2009). Meeting After The New Boss - The Death of Theory. *Architectural Design*, 79(1), p. 40-45.

Koolhaas, R. (1978). *Delirious New York - A Retroactive Manifesto for Manhattan*. New York: The Monacelli Press, Inc.

Perez-Gomez, A. (1983). *Architecture and the Crisis of Modern Science*. Cambridge, Massachusetts: The MIT Press.

Schumacher, P. (2010). Parametric Diagrammes. In M. Garcia (Ed.), *The Diagrams of Architecture* (pp. 260-269). London: John Wiley and Sons Ltd.

Tafuri, M. (1976). *Architecture and Utopia: Design and Capitalist Development* (B. La Penta, Trans.). Cambridge: The MIT Press.

Vesely, D. (2004). *Architecture in the Age of Divided Representation – The Question of Creativity in the Shadow of Production*. Cambridge and London: The MIT Press.

Vidler, A. (2000). *Warped Space – Art, Architecture, and Anxiety in Modern Culture*. Cambridge: The MIT Press.

Wigley, M. (1992). *Untitled: The Housing of Gender*. In B. Colomina (Ed.), *Sexuality and Space* (pp. 327-389). New York: Princeton Architectural Press.

Figures

fig i, Koolhaas, R, 1978: 256.

SECTION 1 - *Thinking Inside / Outside Site*

SECTION 1 – *Thinking Inside / Outside Site*

This section traces the historical dissolution of instrumental and symbolic thinking into two explicitly separated modes of engaging site – inside and outside of it. Framing the divergent value systems of instrumental and symbolic thinking, I illuminate why the conception of digital space as a legitimate ‘site’ has enabled this split to become more profound. Specifically, the Post-Critical movement is argued to perpetuate and transform historical values of instrumental thinking, through the conception of digital space as site. By identifying *Post-Critical* as part of the canon of instrumental thinking, it is inevitable that the deeply embedded traditions of instrumentality will transcend this ‘movement’. However, Post-Critical ideologies provide a useful contemporary base from which to critique instrumental thinking historically. In contrast, symbolic thinking is framed as a product of our situatedness within real space. Identifying ways in which instrumental and symbolic thinking operate, we can identify how they have come to be grounded in entirely different relationships to site. From this analysis, a framework for the resultant trajectory of this thesis is established, where the instrumental and the symbolic are framed as constant presences through one another’s assumed boundaries. The historiographic approach to tracing the divide in representation to its current critical state defines the underlying values of this thesis. Through the split in methods of engaging site, I argue that notions of interiority (embodied) and exteriority (disembodied) have slipped into far more complex relations, and act as a precursor to an instrumental and symbolic reciprocity. Section 2 posits that this reciprocity transcends the discrete boundaries described in this Section.

Post-Critical values are posited as having sustained oppositions to symbolic thinking through aggressive disciplinary autonomy; the propinquity of the natural world becomes removed by the distance-inducing nature of pure instrumentality. The instrumental concern for specificity and transparency is framed as having found its ideal *site* in the hermetic, disembodied appropriation of digital space, and by extension, the construction method of the digital image¹. Furthermore, chapter 1 highlights how turning inward toward instrumental specificity institutionalises the architectural discipline, attempting to transform architecture into its ‘own form of language’ – a discipline driven by the articulation of complexity, through rational and formal constructs (Hays, 2010: 5). In opposition, chapter 2 posits symbolic thinking as unavoidable - its inherent connection to the structure of the natural world suggests that there is entropy to pure instrumentality that is revealed in the translation to embodied space. The ‘participatory’ (Vesely, 2004: 356) nature of symbolic

¹ The appropriation of digital space as a disembodied construct is viewed as reductive within the structure of this thesis. The following critique is thus directed toward this purely instrumental application of digital space, not digital space itself.

thinking derived from embodied notions of site is framed as the base of all communicative and meaningful representation, that may transgress boundaries into digital space, but always emerges from the empirical and reflective observations made in the natural world.

CHAPTER 1.0 | Post-Critical – *Transformations of Instrumental Thinking*

The mass of architects shouldn't worry, they should just do architecture.

Manfredo Tafuri, 1986.

In order to arrive at a critique of instrumental representation, this argument is structured through an initial analysis of instrumental values - how they emerge in contemporary forms via the Post-Critical, and how such thinking becomes grounded in digital space appropriated as a disembodied construct. Historically, instrumental thinking has often been derived from an emancipation of complexities existing in the natural world, toward focusing architecture on 'zones of purer technological possibility' (Vesely, 2004: 308). Embedded in this notion is the fact instrumental thinking imposes its 'hegemony by creating a world it can control' (Vesely, 2004: 284). Stability and technological progress is achieved by negating areas of reality that evade the rationalisations of an instrumental master-narrative. Such values were present in the climate that brought about the birth of the Post-Critical debate in 2002. Decades of reactionary architectural pursuits, attempting to step out of the long shadow of modernism, were argued to be ineffectual in the translation of language to the praxis of architecture. The 'resistance and negation' (Baird, 2005: 17) of capitalist society, through the criticism and architecture of figures such as Peter Eisenman and Michael Hays was perceived to have exhausted itself². Movements advocated by said critical architects and theorists, such as deconstructivism, were unable to maintain the 'robust energy' (Baird, 2005: 18) produced through theory in the translation to practice, and were thus determined to be obsolete and ineffective. A counter resistance from capitalist society in general reinforced the relative ineffectuality of critical architecture - the museum, rather than the street, being a more 'receptive venue' (Baird, 2005: 17) for such thinking.

² 'Unequivocally' defining 'Critical Architecture' (Heynen, 2007: 51) as that which is advocated by Eisenman and Hays (an architecture bound up in ideas of 'representation and autonomy' (Heynen, 2007: 51) presents a narrow position as to what 'Critical Architecture' may be, or how it might function in external reality. For example, Diller Scofidio + Renfro (a well known 'critical' practice) consider architecture as 'a cultural discipline, totally integrated, not autonomous' (Kazi: Diller, 2009:57).

As Michael Hays has noted, the resistance and required autonomy of critical practice results in 'capitalism... [withdrawing] it from service – [taking] it off line – so that demonstrations by architects of the critical distance of their practice... become redundant and trivialised in advance (Hays, 2010: 4). This climate of architectural anxiety contributed toward several key proponents of the Post-Critical debate³ calling for architecture to re-embrace 'mass con-

³ Interestingly, many are protégés of *Peter 'Daddy Critical' Eisenman* (Hight, 2009: 43) - including Robert Somol and Sarah Whiting.

sumer-society' (Baird, 2005: 17). The precept was to re-engage architecture by defining the discipline through the instrumental notions of 'projection, performativity, and pragmatics', instead of the signification of concepts via representation and discourse (Baird, 2005: 19). In particular, the Post-Critical concept of a 'projective theory' (Somol and Whiting, 2002: 75) draws worrying parallels to instrumental thinking - one that seeks to create a taxonomy of architecture grounded in pure 'design and its effects' (Somol and Whiting, 2002: 75).

The notion of 'design and its effects' suggests a clear 'projection' from a master-narrative of technological progress toward specific pragmatic effects - instrumental thinking often frames architectural progress through advancements in technology. However, true architectural progress requires the consideration of a far wider spectrum of reality. If architects are to supposedly abandon 'the continual testing and reinvention of techniques' then, 'architecture is free to re-engage with the world again, without any loss of specificity' (Rice, 2007: 262). Thus, Post-Critical can be typified as the formalisation of techniques that 'fast-forward' architecture 'in one direction' (Schumacher, 2010: 267). Such a conception of architecture is blind to the fact that to truly 're-engage' with society, architecture must operate beyond the mere classification of architecture as an instrument, or a tool, implemented to uncritically re-produce the forms that a capitalist society requires of it⁴.

Through the Post-Critical polemic, architecture becomes relegated to a neutral and complicit discipline, endlessly reproducing 'the structure of... [capitalist] society in its own immanent logics and forms' (Tafuri: Hays, 2010: 4). Through avoidance of the complexity existing in the 'hot, belaboured... overly difficult' (Somol and Whiting, 2002: 75) nature of reality, architecture turns toward instrumental specificity; articulating this complexity through formal rationalisations. While the conditions from which Post-Criticality emerged are understandable, a complete lack of acknowledgement to the contradictions of pure instrumentality as an appropriate means to re-engage with society are less clear. That architectural representation has suffered from this return to instrumental conventionality has been often overlooked in the sustained *back and forth* nature of the Critical-Post-Critical debate. The fact this dialectic persists to the present day is therefore a pertinent issue, analysed in depth in subsequent chapters. The ironic nature of re-engaging architecture with society via an instrumental 'projective theory' (Somol and Whiting, 2002: 75) is clear; a displacement occurs where architecture is reduced to a tool, blindly following the instrumental advancements afforded by technology, while negating the poetic and communicative nature of reality. Dalibor Vesely describes this

[fig 1.01] Bernard Tschumi, Advertisements for Architecture (1 of 9 parts), c. 1975.

⁴ Referencing Le Corbusier's Modernist icon - the Villa Savoye, photographed in a state of disrepair [fig 1.01], before restoration - Bernard Tschumi wrote in his provocative series, *Advertisements for Architecture* - 'The most architectural thing about this building is the state of decay in which it is. Architecture only survives where it negates the form that society expects of it. Where it negates itself by transgressing the limits that history has set for it'. This statement references the impossibility of the totalising control of a master-narrative, and as Michael Hays notes, 'an explicit alternative to the privileging of pure, autonomous form' (Hays, 2010: 143), which is a continued aspiration of architecture conceived as an instrument.

reduction of architecture to a complicit and transparent discipline as engendering 'not a lack of meaning, but a displacement of meaning in the crisis of representation' (Vesely, 2004: 356). Thus a gap emerges between the complexity of everyday life, and the comparatively homogenous, and inert nature of the buildings that are conceived in isolation to this complexity.

If architecture can only participate with external reality by defining itself as a practice reliant on the instrumental certainty enabled by technological advancement, then architecture becomes a commodity, performing its 'task' for a capitalist society. To this end, the limitation of defining the efficacy of architecture through such a narrow lens negates truly creative architecture from emerging. In order to participate in society, a stifling search occurs to classify architecture through a design methodology (master-narrative) entirely reliant on technological progress. A position is created whereby the search to re-engage architecture through instrumental projections drives the 'avant-garde' toward 'a more radical form of self-centeredness and self-referentiality' (Vesely, 2004: 37-38). This results in a universal anonymity when architects start 'classifying' *avant-garde* intentions [fig 1.02]. By negating the fact that architecture is 'a practice engaged with the complex and contradictory world' (Rice, 2007: 262) a weight is lifted and the discipline can blindly pursue the 'pure formalization of aesthetic technique' (Hays, 2010: 4).

[fig 1.02] Zaha Hadid Architects, Master-plan Competition, Appur, India, 2008.

Acknowledging the historical associations to instrumental thinking, Post-Criticality has allowed a contemporary framework by which to understand the current visual 'surface' of instrumentality. Exploring below this surface and identifying the underlying value systems, we can see that such 'movements' only serve to sustain oppositions and trivialise architecture to a discipline 'so thoroughly disempowered, so culturally marginal' (Martin, 2007: 106), that to merely suggest the theoretical capacity architecture inherently possesses is considered irrelevant. George Baird has noted that 'a new projective architecture will not be able to be developed in the absence of a supporting body of projective theory' (Baird, 2005: 21), highlighting the paradox of this polemic, and reinforcing the importance of pursuing symbolic thinking as central to locating architecture's relevance within wider culture. Rather than sustain these oppositions, architecture needs to move beyond rehearsing 'the same dialects' (Hight, 2009: 45), toward the exploration of meeting points in these historically demarcated modes of perception – inside and outside of site.

To examine the conditions of this divide further, it is important to understand that 'projective theory' requires a neutral, disembodied space to act as a mid point in the translation from an instrumental master-narrative toward

the praxis of architecture. ‘Digital space’ is employed as this ideal translator – capable of non-judgementally accommodating the specifics of the master-narrative whilst being unable to conceive any information that resists the rationalisations of this narrative. Establishing a grasp on the fundamental concerns of the present architectural climate through historical references to instrumental thinking allows this thesis to engage with a deeper, historically driven structure, rather than critiquing what initially appears as a relatively new and isolated form of representation. The identification of instrumental value systems operating below the visual surface of this movement presents digital space as the ideal site for such instrumental logic, and in turn we may arrive at a critique of the resultant architectural representation.

1.1 | *Digital Space as Site*

The ‘projection’ of the instrumental master-narrative through praxis, as described in the first section of this chapter, inevitably leaves representation as a neutral middle ground. This *middle-ground* is designed to communicate the specifics of intent as transparently as possible, in other words, it is unable to relate to real sites in a more meaningful way other than the quantifiable. As a result, technological progress is rarely discussed from a ‘noninstrumental point of view’ (Vesely, 2004: 284). Digital space therefore becomes the fundamental site for such instrumental singularity. While this thesis suggests that digital space has become the most receptive site for such rationalisations, this research does not intend to negate the creative potential of digital space that is beginning to be explored. The aim of this thesis however, is to critique the use of digital space in such a reductive, purely instrumental manner.

The precept of Post-Critical instrumentality aligns perfectly with the ‘abstract accuracy’ (Davidson, 2009: 53) afforded by digital space. Mark Wigley has noted that when the site of architectural conception is treated as neutral, a reductive stance is taken whereby the creative potential of the specific site afforded by its latent characteristics is overlooked. This condition is also present at the *site* of an architectural conception: discussing paper, Wigley notes that from an instrumental perspective, the salient characteristic of the ‘material is precisely that it can be overlooked. Paper is treated as if it is not really there’ (Wigley, 2001: 29). This notion is maintained and exaggerated to the infinite virgin sites of digital space, where there is no variation in its base qualities, specifically because we operate outside of it. The traces within digital space as one starts to design are perfectly observable and defined. The distanced nature

of digital space immobilises both the complexity of external reality, and our physical bodies, as digital space presents us with a mathematical truth and a 'reduction of every experience of reality to an experience of images' (Vidler, 2000: 247). Instrumental thinking becomes legitimised through digital site for its capacity to articulate the apparent totality of a design. Vesely notes the worrying faith being placed in digital space as a site for achieving the 'specifics' of architecture, illustrating 'how close we have come to accepting relatively isolated forms of representation' (Vesely, 2004: 4) as accurate descriptions of how space is experienced directly.

⁵ Mark Linder's text, *Nothing Less Than Literal – Architecture after Minimalism*, draws important conclusions from the instrumental ideologies of minimalism (and other related discourses such as *literalism and formalism*), which enable important understandings of contemporary instrumental representations. Linder notes the frustration born of the 'maddeningly indeterminate' nature of language and representation, encouraged the pursuit of 'representation without idealization' (Linder, 2004: 11). However, we can immediately see the impossibility of objectivity when such, 'literalisms lose their specific meaning as soon as they are removed from the circumstances of their utterance' (Linder, 2004: 11). Acknowledging the recurring historical limitations of instrumentality reinforces the intention of this thesis when critiquing the contemporary visual surface of instrumental ideologies.

The instrumental notion of 'projecting' an accurate, measurable concept into the praxis of architecture requires the capabilities of digital space to act as a neutral translator. Because digital imaging is completely underwritten in code, the construction of an architectural artefact within digital space is informed by a set of instructions, this 'data' thus becoming the perfect rational translator. As Therese Tierney notes of contemporary digital design processes, 'the same code, can be used to connect to the internet, to create on-screen visuals as well as fabricate three-dimensional installations' (Tierney, 2007: 82). If digital space becomes a site, where meanings and limits of architecture are established and defined, then a profound split occurs where instrumental accuracy is conceived in absolute separation to our embodied experience of reality. Such specificity of meaning recalls the 'this is this' (Linder, 2004: 11) mentality⁵ of minimalist discourse of figures such as Michael Fried.

The following diagram illustrates how digital space, and by extension - representation, is reduced to a neutral translator in the transmission of instrumental thinking toward the praxis of architecture:

Diagram of Instrumentality Framed through the Post-Critical 'Projective' Theory

[fig 1.03] Reframing the Post-Critical.

Considering this diagram, what is often overlooked in the Post-Critical debate, but becomes more obvious when considering the Post-Critical as an iteration of instrumental thinking, is how architectural representation is once again relegated to a neutral but necessary visual reference in the *projection* toward built architecture. Instrumental 'projection' negates representation as a *site* of instability. The inability of digital space to articulate the natural world on any other level than through data, visualises a 'pseudo-presence' (Vesely, 2004: 39) of reality. It is by identifying such limits of digital space that we must reengage our embodied experience to act as a meeting point to the limits of instrumental thinking⁶. Because digital space conceives manufactured data as the sole translator of meaning, it is assumed that through instrumentality, architecture may gain total control in the transition to physical reality, due to the singularity of meaning achieved in digital space. To continue to define the scope of architecture through such instrumental limits demonstrates a certain naiveté to aspects of reality that evade the attempted totalising control of a master-narrative. By referencing this illusion of instrumental control through historiographic analysis, the properties of digital space become readily associated with technological process as the sole means by which to advance architecture⁷.

⁶ This concept of identifying the limits of designing in the disembodied nature of digital space is derived from Dalibor Vesely's statement that, 'it is at the limits of geometrical representation that we may discover a world in which geometry is situated' (Vesely, 2004: 349).

If digital space continues to be framed as the facilitator of avant-garde architecture, our embodied experience becomes suspended. Operating solely with digital space holds the potential to transfer 'our experience' to only that, 'of the machine' (Ellis, 1997: Wood, 2002: 21) and our concept of physical site is only understood through measurable data. Increasingly, digital space is framed as the sole 'place' from which legitimate architecture can be created. The 'accuracy', and by extension legitimacy afforded by digital space is maintained through the 'defined' environment of digital space. This notion of 'defined' is understood through all relationships between elements existing in digital space, being 'defined' and absolute. If one element changes, its effect on related elements is easily quantifiable. Therefore, there is a split in site, a dialectic where one is either inside (existing within the natural world) or outside (defined relationships of the digital) an environment. This split in ones relation to an environment is recurrent through history and an ingrained part of the design process.

⁷ Dalibor Vesely has noted, 'only certain areas are susceptible to radical technological change while others remain relatively stable. Technology tends to develop in areas that can be more easily rationalised, that are technically more interesting, and that offer a better market return' (Vesely, 2004: 312).

To understand the range of this search for a totalising, disembodied rationalisation of the world, there are many sign posts by which we can draw parallels to the instrumental value systems existing in digital space. For example, Jacques-Nicolas-Louis Durand's functionalised theory which came to prominence in the middle of the 17th century pre-empted the obsessions of contem-

[fig 1.04] Jean-Nicolas-Louis Durand, *Précis des leçons d'architecture données à l'Ecole Royale Polytechnique* (1819), pls. 11, 17.

porary practice. Durand's formalised theory [fig 1.04] should be briefly noted here for historically mirroring the self-referential systems that occur in digital space. Alberto Perez-Gomez notes Durand's formal elements which 'must be combined through mathematical logic, [and therefore] must pretend... its values... its meaning... is derived from the system itself. This formulation... [constituting] its most radical limitation since any reference to the perceived world is considered subjective', a paradoxical quality given the rational aspirations of such autonomous formalism (Perez-Gomez, 1992: 4). It is therefore 'lacking in real value' (Perez-Gomez, 1992: 4). While autonomy is necessary, I believe a pertinent challenge for architects is to articulate reflexive shifts between moments of control, afforded through digital space, and the more turbulent reality, which is required if the design is to hold any relevance.

Considering the conditions of digital space as site, fundamental limitations have appeared which must be addressed as the end goal of this mode of instrumental thinking is the transition to external reality. Because digital space defines qualities of physical site through measurable constructs, what occurs is a *flattening out* of how site is perceived. Qualities of site are re-constructed through uniform and banal constants 'based on a pseudo-transparency of scope and pseudo-scientific justification' (Frasconi, 2007: 1). There is a fundamental difference between the scientific aspirations of instrumental thinking and levels of reality that architecture inevitably must contend with. An obvious question, highlighting the disparity between scientific and architectural aims asked in the University of California, Berkeley post-thesis discussion of 2009 was, 'how do you elaborate a hypothesis and how do you prove whether it is true or not?' (Paz Gutierrez, 2009: 26). In other words, architecture cannot be limited to the scope of scientific certainty, nor can it be limited to digital space's understanding of embodied space. Considering this, the second chapter of this section, whilst explicating the characteristics of a direct experience of space, acknowledges an inter-dependence that is needed with instrumentality. This is understood as the 'plural' nature of reality as articulated by Michel de Certeau – a reality that is conceived as a readable, 'transparent text' (de Certeau, 1984: 92), and is conversely experienced as an opaque milieu of human activity. Identifying the limits of operating either inside or outside of site allows moments of transgression to present themselves, shifts between autonomous and situated states engendering a more holistic connection to how we conceive 'site'.

References

- Baird, G. (2005). "Criticality" and Its Discontents. *Havard Design Magazine*, Fall 2004 / Winter 2005(3), p. 16-21.
- de Certeau, M. (1984). *Walking In The City The Practice of Everyday Life* (pp. 91-110). Berkeley: University of California Press.
- Frascari, M. (2007). *From Models to Drawings - Imagination and Representation in Architecture*. Oxon and New York: Routledge.
- Hays, K. M. (2010). *Architect's Desire - Reading the Late Avant-Garde*. Cambridge, Massachusetts: The MIT Press.
- Heynen, H. (2007). A Critical Position for Architecture? In J. Rendell, Hill, J., Fraser, M., Dorrian, M. (Ed.), *Critical Architecture* (pp. 48-56). Oxon and New York: Routledge.
- Hight, C. (2009). Meeting After The New Boss - The Death of Theory. *Architectural Design*, 79(1), p. 40-45.
- Kazi, O. (2009). Architecture as a Dissident Practice - An Interview with Diller Scofidio + Renfro. *Architectural Design*, 79(1), p. 56-59.
- Linder, M. (2004). *Nothing Less Than Literal*. Cambridge: The MIT Press.
- Martin, R. (2005). Critical of What? Toward A Utopian Realism. *Havard Design Magazine*, 22(Spring/Summer), p. 104-109.
- Paz Gutierrez, M. (2009). Post Thesis Summary Discussion. :AM - University of California, Berkeley Independent Student Publication.
- Perez-Gomez, A., Pelletier. (1992). Architectural Representation Beyond Perspectivism. *Perspecta*, 27, 20-39.
- Rice, C. (2007). Critical Post-Critical - Problems of effect, experience and immersion. In Rendell, J., Hill, J., Fraser, M., Dorrian, M. (Ed.), *Critical Architecture*. Oxon and New York: Routledge.

Schumacher, P. (2010). Parametric Diagrammes. In M. Garcia (Ed.), *The Diagrams of Architecture* (pp. 260-269). London: John Wiley and Sons Ltd.

Somol, R., Whiting, S. (2002). Notes Around the Doppler Effect and Other Moods of Modernism *The Yale Architectural Journal*, p. 72-77.

Tafuri, M. (1986 Spring). There is no Criticism, Only History. *Design Book Review*, 9, p. 8-11.

Tierney, T. (2007). *Abstract Space - Beneath the Media Surface*. New York: Taylor and Francis.

Vesely, D. (2004). *Architecture in the Age of Divided Representation – The Question of Creativity in the Shadow of Production*. Cambridge and London: The MIT Press.

Vidler, A. (2000). *Warped Space – Art, Architecture, and Anxiety in Modern Culture*. Cambridge: The MIT Press.

Wigley, M. (2001). Paper, Scissors, Blur. In C. de Zegher, Wigley, M. (Ed.), *The Activist Drawing - Retracing Situationist Architectures from Constant's New Babylon to Beyond* (pp. 57-74). New York: The Drawing Center.

Wood, P. (2002). *Drawing the Line: A Working Epistemology for the Study of Architectural Drawing*. Doctor of Philosophy in Architecture, The University of Auckland, Auckland.

Figures

fig 1.01, Hays, K. M, 2010: 142.

fig 1.02, Schumacher, P, 2010: 268.

fig 1.03, Drawn by Author.

fig 1.04, Vesely, D, 2004: 246.

CHAPTER 2.0 | Symbolic Thinking – *From Inside Site*

This chapter explores the sensory and embodied complexities associated with symbolic thinking in terms of their connection to real space. Chapter 1 presented a theory that the historical value systems of instrumental thinking have found their greatest legitimacy via entry into disembodied digital space. The ‘seeming immediacy and conquest of space and time’ (Trieb, 2008: 10) that digital space suggests we have achieved, is produced through ‘manufactured’ data driven logic, operating in completely different patterns to our functioning in real space (Mallgrave, 2010: 1). This is owing to the abstract accuracy, and ‘concepts of totality’ (Vesely, 2004: 333) that such logic functions on. Symbolic thinking provides the base reference of our direct perception of real space; in particular, our inability to stabilise exterior reality with our own interior dialogues is what makes representation necessary. True creativity does not refer to specific methodologies or stable assumptions, ‘indeed, most of our energy and attention is spent merely sustaining its presence’ (Vesely, 2004: 61). Therefore representation can be framed as the most immediate, unmediated way of crystallising imaginative responses to given problems. Symbolic thinking allows us to move beyond these exhausted oppositions - the demarcations of thinking and of site - of Critical and Post-Critical. Such a line of enquiry allows us to acknowledge that architecture exists beyond the futile search for a ‘transparently rational and optimal’ (Mical, 2005: 7) state that pure instrumentality would purport. I believe we need to take inspiration from our basic human condition, that which allows us to think holistically (rather than discretely) about these divergent modes of perceiving site.

¹ In his PhD thesis, Peter Wood questions the ‘hegemonic role of vision’ (Wood, 2002: iii) in architectural drawing, noting these values are ‘perpetuated’ in the translation to the digital image (Wood, 2002: iii). One of the parallel concerns of this thesis is the conception of architectural drawing through digital space being subject to increasingly aggressive, ‘representational parameters’ (Wood, 2002: 2). Purer specificity of meaning is imposed through data, underwriting the digital image and actively defining meanings and limits. Such instrumental thinking continues the ideology of architectural drawing as mere, ‘utilitarian convenience’ (Wood, 2002: iii).

Our sensory association to digital space operates through hegemony ‘of vision’¹ (Wood, 2002: iii), defined by constantly reproduced perspectival space - the view stands ‘in for the viewer, the image of a space representing its apparent effect’ (Vidler, 2000: 243). Conversely, that meaningful architecture correlates more closely to our embodied existence raises fundamental questions about the limitations of pure instrumental thinking. Architecture, and our existential nature, engages with more ‘deeply embodied phenomenon’ than reliance on pure vision (Mallgrave, 2010: 159). It is through the unquantifiable, ‘sensory and subliminal dimensions’ (Mallgrave, 2010: 159) that architecture has the capacity to operate. Instrumental thinking, through its aggressive process of negating all concepts that fall outside the, ‘process of its genesis’, or its *master-narrative*, can only derive meaning from such an, ‘overt’ relationship (Vesely, 2004: 357). Symbolic thinking allows us to understand

the limits of such manufactured appropriations of reality, whereas instrumental logic translated through digital space, glides through modulations, fluidly discarding prior iterations toward an idealised form. Because the end result is derived from a specific master-narrative, alignment to this narrative becomes its implied and singular meaning. This is paradoxical when considering the transgression from the self-imposed autonomy of digital space toward the functioning in the natural world - which always reveals that architecture 'can never be too literal' (Linder, 2004: 17).

Symbolic thinking, and indeed symbols, should not be regarded as mere 'contrivance', or, 'self-referential product' (Perez-Gomez, Pelletier, 1992: 21) – the common criticism and primary conclusion of post-modernism. Rather, such thinking is more deeply engaged with the natural world. Alberto Perez-Gomez and Louise Pelletier suggest it is the central means to engage with, 'our transhistorical embodied reality' (Perez-Gomez, Pelletier, 1992: 21). Because this 'transhistorical dimension' (Perez-Gomez, Pelletier, 1992: 21) is embedded within the structure of the natural world, it allows us to create, via symbolic thinking - deeper connections and metaphorical associations beyond the singular visual surface.

This potential, derived from our embodied existence being a central aspect to creative thinking. There is a pressing need in architecture to clarify this transhistorical notion, through what Michel Foucault calls, 'a history for our present' (Foucault: Hight, 2009: 45). Establishing a platform from which to regard the presence of history within the immediacy of the natural world holds the potential to mobilise the 'hybridity and complexity already immanent' (Hight, 2009: 45) within the practice of architecture. In contrast, it is important to recognise the superficial nature of pure instrumental logic, operating through the visual surface that digital space presents to us. The lucidity of this visual surface is articulated through the limiting notion of absolute concepts – entirely self-referential and autonomous. Maurice Merleau-Ponty has described this condition as the 'running wild of a visual power which has lost any sensory counterpart' (Merleau-Ponty, Vesely, 2004: 38-39). Because we can never fully experience such master-narratives, symbolic thinking as an embedded product of the natural world can be viewed as a mechanism that allows us to achieve 'sanity [to our] existence' (Vesely, 2004: 40). In the face of our 'personal mortality' (Perez-Gomez, Pelletier, 1992: 21), it is reassuring to understand that we are part of a deeper structure of the natural world.

Symbolic thinking, associated with our embodied state within the natural world, has recently been analysed and compared to the 'manufactured logic'

that is too often privileged in digital-space (Mallgrave, 2010: 1). Harry Francis Mallgrave has provided important insight in collaboration with neuroscientists to the understanding specific ways in which the human brain functions when producing creative concepts. As Mallgrave notes, such research and understanding of our creative capabilities is ‘particularly germane to our digital age’, considering the prevalent trust placed in digital methodologies to produce optimal architectural results (Mallgrave, 2010: 1). This is not to suggest that creative moments do not occur through digital design processes, this critique is instead directed toward the subordination of creative moments through representational conventions. These conventions are argued to be more explicit in the transition to digital space. Any potential reading beyond the singularity of meaning that data imposes becomes obscured. In turn, this produces representations that, ‘in their universality and anonymity’ (Vesely, 2004: 356) fail in the *projection* or, ‘return to the praxis of life’ (Burger, 1984: 58).

[fig 2.01] Melanie Young, metaphorical study of the design studio.

When designing from the ‘shared concepts, computational techniques, formal repertoires, and tectonic logics’ (Schumacher, 2010:266) that characterise the instrumental master-narrative, collective intentions are directed toward a narrow endpoint. The result is a failure to acknowledge neither the factors that exist outside the instrumental rationalisations, nor the impossibility of such singular objectivity in the transmission to the natural world. Such a stance is antithetical to symbolic thinking, the human brain possessing the ‘capacity to remember’ and retain images [long after they disappear] from the visual field’ (Phelan, 2005: 293). This ability to remember is a fundamental discrepancy between instrumental and symbolic thinking. There is a ‘phenomenal transparency’ (different to representational transparency)² to symbolic thinking that provides clues into revealing the multiple levels of reality that exist within the natural world (Vesely, 2004: 344). Surrealism for example, parallels clear value systems of symbolic thinking. Collage, a common surrealist tactic suggests a ‘movement away from the established system of references [toward visualising] the potential for forming a situational space’ (Vesely, 2004: 342) [fig 2.01]. Harry Francis Mallgrave has shed light on symbolic thought’s salient characteristics - perception and memory, and the connection to external reality:

Memories are non-representational... they do not reside in the molecular structure of our brain’s neurons but rather in the brain’s specific firing patterns – that is, in the circuits that are likewise dispersed over various parts of the brain and lie dormant till reignited. Indeed one of the more drastic

² Phenomenal transparency refers to a direct and transcendental experience of space as it pertains to the individual. Conversely, representational transparency is concerned with the communication of singular and transparent meaning through the application of representational conventions.

results of the new scanning technologies is the realisation that perceptual images are often processed in the same areas of the brain as are imagined images.

(Mallgrave, 2010: 164)

As Mallgrave suggests, advancements in neuroscience have given additional credibility to the objectives of surrealism and symbolic thinking in general. The goals of André Breton³ to synthesise notions of ‘real and the imaginary, reality and unreality, reason and unreason, reflection and impulse’ (Breton, 1924; la Marche, 2005: 274) can be re-assessed through our contemporary context as an articulation of the multiple levels of reality occurring in the embodied world, and through symbolic thinking. The admirable aim to reveal the, ‘fundamental binary human condition variously characterized as interior reality and exterior reality (la Marche, 2005: 274) now seems especially pertinent in the face of so much contemporary architecture being directed toward ‘pure means-end instrumentality’ (Hays, 2010: 4). The metaphoric qualities inherent to surrealist thought, point toward our ability to cohere thoughts that ‘transgresses the deductive’ conventions of an instrumental visual surface (Vesely, 2004: 341). Most important to note is the capacity architecture has to encapsulate these concepts. The capacity to allow the mind to, ‘apprehend the interdependence of two objects of thought situated on different planes’ (Vesely, 2005: 341) is neither as irrational nor dissociative as conventional instrumental discourse may argue, rather it is establishing a poetic and communicative link to the very way the human brain is now being proven to operate.

³ André Breton is one of the central figures of the surrealist movement.

Mallgrave discusses this all-encompassing nature of symbolic thinking in the context of recent neurological studies, which analysed responses to solving supposedly rational language problems. Scanning brain activity during the problem solving process revealed the right side of the brain undergoing a ‘sudden burst of gamma-band oscillatory activity’ (Mallgrave, 2010: 172) when the given problem was solved. Mallgrave notes the capacity of the brain to cross over to ‘a coarser semantic coding’ that ‘allows a more creative solution’ (Mallgrave, 2010: 172). What can be discerned from this study is the holistic capacity of symbolic thought to resolve even the most instrumental problems. That such symbolic thinking is derived specifically from embodied experience means that we may source the origins of symbolic thought from the ‘site’ of the natural world.

2.1 | *Embodied Space as Site*

Having identified correlations between instrumental thinking and digital space as site, a parallel relationship can be identified - locating the origins of symbolic thinking to embodied space, conceived as a 'site'. The central trait of embodied space is our inability to understand it in its totality, 'we are not standing outside it and hence are unable to have any objective knowledge of it' (Ciborra, 2006: 109). However, this universal effect of subjectivity that embodied space evokes in us, allows a greater communicative link through shared experience and different interpretations of the same space of occupation. Conversely, digital space often compresses a series of mimetic effects derived from the natural world onto a visual plane. While digital space constructs *situations* from scratch, where levels of control are measurable - our *situatedness* within embodied space does not afford us such stability. This thesis suggests reconciling this split through shifting between situated and autonomous states, thereby allowing concepts formed in these different spheres of reality to permeate into the boundaries of the other. This final section of the chapter suggests oscillating between the 'prereflective' (Vesely, 2004: 378) immediacy of everyday situations and the stabilising of concepts afforded by representation may present moments where the 'plurality of the real' (de Certeau, 1984: 94) may be best articulated and allowing architecture to become a more involved element of its context.

Although we do not have the capacity to experience autonomous ideas in their entirety, the collective consciousness of experience gives deeper meaning that cannot be articulated from one rational standpoint. This notion allows concepts to take on new meaning as they inevitably become a part of the 'cultural memory and history and, in principal, to the cosmological foundations of our culture' (Vesely, 2004: 378). This relationship to the embodied world correlates to Foucault's call to mobilise a 'history for our present', as mentioned in the previous section (Foucault: Hight, 2009: 45). The notion that the latent world, or the 'silent background' (Vesely, 2004: 378) gives structure and coherence to everything we experience, holds significant potential when considering the emergence of creative thought. Because of this embodied condition, and because such concepts operate below the visual surface, it inevitably becomes something 'we all share without being fully aware of it' (Vesely, 2004: 378). This stands in contrast to the production of objective knowledge, which actively strives to 'keep the observer separate from the situation being studied' (Ciborra, 2006: 114). This separation allows instrumental thinking

to be ‘evaluated independently’ (Ciborra, 2006: 114) of the realities of a situation. The ‘subtleties of a situation’ (Ciborra, 2006: 109) are far more difficult to evaluate so are generally not elaborated or even alluded to, other than in the most reductive sense. This reinforces the relevance of digital space as an ideal site from which to avoid the complexities of embodied space – it is a site that gives ‘the sense of being caught in a matrix, a web, a space of no time, and no place’ (Vidler, 2000: 245).

The state of consensus and stability achieved in digital space acts in constant tension to our embodied human condition. Considering this basic opposition, I believe it is important to question the reliance on data, acting as the privileged translator of meaning from real to representational space. There is a need for a supporting strand of symbolic thought to work symbiotically with the numerical accuracy afforded by data, with the aim of eventually blurring their obvious distinctions. To work toward this synthesis we must first re-explore the nature of embodied space. To begin this exploration, David Antin’s reading of the internal space of the Rothko Chapel in Houston, Texas provides important insight into the complex layers of reality that operate in embodied space. The chapel murals, commissioned in 1964 display a series of site-specific, ‘black-form paintings’ (Rosenthal, 2007: 55) by Mark Rothko. provide important insight into our constant yet fluidly changing relationship with embodied space. This phase of Mark Rothko’s career is important to evaluate in the context of this thesis as it is marked by a progression from ‘figurative imagery’ toward ‘addressing the viewer more directly’ (Rosenthal, 2007: 55) [fig 2.02]. In doing so, the viewer’s relationship to the paintings becomes a *personal*, rather than *prescribed* one – both in terms of physical positioning and interior meditative dialogues with oneself [fig 2.03].

While elaborating on his own work, Rothko has unconsciously provided a critique that can be appropriated to the contemporary limitations of instrumental thinking, which operate in a persistently autonomous sphere of reality to that of the embodied world. Rothko states - ‘I paint very large pictures... because I want to be very intimate and human. To paint a small picture is to place yourself outside your experience, to look upon an experience’ (Rothko, 1951: Rosenthal, 2007: 56). This reasoning, implemented to great effect in the Rothko chapel, typifies a desire to relate to ‘the phenomenal body’ which is ‘in constant relationship with an environment into which that body is projected’ (Merleau-Ponty: Vesely, 2004: 39). Thus Rothko’s paintings reveal this relationship to the individual - that which refers to deeper structures embedded within the natural world, existing beyond the visual surface. In contrast, the disembodiment of digital space - as accessed through a computer screen,

[fig 2.02] Mark Rothko, Untitled (South Wall Painting), 1964-1967.

[fig 2.03] Rothko Chapel interior with original skylight grid, 1971.

⁴ Mark Rothko in this instance refers to small paintings which place the viewer outside of its context. This quote is referenced to correlate Rothko's comments on the small painting with the screen of a computer. In contrast to this condition, the murals of the Rothko chapel *are* the experience.

presents a conventionality that is achieved by looking 'upon an experience' (Rothko: Rosenthal, 2007: 56)⁴ – one that is carefully mediated to communicate singular meaning, operating autonomously to external reality.

David Antin's personal reflections on his experience of the Rothko chapel articulate the most important characteristics of our existential condition. Antin's text is transcribed in a manner that reflects his changing impulsive and reflective responses to the space of the chapel. For example, exaggerated spaces between words, rather than punctuated full-stops cohere Antin's thoughts as a means to communicate the fluid exchanges between, and transformations of, ideas. This literary technique generates ways in which subtle subversions of the 'modified restraints... and grammatical fears' (Kerouac, 1958:7) embedded in writing convention, re-invest the reader with a heightened level of involvement and self-awareness. In turn, this provokes a greater level of engagement and communication of meanings which transcend the autonomy of the page. Due to the sheer scale of the paintings and the octagon-shaped floor plan [fig 2.04], Antin elaborates on his inability to rationalise the 14 paintings of the chapel into a fixed definition:

[fig 2.04] Howard Barnstone and Eugene Aubry, Scale Model of Rothko Chapel, 1970.

the rothko is about the failure of the human ability to stabilise the world in relation to oneself while that self is in transition and failing and your memory is failing and youre very gradually on a path that eventually ends in your dying as your eyes are fatiguing and your memory is straining to hang on to what you hope are the facts of the chapel and then you remember at least i remembered that rothko had been seen and described several times as staring long and intently into the sunset watching the declining light

(Antin, 2003: 130)

As we struggle to cohere our own perceptions and memories (recalling from the prior section that imagined and perceptual images are 'often processed in the same areas of the brain (Mallgrave, 2010: 164) there is a tendency to fall back upon universal givens and apparent truths by which we rationalise broad concepts, such as our understanding of space, of site, and even our situatedness. Antin's specific experience is that of an individual coming to terms with impossibility of objective knowledge through the internal atmosphere created (both within the observer and within the chapel space) [fig 2.05] by Rothko's imposing black-form paintings that exist somewhere in the 'intraceable

[fig 2.05] Rothko Chapel, interior view facing north -
Photograph by Hickey & Robertson.

range of visibility – at the edge of invisibility’ (Antin, 2003: 125). Through exploring the limits of visibility, the Rothko chapel reinforces the limitations of vision alone as a privileged mode of communication. Merleau-Ponty has acknowledged the persistence of a phenomenological presence in the embodied world ‘will forever prohibit the visible-material world’ (Rendell, 2007: 179) from becoming understood as the only legitimate reality that it is engaged with.

The architecture and the environment also play a participatory role in the perception of these paintings - extending the commentary on the limits of vision as a sole means from which to extract meaning from embodied space. Antin notes how this condition of instability, derived from the relationship between the infinite and altering of depths and transparency possesses an added layer of complexity through the abandonment of artificial lighting. The ability to steady one’s relationship to the triptych layouts becomes ineffectual – Antin notes that even ‘a single cloud passing over the central light source could change the degree of visibility and the color of the painting – and this was beginning to make me very nervous as I was trying to figure out how I could discount the effect of the atmospheric condition on the lighting’ (Antin, 2003: 129). Within the Rothko chapel exists then, a complex relationship between perception and memory – an atmosphere that evades rationalisations, it makes us aware of the immediacy and qualities of embodied experience. Such ontological conditions are immediately betrayed through any attempt at reproduction which can only re-present the visual surface. The Rothko chapel

is defined by its 'presence in time and space, its unique existence at the place where it happens to be' (Benjamin, 1936: 220). The 'silent background' (Vesely, 2004: 378) of everyday life is presented to us and persists in our memory – achieving Rothko's desire for his paintings 'to have the kind of presence that when you turned your back on them you felt them still there like the presence of the sun on your shoulders' (Antin, 2003: 126).

Considering his experience in the chapel, Antin draws conclusions between the nature of our situatedness and the reasons for employing representation as a communicative device. What is significant here is the personal nature of Antin's direct experience is sustained and becomes outwardly communicative when considering his text as a *representation* of experience:

'we cant really describe a rothko we can talk about it but we cant describe it in a certain sense you cant describe anything you can list some of its features and make some effort to say how they are fitted together and by the selection of the features or the way you observe their connectedness you wind up with a representation but you cant describe it to someone who hasn't seen it or something very like it so i asked bill "what was the weather like when you looked at the rothko"'
(Antin, 2003: 124)

Using the Rothko chapel as a metaphor for the very basis of representation, the notion of instrumental data-driven representation posited as a device of transparent translation appears to be apocryphal. Peter Wood notes this is achieved 'through denial of... translation as a device of movement' (Wood, 2002: 79). This instrumental desire for specificity was also existent during much of Rothko's career – the *avant-garde* oft directed toward minimalist discourse. The limitations of instrumental thinking become immediately apparent when framed through minimalist discourse. The drive to define art and architecture through such instrumental ends drives these related disciplines in on themselves toward becoming their own 'object... [only achieved] through an essential negativity' (Hays, 2010: 169). This *translates* to a negation of the 'primordial' conditions of embodied space, toward achieving instrumental specificity (Hays, 2010: 169). As a result, 'art was for art's sake, and the means of criticism became the subject of the critique' (Gargus, 2005: 176). A parallel theme ran through architecture which 'likewise, could only be about architecture' (Gargus, 2005: 176). The Rothko chapel then can be seen to go against such stylistic trends and instrumental narratives, and in doing so, sustains

the possibility for art and architecture to be grounded in the ‘communicative space of culture’ (Vesely, 2004: 380). Antin’s text manipulates universal writing convention in order to situate his experience within a wider sphere of discourse. It is as if Antin has inhabited his representation as he did the real space of the chapel⁵. The instrumental application of the experience becomes loaded with symbolic meaning, thereby establishing an inter-dependence between the phenomenal and representational spheres of reality.

⁵ The notion of inhabiting representational convention as one would real space is explored further in Section 2, and becomes a central tactic in the design exploration of Section 3.

2.2 | *Plural Reality*

Perspective vision and prospective vision constitute the twofold projection of an opaque past and an uncertain future onto a surface that can be dealt with.

Michel de Certeau, 1984.

[fig 2.06] Commissioners' proposal for Manhattan Grid, 1811.

To conclude both this section and chapter, a reflection on Michel de Certeau's, *Walking in the City* provides an important reading into the split between embodied percept, and the illusion of a totalising master-narrative. de Certeau explores this divide through the island of Manhattan – a *site* now well known for corrupting the purity of the grid-layout [fig 2.06]. This notoriety is largely due to Rem Koolhaas' allegorical reading of Manhattan in, *Delirious New York* (1978) which examined the seemingly unformulated colliding of the instrumental logic of the modernist grid and skyscraper typology, with the complexities of external reality. Koolhaas coined this condition, the 'culture

[fig 2.08] Empire State Building, New York 1940, photograph by Andreas Feininger.

⁶ Comprised of those who occupy the street level.

⁷ The city read as a transparent representation from a top-down view.

[fig 2.07] Skyscraper under construction, New York 1963 - photograph by Andreas Feininger.

of the skyscraper (the endless multiplication of a site's footprint) [fig 2.07] and its relationship within the relentless abstract text of the two-dimensional grid. Paradoxically, this condition conceals behind the formalist serenity of the skyscraper facades [fig 2.08], an irrational and fantastical condensing of programs and worlds. Here however, de Certeau's analysis of conflicting experiences of the 'migrational city'⁶ and the 'panoramic city'⁷ (de Certeau, 1984: 93) encapsulates the basic conditions of enquiry of this thesis.

Despite recurring 'ambitions [of] purity' (Gargus, 2005: 177), architecture is always presented with a moment of conflict when the seemingly unequivocal nature of the instrumental master-narrative is forced to contend with its very limitations in the translation to external reality. Instead of turning inward and separating the instrumental and symbolic into ever more divergent modes of perception, at some point there needs to be acknowledgement that the embodied world exists beyond such desires for purity. When Michel de

Certeau looked out from the '110th floor of the World Trade Center, he saw the conditions by which – if only momentarily – instrumental purity could be maintained, and also the absolute illusion of it. Vision is again the most illusory of the senses, the 'agitation' of the bustling street level *translated* to an abstract 'wave of verticals... the gigantic mass is immobilized before your eyes' (de Certeau, 1984: 91). Its sheer scale means the city is the typology that most explicitly reveals the limitations of instrumental thinking. The rationality required to plan it, must suppress 'all the physical, mental and political pollutions' that would undermine it (de Certeau, 1984: 94). Such processes of negation become increasingly suited to the legitimacy visualised in instrumentally appropriated digital space, where form becomes ever more complex in a persistent effort to organise mass-society into a smooth surface, 'without tearing or collapsing into a collage' (Schumacher, 2010: 269).

Despite the perceived neutrality of instrumental thinking, there is often an implicit mechanism of power and control that is conceived independent to context – adhering only to an instrumental master-narrative from which to derive meaning. The grid for instance, is indifferent 'to topography, to what exists, it claims the superiority of mental construction over reality' (Koolhaas, 1978: 20). de Certeau describes the top-down, 'panorama city [as] a theoretical (that is visual) simulacrum' - an instrumental condition that presents a transparent representation of the city (de Certeau, 1984: 93). To achieve such lucidity, de Certeau notes one 'must disentangle himself from the murky intertwining daily behaviours and make himself alien to them' (de Certeau, 1984: 93). The contemporary instrumental image of the city presents a curious paradox whereby there is an acknowledgement of complexity, but an avoidance of confronting it any other way than through highly articulated form. This biased faith in instrumental values demonstrates full submission to technological advancement and perpetuates the belief that form is the sole translator of architectural meaning. Countering this, Jonathan Hill has observed digital space used in a purely instrumental manner as 'primarily concerned with the depiction of objects that define spaces, and architects continue to associate architectural development with formal development' (Hill, 2006: 59). Form, operating in the autonomous sphere of digital space presents a 'utopia of optical knowledge' (de Certeau, 1984: 93) – the digital image may be fluid, but to be so, it must immobilise the opaquely complex narratives of external reality. Immobilising the 'opaque mobility' of the embodied world *translates* complexity 'into a readable and transparent text' (de Certeau, 1984: 92).

Contrary to instrumental attempts to exert infinite control over the city, de Certeau describes an alternate reality – a 'migrational city' emerges [fig 2.09],

[fig 2.09] 6th Avenue Station, New York 1940 - photograph by Andreas Feininger.

one that slips through, 'the clear text of the planned and readable city' (de Certeau, 1984: 93). This stance proposes a different reality, one based on the suggestion that translation is never a neutral act. Translation does not mean facilitating a linear transmission of ideas toward practice - 'linking the city to the concept never makes them identical' (de Certeau, 1984: 94). Beyond the false taxonomies of space established in the 'strategies' of the 'panoramic city', de Certeau argues that there exists the 'tactics' of those walking the streets - in other words, those who re-appropriate sites and contexts beyond the limits of the 'systematic space of the proper' (Allen, 2009: xix). These tactics, which take place in embodied space, evade regulation from any 'panoptic administration' (de Certeau, 1984: 96). By understanding this dualistic condition - the embodied and disembodied relationship to site, one can see the instrumental rationalisations which construct space 'on the basis on a finite number of stable, isolatable' (de Certeau, 1984: 94) parameters to be nothing more than an 'imaginary totalization produced by the eye' (de Certeau, 1984: 93).

⁷ Jaqueline Gargus writes: "*Informe*" is a term invented by... Georges Bataille to describe the delicate, oscillating interplay' (Gargus, 2005: 170) between conditions that are conventionally read as oppositional.

Moving beyond the imaginary visual surface, de Certeau locates the idiosyncratic 'spatial practices' (de Certeau, 1984: 91) that subvert the intentions of an imposed master-narrative. The '*informe* order'⁷ of those inhabiting the street, produces an 'interplay between opposite conditions that undermines clarity and erodes or contaminates status' (Gargus, 2005: 170). de Certeau champions the everyday, 'practices of space', implemented by those who actively manipulate the basic elements of the imposed order of the grid (de Certeau, 1984: 100). The 'long poem of walking' (de Certeau, 1984: 101) can act as the most basic subversion of the supposedly determinate spaces of the city. The dense layering of individual activity blurs rational constructs into an ambiguous whole that evades rhetorical clarity and points to a fundamental difference of ways in which instrumental space is constructed and in turn, how it is experienced:

The networks of these moving intersecting writings compose a manifold story that has neither author nor spectator, shaped out of fragments and trajectories and alterations of spaces: in relation to representations, it remains daily and indefinitely other.

(de Certeau, 1984: 93)

The continued carving of idiosyncratic paths through the city combined with the total re-appropriation of space, demonstrates how subtle manipulations to the transparent representation of space can reveal both the limitations of

such stable conventions, and the exploration of new spatial possibilities. The 'lapses in visibility [reproducing] the opacities of history everywhere' (de Certeau, 1984: 94) that takes place in the embodied world, is actively resisted in the values of instrumental representation which rarely acknowledges a reality beyond its control. The surface of instrumental discourse that generalises the embodied world persists in the contemporary context. Advancements in digital capabilities has lead to a proliferation of those who believe that instrumental thinking will find legitimacy separate to any supporting body of embodied priori:

The mass society that was characterised by a single, nearly universal consumption standard has evolved into the heterogeneous society of the multitude. The key issues that avant-garde architecture and urbanism are addressing can be summarised in the slogan: organising and articulating the increased complexity of post-fordist society.

(Schumacher, 2010: 267)

Patrik Schumacher's statement reflects an explicit belief in the capacity of instrumental thinking to have limitless reach across all levels of reality. Schumacher writes reductively in several senses - most importantly, defining the intentions of the architectural *avant-garde* makes the term redundant. The codification of avant-garde intentions through banal 'slogans' suggests a flattening out of ideologies and methodologies, rather than a meaningful connection to specific given context. The visual surface of such contemporary Post-Critical representations presents an instrumental master-narrative posing as a *corrective surgery* to the existing context [fig 2.10] - numerical complexity generating a form that is treated as a reified object. Thinking more holistically about architectural responses proves that 'the master narrative, once a secularization of religious salvation, now fails, and multiple other possible narratives rise up' (Vidler, 2000: 247). These narratives inevitably require a level of symbolic thinking which adheres to embodied knowledge, rather than emancipated forms of instrumental knowledge. de Certeau's reading of a 'plural' New York suggests a shift beyond 'the either/or dilemma' (Allen, 2009: xix) perpetuated by the conventional notion of considering the instrumental and symbolic as dissociative constructs. Instead of erasing all signs of an existence beyond geometrical parameters, de Certeau's poetic analysis proposes that 'beneath the discourses that ideologize the city' (de Certeau, 1984: 95), architects may acknowledge forces that operate beyond illusions of control.

[fig 2.10] Zaha Hadid Architects, Kartal-Pendik Masterplan, Istanbul, Turkey, 2006.

It is by identifying such forces that architects can employ their expertise to locate meaningful meeting points – a ‘progressive symbiosis’ enabled by meeting limits, permeating boundaries, and acknowledging conditions that exist beyond rational control.

Conclusion

This section has located two historically divergent modes of thought, the instrumental and the symbolic, in two equally divergent relationships to site. The embodied space of the natural world being tied to symbolic thinking and digital space, appropriated as a disembodied construct renders it a receptive venue for instrumental thinking. Identifying the central values of instrumental and symbolic thinking as tied to specific conceptions of site has been the key aim of this section and has allowed understanding of the resultant architecture – built or drawn. Chapter 1 elucidated this relationship between the disembodied nature of digital space and instrumental value systems, which revealed a recurrent belief that instrumental logic can become self-legitimising by referring only to itself, heedless of any existence beyond its own autonomous entity. Post-Critical theory is seen as a contemporary platform of instrumental thinking, architecture relegated to ‘projecting’ structures toward practice that are unable to communicate with the embodied world on any level than the technological. While Tafuri asserts the ‘intolerable but inescapable conditions of possibility’ (Hays, 2010: 4) for architecture to be relegated to a neutral and complicit instrument, this section has suggested that architecture is required to engage across a wider spectrum of reality. Architecture is posited to operate across and through embodied/disembodied boundaries - any attempt to define architecture through discrete instrumental values in isolation is fictitious.

Architecture that is instrumentally driven requires a neutral midpoint to translate its master-narrative with an absolute singularity. This recurrent theme of instrumental logic has been a pervasive trend in the history of architecture. The instrumental desire for ‘closure over incompleteness, and stability over uncertainty’ (la Marche, 2005: 279) was described as paradoxical to the way in which we experience the embodied world, which is never finite or stable. Chapter 2 located this connection of symbolic thinking to the universality of embodied experience. The core argument (that these specific relationships to site has caused the divide to proliferate) has provided pressing need to re-engage the ‘plurality of the real’ (de Certeau, 1984: 94). By defining the singularity of limits and meaning in digital space is to ignore the fact that such transparent and uniform rationalisations of site are ‘an effect of mask-

ing' (Wigley, 1992: 376). While the success or failure of contemporary instrumental thinking is determined by the level of control it is able to exert, symbolic thinking is more open ended. The success of symbolic thinking is not measured in achieving a stable set of assumptions; it is an open ended relationship to site communicating across multiple levels of reality as a vehicle of 'participatory understanding and all encompassing meaning' (Vesely, 2004: 356). Having established the characteristics of the instrumental and the symbolic that has driven their separation, Section 2 works toward a meaningful reciprocity. It does so by establishing the instrumental and symbolic and by extension - real and representational space, as always present within the assumed boundaries of the other.

References

- Allen, S. (2009). *Practice: Architecture Technique + Representation* (2nd ed.). Abingdon and New York: Routledge.
- Antin, D. (2005). the existential allegory of the rothko chapel. In T. G & Crow (Ed.), *Seeing Rothko* (pp. 123-134). Los Angeles: Getty Research Institute.
- Barnes, S. J. (1989). *The Rothko Chapel: An Act of Faith*. Houston: The Rothko Chapel.
- Benjamin, W. (1936). *The Work of Art in the Age of Mechanical Reproduction*. In H. Arendt (Ed.), *Walter Benjamin - Illuminations* (2nd ed. 2007) (pp. 217-251). New York: Schocken Books.
- Burger, P. (1984). *Theory of the Avant Garde* (M. Shaw, Trans.): University of Minnesota Press.
- Ciborra, C. (2006). *Situatedness Revisted: The Role of Cognition and Emotion*. In S. Bagnara, Crampton Smith, G. (Ed.), *Theories and Practice in Interaction Design* (pp. 107-116). London: Laurence Erlbaum Associates Publishers.
- de Certeau, M. (1984). *Walking In The City The Practice of Everyday Life* (pp. 91-110). Berkeley: University of California Press.
- Diller, E. (2001). *Autobiographical Notes*. In C. De Zegher, Wigley, M.

(Ed.), *The Activist Drawing – Retracing Situationist Architectures from Constant's New Babylon to Beyond*. The Drawing Center (pp. 130-133). New York: The Drawing Center.

Feininger, A. (2004). *Andreas Feininger - That's Photography* (A. Plath-Moseley, Trans.). Tübingen: Hatje Cantz Verlag.

Frascari, M. (2007). *From Models to Drawings - Imagination and Representation in Architecture*. Oxon and New York: Routledge.

Gargus, J. (2005). *The Tangency of the World to Itself - The Casa Malaparte and the Metaphysical Tradition*. In T. Mical (Ed.), *Surrealism and Architecture* (pp. 168-178). New York: Routledge.

Hays, K. M. (2010). *Architect's Desire - Reading the Late Avant-Garde*. Cambridge, Massachusetts: The MIT Press.

Hight, C. (2009). *Meeting After The New Boss - The Death of Theory*. *Architectural Design*, 79(1), 40-45.

Hill, J. (2006). *Immaterial Architecture*. Oxon and New York: Routledge.

Kerouac, J. (1957). *On The Road*. New York: Penguin Group (1976).

Koolhaas, R. (1978). *Delirious New York - A Retroactive Manifesto for Manhattan*. New York: The Monacelli Press, Inc.

la Marche, J. (2005). *Surrealism's Unexplored Possibilities in Architecture*. In T. Mical (Ed.), *Surrealism and Architecture* (pp. 273-289). New York: Routledge.

Mallgrave, H. F. (2010). *The Architect's Brain - Neuroscience, Creativity, and Architecture*. London: John Wiley and Sons Ltd.

Rendell, J. (2007). *Seeing Time / Writing Place*. In M. Frascari, Hale, J., Starkey, B., (Ed.), *From Models to Drawings - Imagination and Representation in Architecture* (pp. 179-192). Oxon and New York: Routledge.

Rosenthal, S. (2007). *Mark Rothko: A Stage For Tragedy*. In S. Rosenthal (Ed.), *Black Paintings - Robert Raushenbourg, AD Reinhardt, Mark Rothko, Frank Stella* (pp. 55-64). Munich: Haus der Kunst.

Schumacher, P. (2010). Parametric Diagrammes. In M. Garcia (Ed.), *The Diagrams of Architecture* (pp. 260-269). London: John Wiley and Sons Ltd.

Smout, M., Allen, L. (2007). *Augmented Landscapes*. New York: Princeton Architectural Press.

———. (2009). A New Global Style for Architecture and Urban Design. *Architectural Design*, 79(4), p. 14-23.

Tierney, T. (2007). *Abstract Space - Beneath the Media Surface*. New York: Taylor and Francis.

Vesely, D. (2004). *Architecture in the Age of Divided Representation – The Question of Creativity in the Shadow of Production*. Cambridge and London: The MIT Press.

Vidler, A. (2000). *Warped Space – Art, Architecture, and Anxiety in Modern Culture*. Cambridge: The MIT Press.

Wigley, M. (1992). *Untitled: The Housing of Gender*. In B. Colomina (Ed.), *Sexuality and Space* (pp. 327-389). New York: Princeton Architectural Press.

Wolf, E. M. (2010). *American Art Museum Architecture*. New York and London: W.W. Norton and Company Inc.

Wood, P. (2002). *Drawing the Line: A Working Epistemology for the Study of Architectural Drawing*. Doctor of Philosophy in Architecture, The University of Auckland, Auckland.

Figures

fig 2.01, Vesely, D, 2004: 27.

fig 2.03, Barnes, S.J, 1989: 70.

fig 2.03, Barnes, S.J, 1989: 87.

fig 2.04, Barnes, S.J, 1989: 65.

fig 2.05, Wolf, E. M, 2010: 46.

fig 2.06, Koolhaas, 1978: 18.

fig 2.07, Feininger, A, 2004: 216.

fig 2.08, Feininger, A, 2004: 173.

fig 2.09, Feininger, A, 2004: 278.

fig 2.10, Schumacher, P, 2009: 20.

SECTION 2 - *Site Translation / Site Projection*

SECTION 2 – Site Translation / Site Projection

What joins together the entire Modern Movement is... the concept of architecture as an ambiguous object... The observer becomes more and more the user who gives meanings to the object or to the series.

Manfredo Tafuri, 1980

Architecture as a discipline may be a formulation of esoteric knowledge, but it is also required to be a part of everyday lived experience. This concept may provide some insight into the difficulty of grappling with the ‘specificity’ of what architecture is, and what architecture might be. Manfredo Tafuri’s opening quotation for this section elucidates in one concise statement, the impossible specificity of a fully-functioning instrumental master-narrative. Tafuri does this by highlighting the ambiguous functioning of such purity in external reality. Modernism, conventionally understood as ‘didactic and determinist’ (Hill, 2007: 170), is in actual fact more bound to the ‘ambiguous’ object in space - a yet to be colonised artefact. This ‘pretend autonomy’¹ (Evans, 1997:155) is the result of instrumental thinking, advancing independent of any supporting embodied theory or anticipation to the meanings that objects take on as they become experienced. Therefore, while Section 1 was an exploration into why this perceptual split has become so profound, Section 2 argues for a re-orientation of the instrumental and the symbolic; toward their original interdependent relationship, where one could not be distinguished from the other. The analysis of Section 1 into the divergence and loss of meaning of instrumental and symbolic thinking also introduced the notion of site as a potential mediator. This section explores site in this mediating role, arguing that the instrumental and the symbolic are in fact concomitant phenomena – simultaneously occurring, both actively giving structure and meaning to the other, whether directly visible or not.

¹ Robin Evans in this context describes the risk of ‘enclosing architecture within its own compound, denying it communication with anything else to preserve its integrity’ (Evans, 1997:155), however this is seen as merely as ‘pretend autonomy’ (Evans, 1997:155) due to the communicative nature of the drawing. In this thesis, Evans’ comment is indicative of a condition that has worsened where Instrumental thinking become self-legitimising when operating purely in digital space.

The aim of this section is to move beyond the conventional view of much western discourse that ‘depends on the binary opposition of terms’ (Hill, 2006: 72). In the case of this research, the terms are naturally instrumental and symbolic. The relationship of these terms is analysed in two ways – by site translation and site projection, with the intention of locating instrumental and symbolic logics occurring simultaneously both *inside* and *outside* of site. The terms translation and projection are intentionally treated as synonymous in order to emphasize the inter-dependence between discrete modes of

architectural production - in this instance, between the drawn and the built. Chapter 3.0 explores a *translation* of site through Michael Webb's expansive and poetic exploration of Temple Island (1966 – ongoing) as a central case study. The project traces a surreal journey, toward and away-from Temple Island, creating an interdependent relationship between instrumentally formulated references to physical science, architectural drawing conventions, and the symbolic narrative of the journey. The instrumental and symbolic notions embedded in the project set up reciprocal relationships that actively alter the boundaries of the other, challenging the tacit assumptions of what architectural drawing is supposed to communicate. Chapter 4.0 is concerned with taking the translation of site and projecting outward with new architecture into external reality. Guarino Guarini's Santissima Sindone (1667-1694) is analysed as a building that shifts and blurs between its instrumentally formulated geometry and symbolic adaptations in the embodied space of the Chapel. Furthermore, this section treats the 17th and 20th centuries with an equal sense of urgency by which we may address the present situation – the aim is to provide a framework of precedent ways that the interdependence of instrumental and symbolic thinking is present in forming meaningful architecture.

CHAPTER 3.0 | Drawing the Virtual

A dictionary begins when it no longer gives the meanings of words, but their tasks.

Georges Bataille, 1929

This chapter is an analysis of the translation of site through techniques of architectural drawing. Specifically, ways in which imaging architecture may be both an experiential and a critical process that stabilises conditions of an external reality, is explored as a method by which previously unseen realities about a site may present themselves. In this sense, the architectural drawing is viewed as a site in its own right. Most pertinent here is an emergent reciprocity where an embodied experience, as it is stretched beyond any conventionally known reality, requires an ever more rigorous instrumental structure. As the symbolic becomes stretched to its imaginative limit, so too does the instrumental. In this context, the instrumental should not be appropriated to impose control. Rather, it is argued in this chapter that instrumentally formulated logic is more malleable than what is often presupposed. Michael Webb's Temple Island project is analysed as the central case study in this chapter that carries such values. Webb's Temple Island emerges through an embodied experience, allowing a mutual transformation where the symbolic becomes more communicative to the collective space of a wider culture (and perhaps to himself), and the instrumental finds new applications beyond its generally accepted syntax.

Representation becomes necessary to analyse in the context of this thesis as it acts to stabilise and communicate aspects of reality that are, by their very nature, unstable. Robin Evans stated that architects 'never work directly with the object of their thought' (assuming the final 'object' is built architecture), and are 'always working at it through some intervening medium' (Evans, 1995: 156). Therefore architectural representation provides the most immediate method for testing the ideas of this thesis, a translation of site toward the consideration of paper and digital space as an allegorical site to the real. In the context of this research, architectural drawing as both analogous to the built, or considered as its own artefact, are considered as equally valid appropriations of the techniques it affords. For the plural 'uses' of architectural drawing to provide meaningful communication, it is unproductive to continue to consider instrumental and symbolic logics as oppositional, rather, this chapter

argues that they are coded into one another. Considering the thesis position of instrumental and symbolic as concomitant, representation should not aspire to be the carrier of transparent and singular meaning in the transition toward built architecture. This notion in itself is not new, but a privileging of pure instrumentalised and autonomous form continues as a pervasive trend in much contemporary architecture [fig 3.01]. Robin Evans has described this condition, noting, ‘the assumption that there is a space through which meaning may glide without modulation is more than just a naive delusion, however’ (Evans, 1997: 154). The strength of the architectural drawing, a condition that is imaginatively explored in Webb’s Temple Island, is in its ability to reveal a latent virtual condition that conventional instrumental representation seeks to suppress.

[fig 3.01] Jun Yu: Forms of Cellular Aggregation (2005) SCI-Arc 2GBX Studio,

3.1 | *Reorientation*

Before analysing Michael Webb’s Temple Island project in detail, it is pertinent to first set out a framework for the reorientation of the instrumental and the symbolic. The following is a brief series of terms and ideologies that owe much to the writing of Marco Frascari, Stan Allen², and Therese Tierney and provide a conceptual opening into Webb’s project. These terms also find resonance in the following chapter on Guarino Guarini’s SS. Sindone Chapel in Turin. This reciprocity between chapters is intended to communicate latent relationships occurring across the spectrum of architecture – concepts that transform and take on multiple meanings as they shift between different spheres of reality.

² While Stan Allen has been associated as part of the Post-Critical movement, I believe his argument is far more productive. This is particularly evidenced in his writing on representation which is discussed in depth over the course of this chapter.

Techne - The Technological Image

Techne is a term that has shifted significantly in its commonly understood meaning. To reorient *techne* toward its semantic origin thus forms a significant entry point toward aligning the instrumental and symbolic as concomitant phenomena, through both linguistic understanding and as a design strategy. Marco Frascari writes, ‘in common language, technology and its derivative words (technical, technique) have lost the original meaning embodied in the Greek word *techne*, and they are understood only as instrumental in nature’ (Frascari, 1990:11). Frascari links the etymology of *techne* to a multitude of notions including *poiesis* (to make), *aletheia* (truth) and *episteme* (cogni-

tive knowledge). The rhizomatic structure of *techne* thus emphasizes holistic responses to given situations, rather than a discrete series of episodes in an architectural process, where thinking and doing are considered separate. This kind of reflexive dialogue allows creates crossovers where cognitive (symbolic), and universal (instrumentalised) knowledge may start to actively inform one another in a critical design process. Dalibor Vesely has described this important reflexivity between embodied percept and the communicative universals of instrumentalised knowledge, stating '*techne* receives most of its knowledge from accumulated experience but elevates it to a priori knowledge that can be taught' (Vesely, 1994: 32). The implications for this reorientation are significant - instead of placing the architectural drawing in a complicit and neutral role; the drawing (regardless of its existence on paper or in digital space) can be approached as a discursive site. The translation of site from external reality to a representational realm allows the universality of instrumental knowledge to be engaged as a critical tool whose boundaries are continuously being questioned and informed by a symbolic meeting point.

The reconsideration of *techne* calls for synthesis, rather than separation. In order to reconcile the instrumental and the symbolic, a simplistic identification of the two forms of representation within the overall image provides little resonance. The instrumental and symbolic can be framed as constituent parts, assuming multi-functioning roles where, instead of looking for the instrumental and symbolic as individually occurring within the same representation, a 'merging of symbolic and instrumental images' (Fracari, 1990: 11) occurs. The technological image, derived from the concepts embedded in *techne*, is directly related to both embodied experience and critical reflection. This reorientation is a significant departure from the aphorism that has persisted since the Enlightenment in which the architectural drawing serves to organise 'a separation between the poetic and... rational constituents' (Wood, 2002: 132). Fracari describes the technological image as 'a reproduction in the mind of a sensation produced by a perception emerging from a critical system, which does not separate instrumental from symbolic representations' (Fracari, 1990: 11). This concept expands on the notion of *techne* and suggests the immediacy of perception and critical reflection are not dissociative constructs and may be employed to inform one another. The concept of the technological image is considered in Temple Island as a challenge to the inside/outside site distinction discussed in Section 1.

Angel/Angle and the Instrumental Thesaurus

Building on the notion of *techne* and the technological image, Frascari provides a metaphorical relationship between the terms ‘Angel’ and ‘Angle’, which he suggests possess a ‘common etymological root’ (Frascari, 1990: 11). This idiom developed from Mediterranean sailors, who while at sea imagined the angels as symbolic guides, who revealed instrumental angles ‘to determine the direction for reaching land safely’ (Frascari, 1990: 11). The instrumental and symbolic ‘chiasma’ (Frascari, 1990: 11) occurring in the angel/angle relationship suggests creative appropriation of the universality of instrumental knowledge. The dualistic functioning of the architectural image opposes the dictionary-like definition of much instrumental concepts that seek absolute transparency in meaning. Instead Frascari proposes a thesaurus-like consideration, where the tacit assumptions of instrumental conventions are transformed from the ‘intelligible universals’ (Frascari, 1990: 13) of building codes and rule based design methodologies, toward the ‘imaginative universals’ which concerns the production of ‘treatises’, ‘discourses’ and ‘encyclopaedias’ (Frascari, 1990: 13).

Instrumentality, conceived as a mechanism of control, is only able to generate meaning by referring to its own internal processes and thus breaks down when reorienting its meaning toward more open-ended solutions. A thesaurus functions not to impose static definitions, but to generate an ‘understanding of the complexity of meanings through interlocked clusters of words and terms’ (Frascari, 1990: 13). A consideration of the way instrumental logic functions inside site suggests opportunity for creative appropriation of the ‘imaginative universals’ (Frascari, 1990: 13) that Frascari refers to. This reconsideration allows a shift beyond the aphorism that the ‘thinking of architecture is maintained at a distance from its doing’ (Wood, 2002: 132-133)³. The architectural drawing can then be conceived as an instrumental thesaurus - instrumental in that it inevitably refers to a wider system of architectural conventions, but symbolic in that these ‘universals’ are flexible enough to have their boundaries distorted through the application of specific embodied situations. A relationship emerges where the instrumental thesaurus places the architecture within a wider sphere of discourse, while the symbolic provides these creative appropriations that allow such distortions to occur.

³ Peter Wood considers this separation a pervasive trend in the status of architectural drawing, one that has persisted since its inception. Wood writes of architectural drawing: ‘an invention of Enlightenment geometry’ that has demarcated the instrumental and the symbolic to a point where ‘the poetic becomes pure theory and the rational pure practice’ (Wood, 2002: 132-133).

The Virtual

The terms discussed thus far suggest that the instrumental is a set of complex relations that communicate to the wider discipline of architecture, whose

[fig 3.02] Eisenman Architects: Site plan and study models (2002) City of Culture of Galicia, Santiago de Compostela, Spain. Emerging through a process of diagramming, Therese Tierney notes that the City of Culture of Galicia, ‘is generated from a layering of the ancient medieval street plan over the topographical contours of the site. The virtual memory of the medieval city interacts with the present-day topography. The intersections between the virtual and the actual become new places of interaction within the museum’ (2007: 131-133).

creative potential becomes realised through symbolic appropriation. The individual architectural drawing can therefore no longer be viewed as an autonomous artefact; instead it forms a synecdochical relationship to the wider spectrum of architecture. The final term to introduce as part of communicative architectural drawing is the virtual. The virtual refers to that which is not directly visible or stable – it is considered “other”, or the unconscious’ (Hendrix, 2006: 78) and includes notions such as time, memory, perception, projection, allegory and narrative. Mapping virtual concepts (which are imbued with symbolic qualities) against the ‘actual’, allows the architectural drawing to move beyond a mere imitation of the built toward a more sophisticated state, where conditions that exist within the immediacy of embodied space become as structural as the implied literal structure of the given space. In this model, the actual becomes saturated with the virtual.

The physiognomy of the virtual is a condition as flexible as the thesaurus of terms it encompasses. It may be represented and emerge through both the ‘dry dispassionate form of notation’ and diagramming (Allen, 2009: 45) [fig 3.02] – in anticipation of translation, and also via more sensuous means [fig 3.03]. Whatever appearance the virtual takes on in representation, it is always present within embodied space, ‘embedded within the actual, interpenetrating the same space and time’ (Tierney, 2007: 127). Thus, revealing the virtual in the architectural drawing allows us to ‘see’ it, not in isolation, but ‘within relations’ (Tierney, 2007: 128). Against the static, finite and stable – the virtual offers the radical insertion of time, and future states that may not be wholly knowable but relate to the ambiguous and poetic nature of embodied space. The implications of the virtual being represented within the actual allows embodied experience to also function as a critical element within the architectural drawing – continually questioning stable assumptions and provoking an exploration of future conditions.

3.2 | Michael Webb’s Oneiric Trip through Temple Island

... how like an idiot savant a computer is; what wonderfully stupid things it does when fed the ‘wrong’ information or its circuitry malfunctions; and all without feeling bad or guilty. In this study I have attempted to replicate this category of idiocy.

Michael Webb, 1987

Michael Webb introduces his Temple Island project with this statement: ‘Doesn’t look much like Archigram.’ - ‘Looks more like the eighteenth century than the twenty-first (!)’ (Webb, 1987: 1) - a humorous prolepsis to the ‘criticism of his peers’ (Hill, 2006: 149). The project is an expansive work, 1966 – ongoing, and is a complete inversion of how an architectural project is conventionally understood. The work resists easy categorisation – a departure from early Archigram, the influential firm of which Webb was a founding member. Archigram’s work pursued an architecture itself that was kinetic; here movement is bound to the more complex notions of memory and multiple, shifting view-points of Michael Webb’s Temple Island. The shift from Archigram to Temple Island can therefore be viewed as one ‘from object to subject’ (Hill, 2006: 149). I write ‘Webb’s’ Temple Island because it is his. Temple Island as it known to most however, is located near Henley-on-Thames, a small town 35 miles west of London. It is one of many small islands that populate the Thames near Henley, and sits adjacent to the start line of the annual Henley Royal Regatta – a prestigious rowing regatta, ‘founded in 1859 and held in the first week of July’ (Hill, 2006: 145). Located on the island is a small neo-classical temple, from which the island derives its name. Designed by James Wyatt in 1771, ‘the temple was built to punctuate the view of the river from Fawley Court’ (Hill, 2006: 145). It is from this collective understanding of Temple Island that Michael Webb leaves us, taking the site with him through a series of dream-like episodes that critically investigate ‘geometry and representation as the substructure of a fleeting childhood recollection’ (Haralambidou, 2007: 226). This reflection on Temple Island examines the architectural project as one that embraces complexity – blurring the inside/outside site distinction raised in Section 1. An interstice is formed where instrumental geometry, physical science, and memory freely manipulate one another’s implied representational limits by way of a surreal translation of Temple Island.

This analysis of Temple Island is structured in two stages. The first stage outlines the underlying ideologies of the project that correlate to the overall position of the thesis. The second stage analyses two selected drawings titled ‘Early Perspective of the Regatta’ and ‘Plan of Cone of Vision’ respectively. These drawings provide a visual reference to the antecedent ideologies. As Neil Spiller has noted, ‘no single type of architectural drawing was sufficient to delineate this type of project’ (Spiller, 2006: 175), however these two drawings are examined for best illustrating the position of this research, and demonstrate Webb’s propensity to merge instrumental technique with the poetics of imagination.

[fig 3.03] The Museum of Modern Art, New York - photograph by Michael Wesely. The image is a long exposure – The film was exposed to light for the duration of construction - 8/9/2001 to 6/7/2004.

The point of departure is Webb's own childhood memory. As his father was 'accountant to the regatta', Webb had privileged position of watching from the 'Steward's Enclosure' (Hill, 2006: 145). In conversation with Stephanie Brandt, Webb reflects on this childhood memory:

'...around 5.30pm on a hot cloudless day at the conclusion of the races, when the sunlight dances off the surface of the river and when the shadows lengthen... the implied 2d grid of the lines of course markers... that in a photograph resemble one of those pictures intended to explain perspective foreshortening'.

(Webb in conversation with Stephanie Brandt, 2004; Hill, 2006: 145)

This fleeting memory of the actual Temple [fig 3.04] has provoked 'some chronic mental wanderings' (Webb, 1987: 25). Webb explains the distinction between the Temple that exists physically, and that which persists in his memory, the latter of which is becoming obscured:

Both in my memory and upon an islet in the Thames at Henley reposes a temple: i.e. the incorporeal and the real (one), and though the site of each remains intact, the incorporeal one is fading, so that, were its facade to be precipitated on to a 2 dimensional surface, a bit of restoration work would become necessary so as to provide an image you could read'.

(Webb, 1987: 18)

In order to restore the 'incorporeal one' (Webb, 1987: 18), Webb has constructed an allegorical narrative involving a submarine trip down the Thames. The 'Webbian Submarine' (Spiller, 2006:175) journey begins at the finish line of the regatta and travels at the speed of light toward the start – where Temple Island is located [fig 3.05]. By creating this journey Webb moves past the 'real' temple, even beyond the one that exists in his memory, toward restoring a 'third' or imagined temple' - an translation from the material site to an immaterial one that has generated for Webb, 'a conceptual architecture' (Woods, 198: 54). The notion that a new temple may emerge in 'the form intended only as a result of speeding towards it, or into it, or past it (Webb, 1987:1) instantly inverts the conventional architectural process which involves the creation of an object in space. Instead, 'his perceptions and attendant thoughts

are more important than the temple itself' (Woods, 1987: 54). As perception is our primary way of 'knowing' the world around us, then Webb is suggesting the possibility to yield new architecture through an imagined perceptual journey. This is derived from the notion that 'an observer cannot observe without changing what is being seen' (Sorkin, 1987: 72). The Temple Island project sets up an important relationship where perception (and by extension, memory), may be a consequence of external reality, but ultimately transcends 'the material dross' (Woods, 1987: 54) of that reality. While pure instrumental thinking may attempt to present architecture as an object of singular and transparent meaning, Webb's Temple Island reorients us toward our primary way of relating to architecture - that we 'cannot understand an object 'as it is' because the way we perceive affects what we perceive' (Hill, 2006: 147).

[fig 3.04] Facade of the 'real' temple, shown partially veiled – Michael Webb.

[fig 3.05] Map of Henley Royal Regatta, observed through intermittent cloud cover
– Michael Webb.

The initial description we are given of Webb's Temple Island may suggest a nostalgic return to a significant site of his early years. The project is a romantic one, recalling the notion of the picturesque movement that the 'exploration of nature' is a 'metaphor for exploration of the self' (Hill, 2006: 149). While this observation does form an entry point to the project, it betrays the real complexity and criticality present throughout the entire scope of the speculation. Conventionally, memory within architectural discourse is 'institutionalised as architectural type' (Wood, 2002:125) - Temple Island however, transcends such inert re-presentations of memory. Temple Island is mnemonic - not to merely recall what is already there, but to use memory as a calibrating device by which a new Temple may emerge. In doing so, Webb reveals deeper truths about memory. In particular, the means by which experiences become distorted and reformed, where perception and imagination blur⁴ creating space that does not adhere to a singular moment in time, but projects both forward and backward to reveal the full complexity of a given site. As Paul James has noted, memory should 'transform the past rather than... simply recall it' (James, 2008: 61). Memory is a notion that is not directly present; therefore it is an inherently 'virtual' concept, and thus becomes a part of the virtual thesaurus. Therese Tierney's writing on the virtual, that it is built on a priori, allows an analysis of Temple Island as a project that employs memory as a generative concept for reaching new realities. Tierney writes,

'The virtual field is not a tabula-rasa. There is a context-laden substrate that has been termed the background and operates as a set of social and biological capacities through which information is translated'.

(Tierney, 2007: 138)

The relationship to site is central to the virtual. Memory, as a virtual construct, exists not in hermetic isolation but 'within relations' (Tierney, 2007: 128). To articulate it as a static recapturing of the past negates the possibility of memory as a productive and meaningful design tool. Tierney notes an interaction between the virtual (memory) and the design process facilitates the 'production of new realities' (Tierney, 2007: 131). It is through merging memory, conventionally understood as an individual's irrational recollection, with architectural design processes, that Webb has produced a new reality. The result is a series of 'technological images' (Fascari, 1990: 13), where the symbolic nature of Webb's relationship to site becomes active when engag-

⁴ Considering this relationship between perception and imagination, it is important to again reference the writing of Harry Francis Mallgrave which was introduced in Section 1. Mallgrave noted 'one of the more drastic results of the new scanning technologies is the realisation that perceptual images are often processed in the same areas of the brain as imagined images' (Mallgrave, 2010: 164).

ing with the universal instrumentalised knowledge of physical science and architectural drawing conventions. Memory, as it is engaged in Temple Island avoids codification and instead pursues the fleeting and fragmentary, aligning with the notion of site being that which is ‘filled with more questionings and doubts than with comfortable presences’ (Solà-Morales, 1997: 101). The memory ceases to function solely as Webb’s – through a series of drawings that resist transparency, an enduring ambiguity emerges. Re-reading the Temple Island project allows infinite new temples to be imagined - memory becomes a projective device.

Temple Island is both a critical project and one that is deeply tied to embodied percept. Webb has taken instrumentally formulated logic on an aberrant journey, and in doing so has established a set of relationships rarely engaged in contemporary architecture. One of the downfalls of much critical practice (and perhaps one of the frustrations that led to the Post-Critical) is the ‘assumption if an idea travels directly from the artist to the viewer and from the architect to the user, then so does the critical’ (Hill, 2007: 170). Such thinking instrumentalises critical practice, reducing theory to a mechanism of control, negating the ambiguous relationship between subject and object that occurs in external reality. Instead, Webb engages instrumental thinking as a series of ‘imaginative universals’ (Frasconi, 1990:13) - that which can be known independent of context (outside site). Webb has then utilised this instrumentality as a flexible structure for a series of embodied imaginings (inside site).

The ‘enduring ambiguity’ of Temple Island then, makes it a critical project, its ‘ability to appear ever-changing, resist resolution and remain open to interpretation’ (Hill, 2007: 170). Marcel Duchamp is also well known for allowing his art to take on multiple readings - to lose its conceptual purity [fig 3.06]. For Duchamp, ‘the work succeeds if it triggers many interpretations, because it is not the artist alone who performs the creative act’ (Haralambidou, 2007: 231). Webb has set up these types of complex relationships, provoking the viewer to simultaneously question the way we consider memory, the strict functioning of architectural drawing conventions, as well as architecture’s relationship to other academic disciplines – in this case, physical science. Such reciprocity and multi-layered questioning cannot be achieved through oppositional thinking, thus reiterating the thesis position of instrumental and symbolic thinking as concomitant phenomena.

[fig 3.06] Marcel Duchamp - The Bride Stripped Bare by Her Bachelors, Even (The Large Glass), 1915-1923. Photograph by Graydon Wood.

The separation between instrumental and symbolic thinking was correlated to an inside/outside site split in Section 1. The argument posited is that the growing divergence in meaning between the instrumental and the symbolic

is related to two discrete relationships to site. The instrumental certainty afforded from a disembodied sphere is continually viewed as oppositional to the instability of existing inside site, where knowledge is only relative to the individual. In Temple Island, Webb has re-oriented the relationship of universal instrumentalised knowledge and individual nature of symbolic knowledge. This has been achieved, not through privileging one mode of thinking over the other, but through ‘seeing’ one constantly present in the other. The inside/outside site distinction dissolves as the instrumental has its latent symbolic qualities revealed and vice versa. The following is an analysis of the relationship between two images that demonstrate this reciprocity.

The Instability of Perspective Projection.

Section 1 - *Thinking Inside/Outside Site*, critiqued the notion that the specificity of architecture was thought to be located in instrumental determinism, here Temple Island puts forth the notion that architecture’s ‘in-betweenness’ is its strength. Robin Evans has addressed architects directly on this issue, the observation that architecture often seeks justification or legitimation from that which is external to it:

‘We beg our theories from these more highly developed regions only to find architecture annexed to them as a satellite subject. Why is it not possible to derive a theory of... not architecture alone, but architecture amongst other things (?)’

(Evans, 1995: xxxvi-xxxvii)

It is unproductive to continue to consider architecture as ‘satellite’ (Evans, 1995: xxxvi-xxxvii) to more established disciplines. Instead the ‘difficulty’ of architecture, its many paradoxes and perpetual state of in-betweenness could be argued to be its strength. In Temple Island, Michael Webb has explored some of the most unstable elements of the instrumental thesaurus as a means of developing a more engaging proposition – in particular, the techniques of perspective projection. Dalibor Vesely has noted the long-running instability of the nature of perspective drawing, stating, ‘it is not clear if perspective is a symbolic form, a scientific mathematical mode of representation, or a rationalisation of concrete visual experience’ (Vesely, 2004: 136). Webb’s project embraces these difficult questions of architecture, the deeper the journey goes, ‘the less cause and effect it yields’ (Woods, 1987: 54). The project clearly in-

volves movement – from a point of stasis, to a state ‘where at the finish, one would perhaps be travelling at the speed of light... space would be stretched to infinity’, therefore the question must be asked, ‘how would one represent that in a fixed drawing?’ (Webb, 1997). Conventionally, perspective projection privileges ‘the presence of the STATION POINT’ (Webb, 1987: 1), in other words, the static, idealised image of an object in space. With Temple Island, Webb has augmented some of the symbolic qualities of the axonometric projection, where the observer is simultaneously ‘everywhere (almost) and nowhere’ (Webb, 1987: 1). The resultant drawings operate between experiential and analytical states, the speed at which the narrative journey moves reveals the instability of the vanishing point and the stable formulation of perspective slips away. Stan Allen describes the slippage from the fixity of conventional perspective to the implied movement of the axonometric:

‘Perspective, while aspiring to be scientific and generalizable, was always linked to a fixed point of view. By extending the vanishing point toward infinity, the constructions of perspective are rendered at one and the same time more flexible from an instrumental point of view, and more universal from a philosophical point of view.’

(Allen, 2009: 16).

The drawing, ‘Early Perspective of the Regatta’ [fig 3.07], provides a visual entry point into the concepts embedded in Temple Island. The image is a one-point perspective from the start of Webb’s journey looking toward the finish, where the vanishing point is the ‘real’ temple. The architectural object being represented by a single dot immediately inverts the conventional hierarchy of an architectural project – where the representation is often treated as a reified object. Therefore, the narrative is ‘not an object but what we imagine it to be’ (Hill, 2006: 148-149). As literal meaning breaks down in reality, so too does Webb’s imagery - embracing the inevitable conditions of heteronomy. Perspective, commonly associated with a ‘fixed point of view’ (Allen, 2009: 19) appears to resist virtual concepts such as time, movement and memory. The axonometric projection however, has its vanishing point located at infinity - suggesting a ‘continuous space in which elements are in constant motion’ (Allen, 2009: 19). The latent symbolic ‘dimension’ is therefore always present within the ‘technical practices’ (Allen, 2009: 18) of axonometric projection.

[fig 3.07] Early Perspective of the Regatta – Michael Webb.

However, the axonometric holds the viewer at a distance. Considering this, 'Early Perspective of the Regatta' examines a translation between the spatial distortion of a one-point perspective, and the measured space of orthographic projection and in doing so, has located the instrumental and the symbolic present in both. 'Early Perspective of the Regatta' retains the experiential qualities of perspective drawing, while transplanting instrumental knowledge into this space of perception.

In order to represent the translations between measured and perceptual (*instrumental and symbolic*) space, 'Early Perspective of the Regatta' employs the 'empirical science'⁵ (Hill, 2006: 149) of physics to play a mediating role. The Lorentz Transformation, developed by Hendrik Lorentz formed an important foundation for Albert Einstein's theory of relativity. Essentially, a Lorentz transformation 'describes a way in which what an observer in one frame of reference sees can be translated into what an observer in another frame sees' (Sorkin, 1987: 72). 'Early Perspective of the Regatta' uses this logic to create an interdependent relationship with the 'Plan of Cone of Vision' [fig 3.08] drawing.

⁵ The empirical nature of physics is an important consideration in analysing Temple Island through the position of this thesis. This is because physics is works through a translation of embodied observation toward the instrumentalised, operating simultaneously *inside* and *outside* of site (See Section 1).

[fig 3.07] Early Perspective of the Regatta
– Michael Webb. See page 61

The image, 'Early Perspective of the Regatta' has two clear sides. On the left is a rapidly diminishing alternate reality of the Thames, focussed on Temple Island, and on the right is a form of Lorentz transformation that Webb has used to correlate the space of the perspective to the 'Plan of Cone of Vision' drawing. The vertical axis of the grey graph represents the perceptual journey toward the temple (vanishing point), and the horizontal axis (in the middle of the drawing) represents the rapidly expanding actual distance of the journey, which on the left is appearing to diminish. Because the spatial distortion is minimal in the bottom of the perspective drawing, the 'halfway point' between the bottom of the perspective and the vanishing point, 'would be only 1/16th of the distance in the plane of the perspective' (Webb, 1987: 42). As the submarine picks up speed and approaches the vanishing point, the actual distance travelled is far greater, and the parabolic curve tends toward infinity, 'the space of representation on one axis, that of the represented on the other' (Sorkin, 1987: 72). The perspective maps the immeasurable space of reality against the distance that one would observe looking down on this cone of vision [fig 3.08].

The drawings of Temple Island 'embody in themselves... [a] Janus-like presence'⁶ (Fracari, 13: 1990) – the instrumental 'angles' bend and fluctuate, transfiguring themselves into symbolic 'angels' (Fracari, 1990: 12). The 'Plan of Cone of Vision' drawing can be viewed as a translation of the 'Early

⁶ Janus is a god of Roman mythology who is depicted as having two heads - one looking forward, the other backward.

Perspective of the Regatta'; however the translation is far from neutral. Plan drawing, conventionally read as a stable and constant representation from which the viewer is detached, becomes subverted through Webb's manipulations. The 'intangible superfaculty'⁷ (Fascari, 1991:114) of plan drawing is coalesced with the human faculty of perception in the drawing, immediately negating a transparent reading of it. This has been achieved through the introduction of the landscape itself that is motile, layers of 'atmospheric density' (Fraser, Henmi, 1994: 157) and the fact that the scope of the view is only 'that which the observer sees at the point of stasis at the apex' (Webb, 1997). The large white streaks are enormous 'negative' shadows cast into the landscape indicating solid objects within the cone of vision that obscure the view of the individual located at the apex:

⁷ The 'intangible superfaculty' to which Marco Fascari refers, lies in the plan drawing's ability to envision an abstraction not possible, and a future not experienced, through the human eye (Fascari, 1991: 114).

[fig 3.08] Plan of Cone of Vision – Michael Webb.

Instead of a panoptic view where the complexities of embodied space are stabilised⁸, the image evokes the destabilising blur that occurs in reality, and in the narrative. The plan has its latent symbolic qualities unearthed. Thus, an interdependent relationship emerges; the multiple viewpoints do not describe the experience in its totality. Instead the alternate perceptions communicate the notion that if each position of an observer is unique relative to an object or event 'then specific knowledge' (Woods, 2002: 55) of that object or event is unique to the observer.

⁸ This recalls Michel de Certeau's critique of the plan reducing the complexity of Manhattan into a 'transparent text' (de Certeau, 1984: 92) - See Section 1, Chapter 2.0, Part 2.2 – 'Plural Reality'.

Conclusion

The most important observation that can be derived from Temple Island relative to the position of this research, is the personal exploration of symbolic thinking (knowledge through embodied perception), can engage with a wider critical system of knowledge - and in-fact, become a critical production of knowledge in itself as it questions the existing structures of instrumentalised knowledge. With Temple Island, Michael Webb blurs instrumental and symbolic distinctions in both directions. The 'inward processes of knowledge formulation' become translated into an instrumental 'mathematical language', which in turn projects outward, becoming 'transmittable to others and accessible to the methods of science' (Woods, 1987: 55). For the full complexities the Temple Island narrative explores to become communicative, the drawings are required to be ever more 'controlled and conditioned' (Spiller, 2006: 176). The instrumental rigour in the drawings must maintain careful control to describe the complexity of the proposition - far more so than if the instrumental was considered reductively to be a set of unshakeable laws. The final paradox is that the more exacting and skilful the synthesis of the instrumental and the symbolic becomes, the more one becomes aware of the point of letting go. The work is built on the 'crucial faculty of vision, at the same time believing in a world not entirely explainable in material terms' (Woods, 1987: 55).

The Temple Island project resists easy categorisation; the images convey 'precise data and vague hints' (Hill, 2006: 147). While the project appears to be in part a personal exploration for Webb, it is also a *translation* of an actual site into an allegorical one, making it possible for collective interpretation. In doing so Webb reveals deeper questions about the nature of the architectural project, 'architecture can be seen for what it is; never its own sufficient subject, nor its own sufficient end' (Darden, 1993: 9). The project is interstitial by nature, this condition means the relevance of it would not have been possible through the oppositional thinking highlighted in Section 1. The instrumental and the symbolic being both visibly present within the images and their attendant descriptions establish an important interdependence between the poetic and the rational constituents. However the 'picture' is never complete – it is equal parts rigorous exploration and the unknowable, Jonathan Hill has observed that 'as fleeting and fragmentary as memory and perception, Temple Island is incomplete and unfinished, knowingly' (Hill, 2006: 147). This analysis then could be seen merely as a series of conjectures – suited to illustrate the thesis position. The drawings are difficult to situate within the multivalent blur of contemporary architectural imaging, the transparent and

immediate have been substituted for the opaque and sublime. Temple Island is a project that provides a window, or perhaps a mirror⁹, by which we may contemplate our own existence, and design our own architecture.

⁹ In Jonathan Hill's index of Immaterial Architectures, Temple Island is listed under the category of 'Mirror'.

References

- Allen, S. (2009). *Practice: Architecture Technique + Representation* (2nd ed.). Abingdon and New York: Routledge.
- Barnes, L. (2007). *Measures of Time*. Berkeley: The Regents of the University of California.
- Bataille, G. (1929). *Formless* (A. Stoekl, Trans.) *Visions of Excess, Selected Writings 1927-1939*. Minneapolis: University of Minnesota Press, (1985).
- Darden, D. (1993). *Condemned Building - An Architect's Pre-Text*. New York: Princeton Architectural Press.
- de Certeau, M. (1984). *Walking In The City The Practice of Everyday Life* (pp. 91-110). Berkeley: University of California Press.
- Evans, R. (1997). *Translations from Drawing to Building and Other Essays*. Cambridge: The MIT Press.
- Evans, R. (1995). *The Projective Cast: Architecture and its Three Geometries*. London: The MIT Press.
- Fascari, M. (1991). *Monsters of Architecture - Anthropomorphism in Architectural Theory*. United States of America: Rowman and Littlefield Publishers Inc.
- Fascari, M. (1990). *The New Angel/Angle in Architectural Research*. *Journal of Architectural Education*, 44(1), p. 11-19.
- Fraser, I., Henmi, R. (1994). *Envisioning Architecture - An Analysis of Drawing*. New York: Van Nostrand Reinhold.

Haralambidou, P. (2007). The Fall - The Allegorical Architectural Project as a Critical Method. In J. Rendell, Hill, J., Fraser, M., Dorrian, M. (Ed.), *Critical Architecture* (pp. 225-236). Oxon and New York: Routledge.

Hendrix, J. (2006). *Architecture and Psychoanalysis - Peter Eisenmann and Jaques Lacan*. New York: Peter Land Publishing Inc.

Hill, J. (2007). Centuries of Ambiguity - Sublime and Beautiful Weather at the Farnsworth House. In J. Rendell, Hill, J., Fraser, M., Dorrian, M. (Eds.), *Critical Architecture* (pp. 170-181). Oxon and New York: Routledge.

———. (2006). *Immaterial Architecture*. Oxon and New York: Routledge.

James, P. (2008). Walter Pichler's House Next to the Smithy: Atmosphere and Ground. *Architectural Design*, 78(3), p. 60-63.

Mallgrave, H. F. (2010). *The Architect's Brain - Neuroscience, Creativity, and Architecture*. London: John Wiley and Sons Ltd.

Meister, S. H. (2004). *Michael Wesely Open Shutter - The Museum of Modern Art*. New York: Department of Publications - The Museum of Modern Art.

Solà-Morales, I. d. (1997). Place: Permanence or Production (G. Thompson, Trans.). In S. Whiting (Ed.), *Differences - Topographies of Contemporary Architecture* (pp. 92-104). Cambridge: The MIT Press.

Sorkin, M. (1987). Canticles for Mike. *AA Files*(15), 67-72.

Spiller, N. (2006). *Visionary Architecture - Blueprints of the Modern Imagination*. London: Thames and Hudson Ltd.

Tafuri, M. (1980). *Theories and History of Architecture* (G. Verrechia, Trans.). London: Granada.

Tierney, T. (2007). *Abstract Space - Beneath the Media Surface*. New York: Taylor and Francis.

Vesely, D. (1994). *Architecture and the Question of Technology*. In Pelletier, L., Perez-Gomez, A. (Ed.), *Architecture: Ethics and Technology* (pp. 28-49). Montreal: McGill-Queens University Press.

Webb, M. (2010). Archigram Archival Project, Temple Island, <http://archigram.westminster.ac.uk/project.php?id=236>. Retrieved 6/12/10

———. (1997). Michael Webb - A True Archigrammer. New York: Pidgeon Audio Visual and the Museum of Contemporary Art - Los Angeles.

Webb, M. (1987). Temple Island - A Study By Michael Webb. London: Architectural Association.

———. (1987). Temple Island - A Study By Michael Webb. London: Architectural Association.

Wood, P. (2002). Drawing the Line: A Working Epistemology for the Study of Architectural Drawing. Doctor of Philosophy in Architecture. Auckland: The University of Auckland,

Woods, L. (1987). Henley and the Enigma of Michael Webb. In M. Webb (Ed.), Temple Island - A Study by Michael Webb (pp. 54-56). London: Architectural Association.

Figures

fig 3.01, Tierney, T, 2007: 117.

fig 3.02, Tierney, T, 2007: 132.

fig 3.03, Meister, S. H, 2004: 39.

fig 3.04, Webb, M, 1987: 19.

fig 3.05, Webb, M, 1987: 17.

fig 3.06, Barnes, L, 2007: 93.

fig 3.07, Webb, M, 1987: 43.

fig 3.08, Webb, M, 2010: retrieved: 6/12/10.

CHAPTER 4.0 | Baroque Projections

That which permits us to center our existence is also that which prevents us from centering it absolutely.

Maurice Merleau-Ponty, 1962

¹ Santissima Sindone is also known as *The Chapel of the Holy Shroud*.

[fig 4.01] Portrait of Guarino Guarini – *Architettura Civile* (1737).

The Santissima (SS.) Sindone Chapel¹, designed by Guarino Guarini [fig 4.01] is located in Turin, Italy and was built between 1667 and 1694 to house the Shroud of Turin. Sindone continues the thematic of Michael Webb's Temple Island as a final case study by which the conventionally understood relationship of instrumental and symbolic thinking may be overturned. The thesis position thus far has established this conventional understanding of instrumental and symbolic thinking to be one of separation rather than reciprocity. A framework for this understanding was described as an *inside/outside site* split in Section 1 – symbolic thinking being derived from the embodied condition of existing inside site, and instrumental thinking gaining legitimacy through a supposedly distanced sphere of reality (outside site). In particular, the reductive appropriation of digital space as an instrumental site is argued to perpetuate the notion of instrumental thinking as hermetic and dissociative to symbolic thinking. Baroque culture was placed directly in confrontation with this emerging dialectic. Therefore, an anachronistic return to an important period of this split becomes pertinent to the thesis position – providing a framework by which the split may be addressed in the contemporary context. The 'schismatic nature of culture in the 17th century' (Gargus, 1989: 117) was brought about by the birth of modern science, which sought to overturn the primacy of perception as the 'ultimate evidence of knowledge' (Perez-Gomez, 1983:9). Rather than demarcate these seemingly discrete forms of knowledge further, Guarini's SS. Sindone represents the capacity of architecture to locate the emergent force of science within 'the ontological continuity of culture' (Vesely, 2004: 200).

Michael Webb's Temple Island involved the inward translation of an existing site into an allegorical one. His symbolic perceptions and narrative required a creative and rigorous appropriation of instrumental thinking, in order to make the project become outwardly communicative again. Conversely, Guarini's work is framed as working in the opposite direction, projecting from the instrumental geometry of his treatises, to the universal condition of embodiment. Guarino Guarini's work in his philosophical texts and treatises, most

notably, *Architettura Civile* (published posthumously in 1737), provide important insight into the means by which Guarini was able to mediate conditions that are conventionally read as oppositional. For example, *Architettura Civile* [fig 4.02] demonstrated how to ‘materialize geometry into stone’ through the technique of stereotomy² [fig 4.03], thus requiring the equal presence of the material and the immaterial. In Guarini’s drawings illustrating stereotomy, projective lines and geometry appear equally as solid as the stone being cut. Complementing these reciprocal conditions, the earlier work of *Plactica Philosophica* [fig 4.04] published in 1665, was an inquiry ‘into the relationship between spirit and matter’ (Debanné, 1999: 50). Guarini was adept to confront these seemingly conflicting notions, and reconcile them through the design of Sindone, returning emergent developments in scientific discourse to the collective and universal condition of embodiment. Guarini belonged to a select group of architects (that included figures such as ‘Francesco Borromini and Bernardo Vitone) who were aware of the ‘new intellectual force of science’ but were able to situate it inventively within collective space of wider culture (Vesely, 2004: 196). What is common to both Webb and Guarini’s work is their ability to locate instrumental and symbolic interpretations of reality in constant exchange through one another’s assumed boundaries.

² Stereotomy essentially means, ‘the cutting of solids’ (Evans, 1995: 179). The orthographic drawings used to determine the precise cutting of stone are called ‘traits’, and were employed to ensure that the ‘accurate fabrication’ of complex geometrical solids could be achieved ‘prior to construction’ (Evans, 1995: 179).

[fig 4.03] *Ortografia Gettata* (Guarini’s theory of parallel projection) applied to stone cutting (stereotomy) – *Architettura Civile* (1737), Lastra V, Tratt. IV.

[fig 4.02] *Architettura Civile* frontispiece (Turin: 1737).

[fig 4.04] *Plactica Philosophica* frontispiece (Paris: Denys Thierry 1665).

4.1 | Live Geometry

To better understand Guarini's ability in reconciling the emergent dialectical interpretations of reality in the 17th century, it is important to note the 'multiple vocations' he pursued as 'priest, scientist, mathematician and architect' (Gargus, 1989: 117) – a unique position for an individual, that allowed him to see a latent inter-dependence between disciplines. At a period where the instrumental was forming as a paradigm where meaning was derived only via self-referentiality, Guarini was able to conceive of geometrical operations where the 'transcendental intention was simultaneously present' (Perez-Gomez, 1977: 126). The codification of architecture and architectural geometry has sought to strip the discipline of such transcendental intentions. Robin Evans has described this emptying of meaning as reducing the instrumental to comparatively inert formal manipulations, stating, 'dead things are easier to handle than live ones... dead geometry is an inoculation against uncertainty' (Evans, 1995: xxvii). When architecture is treated as an internalised, autonomous discipline, legitimacy is gained independent of the contexts that it is inevitably required to be a part of - 'orders, forms and proportions' become codified and manipulated for their own sake' (Gargus, 1989: 117). Instead of purporting illusory concepts such as essentialism³, Guarini's geometry is formulated 'by optic considerations' (Robinson, 1991: 384), in other words, geometry is considered in its relation to basic human experience which only becomes more transcendental when merged with tectonic considerations. The optic intonations [fig 4.05] present in Guarini's geometry corresponded across the spectrum of different translations that they manifest. In the space of his buildings, Guarini's geometry has its 'situated and ontological' (Vesely, 2004: 435) dimension made intelligible, thus allowing the architecture to transcend its instrumental boundaries, becoming conditioned by surface, material, and embodied percept. Alberto Perez-Gomez has observed (1977:128) that in *Architettura Civile* geometry is also 'treated as image'. This unique treatment of geometry was not as an 'abstract science devoid of images' (Perez-Gomez, 1977: 128) but one where a latent corporeality was addressed:

³ Robin Evans articulated the naïveté of essentialism in his seminal text, 'Translations from Drawing to Building'. Evans describes essentialism as an attempt 'at maximum preservation in which both meaning and likeness are transported from idea through drawing to building with minimum loss' (Evans, 1997: 181). Such paradigms only serve to stifle the instrumental, limiting it to a mechanism of control, and attempts to sever its in-herent relationship to the symbolic.

'A most striking feature of this treatise on "theoretical" geometry is the fact that all problems, including the most simple arithmetical operations, are treated as images and solved by means of graphic constructions. Thus the cubic root is worked out by means of a cube divided into small cubes and most operations are solved through the superimposition of a grid upon a determinate figure.'

(Perez-Gomez, 1977: 128)

[fig 4.05] Method of uniting the inner and outer surfaces of a cylinder segmented obliquely – *Architettura Civile* (1737), Lastra III, Tratt. IV.

If Guarini's work appears dominated by geometrical operations, it is important to address how the symbolic qualities that he wrote about were manifested. *Architettura Civile* reads like a geometrical thesaurus that becomes mobilised through the projection into embodied space. As Marco Frascari has noted, 'in the classical tradition, symbolic and instrumental representations were unified in the building, whereas the drawings were seen as merely instrumental representations. In the present reality, however, their union in the building depends on their presence and union in the drawings' (Frascari, 1990: 14). That the instrumental nature of Guarini's geometrical operations was 'simultaneously formal and transcendental' (Perez-Gomez, 1977: 128), suggests the symbolic as an embedded presence in universalised instrumental knowledge that would become explicit in the projection toward built architecture. This refers to the notion of *techne*, introduced in chapter 3, where empirical knowledge originates from situated experience, and becomes transformed to a priori where it becomes communicated to a wider sphere of discourse: the instrumental thus originates from the symbolic. Considering this, Guarini's work in *Architettura Civile* represents this notion of *techne*, where instrumentalised knowledge is imbued with symbolic meaning – it is through the projection into the built space of SS. Sidone that the harmonious relationship between the instrumental and the symbolic becomes most explicit.

4.2 | Projective Space - The Role of Infinity.

The following text does not attempt to describe Sindone in its entirety; rather the chapel is read through observations pertinent to the thesis position. Additionally, having not personally visited Sindone, all reflections on the nature of the actual space of the chapel are derived from the both the writing of others, and imagining the affect of the built space through photographs and drawings. In this sense, I have attempted to inhabit the building ‘projectively’.

⁴ Janine Debanné writes: In 1667, Guarini was ‘appointed engineer to the project by Duke Carlo Emanuele II, in response to concerns about the chapels structure’ (Debanné, 1999: 47).

⁵ In this instance, Mark Hansen is speaking generally about the nature of embodiment – not specifically about Guarini or Santissima Sindone.

Guarino Guarini’s commission to take over the design⁴ of Sindone required the articulation of delicate programmatic requirements, and provided the opportunity to establish an architectural expression that represented the unstable cultural climate. Guarini’s ability to articulate and synthesize these competing notions can be read in his ability to return architecture to the ‘irreducibility of embodiment’⁵ (Hansen, 2006: 191). Janine Debanné describes the allegorical associations between the symbolic nature of the program and Guarini’s philosophical discourse - in particular how the religious narrative that constituted the program provided opportunity for a rich source of enquiry into the relationship between the instrumental and the symbolic:

‘the design for the chapel was to house the ‘piece of linen (sindone) purported to have wrapped the body of Christ while it lay in the tomb... the chapel was to reflect the notion of logos becoming “flesh”... [it would] would attempt to give a tangible “image” to the fleeting corporeal essence of the divine – a task rendered all the more delicate by the subject at hand: the complex events of the death and Resurrection of Christ, and the precarious moment of emptiness contained between them’.

(Debanné, 1999: 47).

The resolution of these unstable conditions in Sindone provides important values by which we may address contemporary illusions of architecture codified as a purely instrumental discipline or, as Section 1 introduced, the post-critical that only by returning to this condition of pure instrumentality can architecture have any relevance within a capitalist society. For example, the notion that the ‘dual nature of Christ’ in external reality was typified by attempting to establish ‘his bodily presence in the world, and his absence from it’ (Debanné, 1999: 47) can be read metaphorically to explore the mutual

presence of other terms that are considered oppositional; Jonathan Hill would ascribe as ‘material and immaterial... intellectual and manual, real and virtual’ (Hill, 2006: 72). At Santissima Sindone, the complex slippages between the instrumental and symbolic are driven through allegorical associations to the religious narrative at hand. To understand the relationships between Guarini’s geometry, the built space of the chapel, and the underlying ideologies that are at play here, allegorical thinking allows these complex translations to become coherent. Penelope Haralambidou describes allegorical thinking as a ‘mechanism we constantly use to understand the world around us, to make sense of things’ (Haralambidou, 2007: 225). The complex allegorical relationships that operate in the space of the chapel find the instrumental not as an imposed order of stability, but instead communicating directly to the individual through *translation* and *projection*. Thus, the demarcation of the instrumental and symbolic is through the suppression of the qualities of one within the other - not a *literal*, but a *perceived* absence. It is through these notions of translation and projection that the latent inter-dependence between these terms becomes most explicit.

Robin Evans describes projective space as that which ‘operates in the intervals between things... is always transitive’ (Evans, 1995: 366). In Evans’ model [fig 4.06], projective space occupies the gaps between stable and recognisable architectural conventions - for example, between drawing and building. It is in these projective spaces that meanings shift, acquire a new face, or facilitate new readings. It is in the projective space between Guarini’s complex geometrical figures, the built space of the Chapel, and the embodied perceptions of the inhabitant, that the metaphysical qualities emerge. Guarini viewed metaphysics as a foundation for establishing continuity between the instrumental nature geometry and the symbolic nature of the chapel – the fifth book of his geometrical treatise, ‘the *Euclides adauctus*’ on proportion, is described as ‘a metaphysics for the philosophers’ (Guarini: 1671, Vesely, 2004: 206). This metaphysical realm became culturally situated because the nature of infinity is directly articulated in the space of Sindone.

The chapel is approached by proceeding through the nave of Cathedral of Turin [fig 4.07]. The passage from the staircase to the reliquary where the Shroud of Turin is held culminates in a view of the dome. Through this procession, Guarini has attempted to establish a meaningful continuity between the telluric and divine realm of the chapel. Dalibor Vesely has noted Guarini’s appreciation for this relationship is closely tied to role of infinity, stating ‘Guarini’s commitment [to the nature of infinity] was based on a deep faith in the

[fig 4.06] *Projection and its analogues: The Arrested Image* – Robin Evans.

Evans’ diagram describes 10 ‘fields of projection... joining 5 types of target’ (Evans, 1995: 366) and is intended to establish the ‘real’ targets and the ‘imaginary’ projective spaces as equally present (Evans, 1995: 366).

continuity between the finite human world and the infinity of the divine mind' (Vesely, 2004: 207). Coming to terms with the concept of infinity or to experience it in direct perceptual space, was difficult to accept in the finite understanding of reality of the Renaissance and Classical periods. For example, perspective drawing, the most trusted representation of perceptual space, relied upon the notion of 'a fixed observer, an immobile perspective field' which constituted a world of 'stable vision' (Lefebvre, 1991: 361). In contrast to the stability of perspective, the notion of infinity is by its very definition unstable. This is primarily due to the difficulty in mediating the disjunction between 'introverted experience and the indeterminate beyond' (Vesely, 2004: 207). This required identifying the limits of instrumental certainty by way of a symbolic meeting point - a mediation between aspects of reality that could be comprehended and analysed and those aspects that could not.

[fig 4.07] Plan of the Cathedral of Turin and the Chapel of the Holy Shroud (SS. Sindone). Drawn by Carla Del Molin.

[fig 4.09] SS. Sindone Plan (*Architettura Civile*, tav. 2) – Guarino Guarini.

Closely related to Guarini's skill in articulating the role of infinity, is the nature of the projective space between the orthographic drawings and the effect the built space has on the individual, which can be argued to have an allegorical association to one another. Articulating the perceived gap between a world that could be broken down into an easily codified instrumentality, and that which evaded such pure comprehension provided Guarini a difficult but poetic opportunity to situate direct human experience within the universal nature of instrumental knowledge and the indeterminate beyond. Robin Evans made the observation that the 'effect of Sindone is not accessible from its drawings' (Evans, 1995: 360). Therefore a projective space exists between Sindone and its drawings, 'an unstable void' (Evans, 1995: 363) where the instrumentality of Guarini's geometry transfigures itself, shifting into the unstable space of the chapel – losing its abstract instrumental purity, but becoming culturally situated. Between Guarini's treatises on philosophy and geometry and his built architecture, there is fluid exchange rather than hermetic instances of architectural production. They cannot be seen as distinct entities, as one mode of thinking and representation serves to communicate deeper meaning about the other.

In order to establish the presence of infinity within the direct human experience of space, the built space of Sindone sets up a framework that engage conditions often read as oppositional in order to explicate their inherent relationship. Walking up the stairs to the reliquary, Janine Debanné describes the experience as being drawn into a 'deep surface' (Debanné, 1999: 53). The surfaces 'clad entirely in polished black marble' (Debanné, 1999: 53), creates an entry space that is continuous and solid [fig 4.08]. Forms, orders and materiality become established, they are constant and linear but give little hint to the transformation that is undertaken upon reaching the circular floor plan [fig 4.09].

In the centre of the circular floor plan is the reliquary [fig 4.10], containing the shroud. The floor plan introduces temporality into the geometry of the chapel; the inscribed geometry of the floor plan prefigures conditions which become more explicit in the dome. The section drawing [fig 4.11], while serving the purpose of indicating the geometrical transformation does not communicate the direct sensory and perceptual complexities of the space - however comparing the orthographic drawings of the chapel is useful in forming a stable reading of the geometrical transformations that appear unstable in the embodied space of the chapel. There is a concern that the distinction of architecture's instrumentality and the discrete values that come with it, in the process of architectural production become corrupted or lost in the transla-

[fig 4.08] Turin, SS. Sindone. Stairs from Cathedral.

[fig 4.10] Demetrio Festa, *Chapel of the Holy Shroud* (SS. Sindone), lithograph, 1833 (from L.G Piano, *Comenarii critic-archeologici sopra la SS. Sindone...*, Turin, 1833, II, 394; photo: Biblioteca Reale, Turin).

tion into different spheres of reality. Rather than suppress the latent symbolic content, or speak of a distinction from the instrumental, the projective space between Guarini's instrumental drawings and the embodied space of the chapel allow a reflexive reading of the drawings, revealing them as mechanical in operation but full of 'symbolic power' (Perez-Gomez, 1977: 132). Reading these geometrical transformations in the section [fig 4.11], one can see certain architectonic elements slipping in and out of phase, becoming 'latent in the walls before reappearing at an elevated point' (Debanné, 1999: 57). The pendentives delay the culmination of the internal space in the dome, establishing both distinction and continuity between the depth of the earthly realm, and the more ambiguous space of the dome. While these transformations occurring in the chapel satisfy the religious narrative, the cumulative understanding of Sindone through both the built space, the orthographic drawings and its surrounding discourse provide an important historical reading of the reciprocity between the instrumental and the symbolic. This underlying relationship between the instrumental and the symbolic facilitates an active historical analysis, making SS. Sindone relevant in the contemporary context and hence a pertinent example of built architecture to reinforce the thesis position.

The dome of SS. Sidone [fig 4.12] is understandably the most comprehensively written about space of the chapel, this is most likely due to it being the space where the relationship between instrumental and symbolic lines of thought is most intelligible, and ironically, most ambiguous. It has been analysed in two main ways - through a technical sphere from those attempting to dissect an exemplar of complexity in Baroque geometry [fig 4.13], to more holistic observations focussing on a transcendental connection to those who have inhabited the space. What is common to both readings of the dome is an inability to articulate the nature of the space from either a purely instrumental or purely symbolic angle. Instrumental and symbolic characteristics are so embedded in Sindone that speaking of one is to also speak of the other. Marco Frascari describes this inseparability that is most intelligible in the space of the dome as a 'chiastic presence' of the instrumental and the symbolic (Frascari, 1991: 117). In other words, it is a space where the 'construction' of Sindone - its supposedly most instrumental characteristics - cannot be separated from 'construing' the symbolic meaning of the space (Frascari 1991: 117).

While the religious meaning of the dome provided parameters for the proportional shifts, the overall affect of the space does not require prior knowledge or a complete understanding in order to form a meaningful relationship with the space. The dome is comprised of six hexagonal ribs, each one rotated 'thirty

[fig 4.11] Section of the SS. Sindone – Section, Turin, 1667-1694 (*Architettura Civile*, tav. 3) – Guarino Guarini.

[fig 4.12] SS. Sindone, Interior of the Dome – Guarino Guarini. Photograph by Elwin C. Robinson.

[fig 4.13] Parametric variations of scripted geometry for Santissima Sindone.
Script written by Jess Maertterer.

degrees with respect to the lower hexagon, so that its elliptical ribs spring from the keystones of the preceding tier' (Robinson, 1991: 386-387). Additionally, each successive hexagon is reduced in scale which generates the steep parabolic shape of the dome - this can be more easily discerned in the section drawing [fig 4.11]. The diminishing heights of the hexagons create a space that appears more extended than its actuality and gives the impression of an asymptotic approach toward infinity. This asymptotic approximation suggests a space that could be potentially 'extended to infinity' - the more complex the instrumental geometry becomes, the more able Guarini was able to employ it to derive a 'metaphorical and analogical articulation of reality' (Vesely, 2004: 205). This approach toward infinity is significant because instead of closing off space into a perspectival interpretation of reality, the dome resists such finitude. Space does not close off, or become static and controllable - the dome approaches a vanishing point there is an important distinction: 'the shift from the human to the divine point of view, and from perspective to projection' (Vesely, 2004: 208), hence the relationship between projective space and infinity.

The approach toward infinity and the shift into projective space in the dome is achieved not solely through the deployment of geometry into built space. The sophisticated treatment of stone and light as equal 'materials', allow the dome to oscillate ambiguously, never closing off or providing a stable reading. The 'impression of illimitable height' (Evans, 1995: 360) was achieved not only through the more obvious geometrical transformations but also through a gradation of surface treatment to the black marble. The 'polished black marble' that constitutes the majority of Sindone's interior materiality is left unpolished in the 'upper reaches' of the dome (Evans, 1995: 360). This surface treatment, coupled with the fact that the hexagonal structure is consistently diminishing resulted in the highest parts of the dome appearing 'further away yet more luminous' (Evans, 1995: 360).

Each rib in the dome frames a pair of windows [fig 4.13] that flood the structure with light, imbuing the initial solidity of the space with a 'diaphanous

[fig 4.11] Section of the SS. Sindone - Section, Turin, 1667-1694 (*Architettura Civile*, tav. 3) - Guarino Guarini.

[fig 4.14] SS. Sindone dome, “weave” of light and stone. Photograph by Janine Debanné.

[fig 4.15] Friedrich Gilly, perspective study with landscape scene (1799).

quality and the capacity to waver between stone and light’ (Debanné, 1999: 56-57). The dissolution of the structures stability establishes a more sophisticated metaphorical relationship to the nature of infinity and by extension, the divine space beyond. As the structure starts to converge the stone slips into an immaterial state, a state that is conditioned by the external light qualities pouring through the internal space of the dome. This treatment of light and structure resists the reductive understanding of Euclidean linearity, where architecture becomes ‘reduced to the configuration of volumes and their perception’ [fig 4.14] where an ‘architectural order can be established by merely regularizing the relationships between particular shapes and our experience of them’ (Vesely, 2004: 259). Sindone achieves a more complex appropriation of light where the instrumentality of the geometry is employed not to control the light into a legible space – rather it expresses continuity through the stable order of the ground space, to the indeterminate space beyond.

An important consideration to conclude this analysis of Santissima Sindone is returning to the relationship between the individual occupying the chapel. The shifts and slippages that have been described in the chapel provoke a proprioceptive response from the individual, rather than position the individual as a detached spectator with a static and idealised view. In other words, the bodily positioning within the space arises from an internal dialogue with oneself. It is at this point that Sindone transcends the merely visual into a bodily engagement with the individual. Inhabiting Sindone has been described as being simultaneously in awe of the transition to the dome as well as attempting to find the instrumental orders as points of stability. Instead, the more complex the instrumental qualities of become the more ‘the governing system of order’ (Gargus, 1989: 119) eludes the inhabitant, particularly at the highest reaches where the building is at its most geometrically complex, and also most unintelligible due to the diaphanous effect the light has on the stone.

There exists a metaphorical link between the individual to the internal space of the chapel, and the chapel itself to the external environment. In both cases the internal dialogues that are occurring are inevitably conditioned by the greater external forces. The space is clearly inward focused, the external environment is not understood through a view, but by how it conditions the internal space of the chapel. The light of the external environment is translated as a material that becomes as present as the stone structure. This relationship operates in parallel with the inhabitants internal dialogues with the space of the chapel. Rather than a prescribed response, the shift from the stable architectural elements to their eventual dissolution provokes individual symbolic responses that avoid codification – the chapel situates the inhabitant between

the known and the unknown – an unstable space between which provides a powerful allegory for our existential condition.

Conclusion

The cumulative effect of the chapel discloses only our inability to fully come to terms with it – a space that cannot be fully known, or mastered - but one in which the individual becomes aware of their position within it. This underlying ideology is the means by which Guarini articulated an analogical link to external reality. Within an internally focused building, a space was created by which this wider, more external cultural condition could be made apparent. These internal dialogues with external reality can be read as one of the most important contributions Guarini made with his work. SS. Sidone hovers indeterminately, and in doing so resisting any finite or purely instrumental reading of the building. There is a tendency within contemporary architectural discourse to be able to fully dissect the intentions of a space, to refer it back to a manifesto, or master-narrative. Such architecture depends on autonomy to gain its legitimacy and therefore its efficacy is determined independent of any 'site' or context.

What is common to both Guarino Guarini and Michael Webb's work is that the more exacting and technically complex the instrumental characteristics become, the more the poetic and symbolic content of their work is revealed. Webb's work travelled from a situated experience into the space of representation, Webb inhabits representation as he does real space in order to have one reveal latent qualities of the other. Guarini's instrumental representations sets up a framework for embodied experience where the nature of our direct experience of space is embedded into the narrative of the Chapel. This suggests the symbolic as an innate presence within the instrumental and vice versa. It is in the projection and translation between the spheres of representation and the more direct nature of embodied perceptual space that this communication and indeterminance between the instrumental and the symbolic occurs. The following section explores this projective space as a 'site', a metaphorical interval where this reciprocity is examined directly.

References

Debanné, J. (1999). Surface and Appearance in Guarino Guarini's SS. Sidone Chapel. In A. Perez-Gomez, Parcell, S. (Ed.), *Chora Three - Intervals*

in the Philosophy of Architecture (pp. 45-77). Montreal: McGill-Queen's University Press.

Evans, R. (1997). *Translations from Drawing to Building and Other Essays*. Cambridge: The MIT Press.

———. (1995). *The Projective Cast: Architecture and its Three Geometries*. London: The MIT Press.

Frascari, M. (1990). The New Angel/Angle in Architectural Research. *Journal of Architectural Education*, 44(1), p. 11-19.

Gargus, J. (1989). Guarino Guarini: Geometrical Transformations and the Invention of New Architectural Meanings. *Harvard Architecture Review*, v.7, p. 116-131.

Guarini, G. (written 1686, published 1737). *Architettura Civile*. London: Gregg Press (1964).

———. (1671). *Euclides adauctus et methodicus mathematicaq(ue) universalis*. Turin.

Hansen, M. (2006). *Bodies in Code - Interfaces with Digital Media*. London and New York: Routledge, Taylor and Francis Group.

Haralambidou, P. (2007). The Fall - The Allegorical Architectural Project as a Critical Method. In J. Rendell, Hill, J., Fraser, M., Dorrian, M. (Ed.), *Critical Architecture* (pp. 225-236). Oxon and New York: Routledge.

Lefebvre, H. (1991). *The Production of Space* (D. Nicholson-Smith, Trans.). Oxford: Blackwell.

Meek, H. A. (1988). *Guarino Guarini and his Architecture*. New Haven and London: Yale University Press.

Merleau-Ponty, M. (1962). *The Phenomenology of Perception* (C. Smith, Trans.). London and New York: Routledge.

Perez-Gomez, A. (1983). *Architecture and the Crisis of Modern Science*. Cambridge, Massachusetts: The MIT Press.

———. (1977). *The Use of Geometry and Number in Architectural Theory: From Symbols of Reconciliation to Instruments of Technological Domination (1680-1820)*. Doctor of Philosophy, University of Essex, Essex.

Robinson, E. C. (1991). Optics and Mathematics in the Domed Churches of Guarino Guarini. *Journal of the Society of Architectural Historians*, 50(4), p. 384-401.

Saunders, A. (2009). Baroque Parameters. *Architectural Design*, 79(1), p. 132-135.

Varriano, J. (1986). *Italian Baroque and Rococo Architecture*. Oxford, New York and Toronto: Oxford University Press.

Vesely, D. (2004). *Architecture in the Age of Divided Representation - The Question of Creativity in the Shadow of Production*. Cambridge and London: The MIT Press.

Figures

fig 4.01, Guarini, G, 1737: 5.

fig 4.02, Guarini, G, 1737: 7.

fig 4.03, Debanné, J, 1999: 67.

fig 4.04, Debanné, J, 1999: 60.

fig 4.05, Debanné, J, 1999: 60.

fig 4.06, Evans, 1995: 367.

fig 4.07, Scott, J. B, 1995: 610.

fig 4.08, Meek, H. A, 1988: 70.

fig 4.09, Guarini, G, 1737: 413.

fig 4.10, Scott, J.B, 1995: 619.

fig 4.11, Vesely, 2004: 201.

fig 4.12, Robinson, E. C, 1991: 388.

fig 4.13, Saunders, A, 2009: 135.

fig 4.14, Debanné, J, 1999: 55.

fig 4.15, Vesely, D, 2004: 260.

SECTION 3 - *Explorations of Projective Space*

SECTION 3 - *Explorations of Projective Space*

The dream is seen as a narration developed within the labyrinth of the reflections between the physical and metaphysical possibilities of things. This oneiric locus of reflection is the place where geometry, philosophy, and science discover their common origin or “nature”, i.e., their roots in human imagination.

Marco Frascari, 1991

The term ‘site’ has recurred many times throughout this thesis. It is a familiar word in architectural discourse because the conventional understanding is that architecture must be *sited* - it must exist *somewhere*. Therefore site is a common thread to most, if not all, architecture projects. In the current context, this notion of site is becoming increasingly difficult to define¹. Through a design enquiry, this section explores the idea of site as far more complex than the normative association of the architectural object that exists on a single physical site. The critique established in Section 1 posited instrumental architecture as a concept that can only maintain its ideological purity independent of context, or ‘site’. This is because such conceptual transparency requires complete control - a condition that never occurs in reality where concepts always gets diffused or lost in this translation from representational to real space. The collective and embodied nature of real space is seen as something that disrupts this conceptual purity. Therefore, a case can be made that if one was to inhabit the pure space of representation as one inhabits real space, then a more meaningful interdependence between these two ways of perceiving space may be explored. Thus site is employed as a term that enables a complex reading of architecture in the following design exploration. If real space and the space of representation can be treated as legitimate sites, then the separation of instrumental to the realm of representation and the symbolic to external reality no longer applies. The model proposed in this design study suggests the instrumental and the symbolic are constantly occurring within and through one another’s assumed boundaries.

¹ This refers to the position established in Section 1 where the representational space and real space were identified equally as legitimate ‘sites’, but were also positioned as discrete to one another. This assumption of separation was challenged in Section 2; an argument was made that the representational *site* and the real *site* are in constant dialogue with one another - what may appear stable and instrumental in one sphere of reality, becomes experiential and sensory in the other.

Section 2 explored *translation* and *projection* as synonymous devices where architecture shifts from one mode of perception to another, for example: from drawn to built - from representation to real. What can be discerned from these terms, both of which imply movement, is that our understanding and engagement with architecture does not necessarily stay the same through these

translations and projections. What is stable and quantifiable in one sphere of reality, may not be in another. Therefore the determinist logic of purely instrumental architecture negates movement, requiring an autonomy only achieved only through a distancing from the complexity of real space in order to gain legitimacy. Architecture treated as purely instrumental discipline reduces site to an aphonic presence within a design process. Therefore returning to the complexity bound up in notions of site is pertinent to the thesis position. However, the following design project does not treat the abstract and instrumental characteristics or representation as discrete to the embodied and sensory characteristics of real space. By considering both real space and the space of representation as 'sites' of architectural production, I have speculated through a design enquiry the concept of an architectural space or 'site' that exists between these two conventional perceptions of reality. That is, between the representational and the real - the instrumental and the symbolic. I have called this between-space *A Projective Site* - its purpose is to test out the thesis position by exploring on a space where a meaningful exchange between the instrumental and the symbolic is most explicit.

Chapter 5.0 | Inhabiting A Projective Site

There is a deep gap in communication, not only between people or buildings, but between different areas of culture itself... this is, reflected most clearly in the difficulty of reconciling the abstract, conceptual representations of our world and the particular conditions and aspirations of our lives.

Dalibor Vesely, 2004

The aim of this design project is to re-orient the instrumental and symbolic as reciprocal. In sections 1 and 2, I argued each was integral to the other. I suggest there exists a creative potential when the two terms considered together, as opposed to separately. Central to what has been established in the thesis thus far is that this separation of the instrumental and the symbolic is based in an historical separation of the two ways of perceiving space, and by extension, architecture.

As has been clearly expressed in Section 1, when the instrumental is considered in isolation from real sites and situations, it operates in its own hermetically sealed, rule based environment. Essentially, it attempts to have the ability to exist and operate independent of specific context, in similar fashion to a mathematical equation². However, this design exploration argues that the characteristics of real and representational space are constantly overlapping the assumed boundaries of the other, a notion that was suggested in Section 2. In order to explore this idea, the space of representation has been treated much like a real site, in other words, it has been imbued with all of the embodied complexities of real space. The reason for doing this is that our direct experience of space is seen as something that disrupts the conceptual purity that is presented as a reality in the space of instrumental representations. This disruption can be most clearly evidenced in the difference between the way an idea is conceived, versus how it is received by others - it is never the same. This gap as it occurs in practice can be seen in the nature of the architect's relationship to a building. Robin Evans has noted a 'displacement and indirectness' (Evans, 1997: 156) that occurs as the architect, in a conventional design process, does not directly produce the built architecture. The building is constructed and inhabited in ways that are never wholly predictable, and beyond the architect's direct control. Therefore it is pertinent to re-address the space of representation as an allegorical site to real, it is a site that the architect inhabits

² The clear distinction between the purpose of a mathematical equation and built architecture, is that the purpose of the mathematical equation is to provide a universal model that is instrumentally correct no matter where one is located. Built architecture, although it involves mathematics, must engage with many different forces that are oftentimes outside of the control of mathematical certainty.

as unstable ideas becomes translated through universal and stable representational techniques. A latent condition of embodiment (which is explicit in real space) is therefore present in the space of representation.

A Projective Site - An Allegorical Dwelling

The design project serves to challenge the demarcation of the characteristics of real space and the space of representation, and by extension, the separation of the instrumental and the symbolic. It does this by proposing an architectural space that exists in between a physical building and its representation in drawing and modelling. The project is a speculative investigation where instead of designing a new building I have pursued the notion of site in a design enquiry that attempts to distil a complex way to occupy architecture: I am suggesting that both real space and the space of representation can be occupied simultaneously. I have called this 'between space' **A Projective Site**: as previously noted, it exists between real and representational space; coupling the sensory, embodied complexities of inhabitation (of the former) with the abstract, instrumental characteristics (of the latter). This concept of a Projective Site can be further elucidated in the following diagram [fig 5.01]:

[fig 5.01] Where is a *Projective Site*?

The notion of dwelling in, or inhabiting, representational space as one would inhabit real space sets up a complex framework for the following design explorations. By setting up a parallel process of inhabiting real and representational space simultaneously, this project attempts to draw a connection to the more literal nature of dwelling. This thesis suggests that the inter-dependence between the interior and exterior aspects of the dwelling or 'home' has an allegorical association to the interdependence of real and representational space, and by extension - the instrumental and the symbolic. Dalibor Vesely notes that 'there is a certain logic to the origination of so many of our intellectual achievements in the relatively small world of the dwelling' (Vesely, 2004:191).

This notion highlights the relationship between the our supposedly stable internal environments of home and the wider social contexts that are needed to both place our ideas and to give them relevance - the shift between autonomy and situatedness and the blur between the instrumental and the symbolic. On a more direct level, Jonathan Hill has observed the conventional historical assumption on the nature of the dwelling, as well as its actuality which is often suppressed:

'Home must appear solid and stable because social norms and personal identity are shifting and slippery... The purpose of the home is to keep the inside inside and the outside outside.'

(Hill, 2006: 8)

Therefore this project is framing the commonplace notion of inside and outside in a different way in order to reveal the interdependence of the instrumental and the symbolic. Instrumental representations are assumed to be safe and stable - they communicate the measurable and known characteristics of architecture, they are architecture's interior and the space that architects inhabit most directly in a design process. The embodied perceptual space of everyday life is the space in which built architecture is situated. It is more immediate, irrational and subject to complex social and ecological forces that are not wholly controllable. This is the aspect of architecture that is not autonomous and can thus be understood as architecture's exterior. The following design project seeks to uncover the synthesis of this 'fundamental binary variously characterized' as 'interior reality and exterior reality' (la Marche, 2005: 23). *A Projective Site* crosses the borders of both and attempts to 'catch' the qualities of one mode as it traverses its boundaries into the other.

The following analysis of the design project is broken down into nine sub-sections. Each was selected to communicate important discoveries made relative to the challenges posed by the overall thesis position. Each exploration seeks to uncover a shared point of origin between the instrumental and symbolic meanings of architecture. The sub-sections are structured by an introduction to the individual exploration, followed by a detailed description of the processes undertaken, before concluding with a brief critical reflection highlighting both how the experiment has developed the thesis argument, as well as addressing its limitations. The ninth sub-section is a broader conclusion on the nature and role of the Projective Site - it will attempt to position the project not only within the academic framework of design as research, but also within

the wider scope of architecture as practice.

5.1 | *Real Site*

In order to pursue the notion of a Projective Site, an existing *real* site was required. This was in order to test and translate the inhabitation of real space into the space of representation. To embark on a design project of a new building would not have been appropriate, simply because it would not have been built and thus would be bound to the realm of representation. This would mean that any conclusions made on the direct and embodied inhabitation of this space would have been conjecture. The site chosen is an abandoned shipwright building in Shelley Bay, Wellington [fig 5.02]. The site was selected because it was already loaded with many of the issues surrounding the thesis. It was conceived of as a purely utilitarian building located next to a slipway [fig 5.04] in service of navy ships. The buildings orientation is dictated by its relationship to the slipway, and as a result, would have received little sunlight when it was originally in use.

[fig 5.02] Shipwright building - Shelley Bay, Wellington | 01

[fig 5.03] Shipwright building - Shelley Bay, Wellington | 02

[fig 5.04] 'Real' Site Plan - not to scale.

A series of large wooden trusses define the envelope as well as the internal space of the building. Over the course of the following design investigations, the role of the trusses forms a significant entry-point into understanding the nature of the space - they are a universal and therefore relatively anonymous structural system, but as the building has been exposed to time and the extreme nature of the site conditions³, the trusses now play a defining role in affecting the internal atmospheres of the building. What is important to observe from the first impression of this building is that while it was conceived as a purely instrumental and rational structure, exposure to site conditions and the radically changing social context now means it hovers as an ambiguous abandoned structure. This notion reinforced its relevance to the thesis argument and made it a rich source of enquiry for a point of departure into the parallel inhabitation of both the building and its representation in drawing and modelling.

³ Because the building is located right on the edge of the bay, it is directly exposed to harsh site conditions of the wind, rain and sea-salt. As a result the materials have decayed at a rapid rate.

5.2 | Site Reconstruction

[fig 5.05] Site Reconstruction | 01

⁴ Because this was the first design exploration, some early ideas were discarded. The drawing on the left hand side of **figs 5.05 + 5.06** involves a second ‘real’ site, and was examined because I was still in the process of deciding which site best fit the thesis position. Due to this second site not being used further than this experiment, it will not be discussed over the course of Section 3.

[fig 5.06] Site Reconstruction | 02

The first design experiment is an exploration of issues raised in Section 1 – Thinking Inside/Outside Site⁴. In particular, the notion that when one exists outside of a site (and from an instrumental perspective), the conditions of that environment becomes reduced to defined and measured constructs. Conversely, existing within a site requires our knowledge of that environment to be produced in a primarily cognitive manner – the immediacy of perception forming an embodied, but always incomplete image of our environment. The model/drawing composite described here, is conceived as a ‘Site Reconstruction’ from these two vantage points – inside and outside of site. This approach was inspired by Robin Evans’ suggestion that ‘if we take the trouble to discriminate between things, it is not to keep them apart but to see more easily how they relate to one another’ (Evans, 1995: xxxvi-xxxvii). Considering this, ‘Site Reconstruction’ presents the ‘illusion’ of instrumental transparency as ‘an effect of masking’ (Wigley, 1992: 376), if only one method of thinking is visible, it is due to the other being suppressed. In this sense, the follow-

ing exploration, 'reconstructs' the real site from these two perceptions. The process was to unpack the inside/outside relationship to site, splitting these ways of perceiving and holding them apart using common representational techniques as a prop in order to view these seemingly conflicting arguments in a stable position from which they may be analysed.

Outside Site Model

The 'outside site' component of Site Reconstruction is both a usable set of quantitative data and a critique of the limitations of pure instrumentality. Essentially, this model collapses a data field into a perceptual field by making data physical. It does this by reducing the shipwright building and its surrounding topography into an abstract field of vertical acrylic rods [fig.5.05]. The intention was to remove all of the site qualities apart from those that were quantifiable, and then corrupt this rationality by making it a perceptual object in its own right. As one moves around the model, the stripped back, supposedly neutral aesthetic of instrumental representation is used to generate a topography whose image shifts as the viewer shifts. This was the first significant discovery made in the design process - as an object of apparent neutrality shifts from representational space to real space it becomes exposed to an individual perceptions. The data field hovers between being an analytical and experiential object [figs 5.08 + 5.09], the experiential dimension that was latent on the computer screen becomes revealed by this shift.

[fig 5.07] Sketches of construction details.

[fig 5.08] Site Reconstruction | 03

[fig 5.10] Site Reconstruction - perceptual data field.

[fig 5.11] Inside/Outside Blur.

Inside/Outside Blur - Long Exposure Photo

The photo located beneath the site model [fig 5.11] is an alternative to the acrylic site model sitting above. The image is a long exposure shot taken from the Mt. Victoria lookout, a point which grants a 'birds-eye view' over the Shelley Bay site. The film was continuously exposed to light as the camera panned across the width of the site. The final effect is a shifting landscape and horizon line of deep greens and reds that falls in and out of focus - a unique record of my being in that place during those specific climatic conditions overlooking the real site. The photo, scaled to the size of the site model presents an alternative reality to limitations of the panoptic vision created in instrumentally appropriated digital space. Instead of the absolute transparency of an instrumental view, the photo instead presents the ambiguity of external reality and the impossibility of totalising instrumental control. The photo is partially transparent, and as light is projected through it the colours of the photo further contaminate the purity of the abstract field of data points [fig 5.12].

[fig 5.12] Site Reconstruction | 05

Inside Site Drawing

The drawing on the corner of the Site Reconstruction [fig 5.13] attempt to draw out timelines of inhabitation of the real site. The film negatives are cropped as they are about to extend off the border of the pages, representing the infinite capturing of light on film as analogous to the continually reproduced mental images I constructed moving through the space. From these 'impulsive' recordings, a singular image may best represent the site – the cone of vision holding the image which emanates from my eye immediately places the person viewing my drawing at a distance. The isometric distortion occurring through the cone of vision to the flat sheet of paper references the individual's perception rather than an idealised final image meant for collective consumption. The hand drawings produced above the cones of vision complete the timeline. They are reflective observations made in studio and attempt through memory, to draw out specific site qualities as vividly as possible. For example, the drawing of the truss as exposed through the decaying facade [fig 5.14] on the Shelley Bay site is a reconstruction of my observation that the light quality can be directly related to the state of disrepair the building is in. Due to the awkward orientation of the building, it would have received almost no light inside when it was originally used – as the cladding has rotten away, certain periods of the day now cast the structural members of the building in high contrast of dramatic light, thus becoming one of the defining qualities of the space.

[fig 5.14] Truss drawing.

[fig 5.15] Details of Site Reconstruction.

[site a] shelley bay shipwright building

[fig 5.13] Inside-Site drawing.

Site Reconstruction is a seemingly disjointed series of episodes, pieced back together within the same structure, which was done to express site as a complex notion where perceptions and representations are always changing - from the transparent to the ambiguous. The model attempted to make clear the complexity of the situation, and that the following explorations needed to be far more direct in what they set out to achieve. This model brought about an awareness of the dangers of an overwhelming opaqueness present in the ideas that the project is engaging. The ideas have complexity and were important individually, but require much explanation to communicate collectively. This model therefore served to communicate that if only one mode of representation is present, it is at the suppression of the other. The following drawings and models sought to collapse one mode of thinking into the visual language of the other in order to communicate the equal relationship of the instrumental and the symbolic in a more direct manner.

5.4 | Wood Block Model

[fig 5.16] Study drawing of Wood Block Model.

The Wood block model [fig 5.17] attempts to build on particular concepts developed in *Site Reconstruction*, in particular the notion of displacing neutral representations into an embodied-perceptual field in order to address the latent symbolic qualities. The Wood block model explores the transitive moments between the more recognizable communicants of architectural imaging conventions (plan, section, isometric) and finds instrumental certainty to only be as stable as the material it is drawn on. In this model, I have used the generic volume of the building as a central object, projecting in either direction are laser-etched drawings of the building in isometric and perspective. This puts

[fig 5.17] Wood Block Model | 01

[fig 5.18] Wood Block Model - acrylic plane close-up.

⁵ The structure being represented is the reference to the real space of the building.

the object and its multiple representations within extremely close proximity to one another. These different representations of architecture that usually operate at great distance to one another now start to jump into one another's representational fields [fig 5.18]. The images start to probe into what the characteristics of a projective site could be: as one moves around the model, the previously stable drawings start to flatten and distort and have reflections of other representations slip into one another's picture planes. The projective lines, which appear as present as the cantilevered picture planes they support, possesses figurative qualities – as if the structure of the building is looking in the mirror. However the 'mirror' doesn't return a neutral gaze but a translation of its former self. The observation that the representations never fall into a comfortable alignment attempts to provide a metaphor for the nature of translation: the qualities that are lost and gained as an architectural project shifts from representational space to the real are presented in a scaled down version in this model.

The close exchange occurring through the precise representations that become distorted through perception sets up a synthesis between the instrumental and the symbolic which is pursued in later drawings and models. While this model sets up these relationships within a representational field, it does not achieve the full scale immersion of real space. Therefore, the central limitation of this experiment is that while the model does refer to the real space of the building⁵, all experiential aspects are focussed toward representational conventions, not the aspects of real space which would transcend it. This negates the opportunity for a meaningful reciprocity with the sensory and embodied complexities of the actual shipwright building. The direct experience of real space is therefore only of the model. Observing these limitations in each iteration of the Projective Site allows the project to build complexity and facilitate a more holistic reading of both sites, the wood block model hints at the instability that occurs in real space but nevertheless maintains a distance from it. What this model does set out to achieve is an ability to situate the viewer in relation to the model, provoking a self awareness of our relationship to both real and representational space. This occurs as one engages a process of realigning oneself to the 'correct' views of the drawings, which provokes an awareness of the role that instrumental representation plays with the real space. The Wood block model engages the immense distortion that occurs between perceptions of real space, and its translation into measurable, precise representational space.

[fig 5.19] Wood Block Model | 02

5.4 | Photogram Model

The Photogram Model [fig 5.20] represents an important progression in the drawing and model series. The model attempts to develop a more complex relationship between perception and representation. Conventionally, the space of representation is assumed stable, and the more direct experience of real space is unstable in comparison. This model suggests that the characteristics of real and representational space are in-fact always transfiguring themselves and having presence within the others implied domain. The notion that they are not discrete or opposed to one another becomes a more explicit concern in this model.

The process taken to achieve this overlap - between real and representational space - occurs through an inversion of the traditional space that the real and the representational occupy. The Photogram Model collapses a direct experience of the structure into the space of representation, while an instrumental representation of the building structure now hovers above as a perceptual object⁶. The structure is represented in diagrammatic fashion – divorced from the ground and stripped of its qualities other than the measurable. This is a symbolic move to make the structure oscillate between being representational of the shipwright building, and its own perceptual artefact. This technique of removing the ground plane in order to evoke an ambiguity between representing real space, and functioning as a semi-autonomous perceptual object was hinted at with the Wood Block Model. This becomes a common characteristic of the following drawings and models that constitute the Projective Site.

The shadow's characteristics of instability - through constant movement [fig 5.21] and spatial distortion - are employed metaphorically as an individual perception. The photogram technique was employed to collapse this moment of perception into the space of representation. Using a darkroom, I shone a light through the model of the structure, attempting to capture a moment where the shadow would shift from sharp to blurred the further away it got from the structure. This attempted to communicate a continuity between the

⁶ The notion of perception is understood in this thesis as the way an individual observes and inhabits spaces and/or objects in order to generate empirically - independent of a prescribed and finite reading of an object, space, or drawing.

[fig 5.21] Recording shadow as analogous to individual perception.

[fig 5.20] Photogram Model | 01

[fig 5.22] Photogram Model - real shadow interacting with the virtual.

[fig 5.23] Photogram Model | 02

[fig 5.24] Photogram process - the real (top) and the virtual shadow (bottom).

measured and precise nature of the model, and the perceived distortion of real space as one inhabits it in everyday situations. Therefore, this model marked an attempt to record my inhabitation of real and representational space simultaneously. Once the shadow was chosen, light-sensitive paper was placed underneath it. In a typical photographic developing process, light is exposed through a film negative of an image. This creates a true representation (a positive). Black areas do not allow light to penetrate through the negative, restricting exposure to light-sensitive paper (the paper remains white). The photogram technique is similar, except I have used the shadow of a real object, instead of a film negative. The black shadows restrict the light on the paper so it appears white. The resulting photogram is a negative, or *virtual* shadow that is left after the paper is developed [fig 5.24]. The virtual shadow is white and therefore assumes a similar visual language to the building structure hovering above, one appears to emanate from the other. A perceptual moment is stabilised and recorded into the space of representation.

[fig 5.25] Photogram Model | 03

[fig 5.26] Dark room sequence of exposure.

This was another experiment carried out during the process of making the Photogram Model. The sequence shows an image from my first visit to the shipwright building developing on paper in a dark room. When the image is most clear the lights are turned on for the first time. As the image has not yet been fixed, the light in the room causes the paper to degrade at a rapid rate (it has been exposed to too much light). The intention was create a representation that was analogous to the way an image appears in one's mind in real space, falls into a memory and is distorted over time. Each iteration is equally important to communicate different aspects of the space, rather than a single idealised representation of it.

The Photogram Model marks several important discoveries concerning the nature of a Projective Site. The instrumental and symbolic aspects start to blur - this is achieved through using same visual language to describe them. The supposedly neutral, 'bleached out' (Hays, 2010: 89) aesthetic of representation has been manipulated to describe both instrumental and symbolic characteristics of the building structure. Additionally, the disappearance of a conventional ground plane [figs 5.25 + 5.27] allows the Projective Site to move beyond a literal representation of the building, forming a metaphorical link to the characteristics of a full-scale real space. While this model marks important developments transcending conventional representation, it does not address specific qualities of actual shipwright building. However, the instrumental characteristics of the buildings structure are alluded to as being a defining perceptual presence within the real space. The next step was thus to translate an experience of the real space into the space of representation.

[fig 5.27] Photogram Model | 04

5.5 | Isometric Studies

The following four Isometric Studies are a series of images that aim to develop increasingly complex ways to translate an inhabitation of real space into the space of representation. The intention is to provide a moment of disconnection from the immediacy of real space by which a relationship between symbolic inhabitation and the instrumental characteristics of the building structure may be analysed. Through a process of drawing that renders the virtual space of inhabitation as *present* as the building, the virtual and the actual start to develop a more engaged reciprocity. In these drawings the virtual space of inhabitation is drawn to appear as *structural* as the literal *structure* of the building.

All four drawings are inverted, this is to draw a metaphorical connection with to the concept of an X-ray. Peter Wood writes, the 'X-ray provides a particularized view of the body not seen without technological intervention... the X-ray drawing is a form of super-vision that sees that which should really be hidden (Wood, 2005: 5). Therefore, the isometric studies form a metaphorical link to the usually unseen, in order to explicate the relationship between the actual and the virtual, a relationship that is often suppressed, but is no less present in both real and representational space⁷.

The use of isometric drawing to describe the reciprocity between the instrumental and the symbolic was also an important consideration. The simultaneous presence of instrumental and symbolic characteristics in isometric drawing was introduced in Chapter 3, concerning Michael Webb's Temple Island Project. While linear perspective drawings close space off at a vanishing point, the isometric has its 'vanishing point... located at infinity' (Allen, 2009: 19). This establishes a metaphorical link to the continuous and infinite nature of *real* space, that becomes present within the *representational* space of isometric drawing. Stan Allen elaborates on this instrumental - symbolic oscillation of isometric drawing:

'instrumentality may work against the symbolic, but a new metaphysics of infinite space works against the instrumental. A symbolic dimension is grafted onto these technical practices'

(Allen, 2009: 18).

note: the following full-page drawings are 1:100 scale at A2.

⁷ Each of the four supporting texts for the Isometric Studies act as instruction manuals on how to read each new layer of inhabitation that emerges into the space of the drawing. A brief conclusion will follow that will develop the philosophical position of this drawing series - why I have inhabited representational space in this way, and what can be discerned from these studies in relation to the overall thesis argument.

Isometric Study 1

The first of the Isometric drawings describes my initial visit to the shipwright building [fig 5.28]. The drawing initiates a series of diagramming techniques that articulate shifts between real and virtual time. Real time is the instrumental means by which time is measured - seconds, minutes and hours, and virtual time being the way time is perceived to speed up or slow down relative to a direct experience of space. The points that project toward the images represent my changing position within the building. These lines project downward and form a *virtual floor plan*. At this new floor plan, five concentric circles expand outward and mark ten-minute intervals of the overall fifty minutes that was spent in the building. These circles which represent a precise time-scale, are in proportion with the isometric structure of the building above. The perceptual moments occurring in the actual space project downward onto the circles - these straight lines mark the direction and distance from my position, to the subject of the image. A solid white line follows a path through the straight lines and the arcs of the circles - each time this path hits a straight line I have arrived at a new view, when the white line follows the arc, this represents a reorientation in the real space to the next significant view. The first view is at the centre of the circles, and the last view corresponds the straight line that reaches the outer-most circle. The numbers that are marked along this path represent a synthesis between instrumental and symbolic time - each new ring marks another 10-minute interval, however as the arc reorients itself to the next straight line, the time-scale compresses or expands relative to how long it took me to discover the next significant moment within the building [fig 5.29].

[fig 5.28] Virtual floor plan detail.

Example of a position I occupied in the real building. The dotted line projects downward to the virtual floor plan.

Arc of solid white line stretches out the time-scale, each number representing one minute within the building.

Each new circle from the centre represents another 10-minute interval.

Blue line indicates direction and length from my physical position to subject of the image.

As the numbered path coincides with the straight blue line, one can see it is the fourth straight line the path has oriented to in the floor plan, therefore it was the fourth perceptual moment in the real space of the building.

Time-scale stretching out toward last view in building.

Isometric Study 2

The second drawing in the isometric series [fig 5.30] describes a significant memory of the space that occurred one week after my initial encounter with the building. The drawing of the truss, which has been described in the Site Reconstruction model (part 5.2), presents the structure as possessing both instrumental and symbolic meaning. My intention in this drawing is to translate this reciprocity of the instrumental and symbolic characteristics of the structure into the space of representation. This occurs not only through the more emotive nature of the drawing, but also in the mathematical language used to describe its positioning both physically, and in time, within the building.

In the close-up detail [fig 5.31], my original positioning within the building is marked as *A*, a line projects through the isometric version of the truss *B*, which is hatched for clarity, out toward the drawing which recalls the experiential characteristics of the space *C*. The diagramming of my initial encounter with the building has started to blur and slip off the page as an exponential curve describes a new relationship between perception, time, and the instrumental representation of the building. The formula $y = (1/x) + 1$ forms an exponential curve that describes a rapid compression of time from the minutes of the initial encounter, to the week later at which the drawing was made. This allows the drawing to be situated with a degree of accuracy within the virtual space of the isometric drawing. On the y axis, actual time *D*, runs along the side of the building, these numbers are constant and uniform in their spacing. Lines project outward from the actual time numbers, and upon hitting the exponential curve project down toward the x -axis of virtual time *E*, as they do this, the spacings between lines become smaller and smaller *F* -describ-

[fig 5.31] Exponential curve / line of vision composite detail.

ing a rapid compression of time, linking the drawing into the space of the isometric. The '+1' of the $y = (1/x) + 1$ curve formula means that the virtual time curve tends toward a 1:1 relationship as it approaches the building, however the scales never line up, the symbolic role of the curve slips just out of phase with the instrumentally drawn isometric as time tends toward infinity *G*.

The greater the distance from the constant, precise space of the isometric, the greater the compression of time - this is described in the rapidly diminishing spacing of the lines (see note below).

Time continues toward infinity the further it gets from the isometric, and tends toward a 1:1 relationship as it approaches the building (see note *F* in body text).

The lines projecting off the curve rapidly compressing - the smaller the spacing, the more time expands to the 1 week point at which the drawing was made.

The initial diagramming process blurring and slipping off the page.

Isometric Study 3

The third drawing in the Isometric series [fig 5.32] describes a return visit to the real site where I did an iterative series of sketches imagining new spaces emerging within and through the existing building [fig 5.33]. I walked around the physical space of the building and drew the sketches over a 1:100 plan drawing - the resulting inscriptions made into the representational space of the paper were influenced by the qualities of the actual space of the building that I was experiencing simultaneously. The result is a series of autobiographical drawings that were merged together and placed into an increasingly dense isometric drawing. The drawings are inverted, not only to correspond to the visual language of the isometric series, but to reveal each trace made by my hand - indicating which parts of the representational space I occupied most [fig 5.34]. The embodied perceptions made in real space are now starting to subsume the instrumental clarity of the original isometric drawing. This cumulative build up of inhabitation occurring in both representational and real space suggests the latent complexity of real space, that is conventionally suppressed in the instrumental purity of the isometric. This technique of translating on-site sketching into the neutral space of architectural drawing convention starts to forge idiosyncratic connections to *site*. It does so by proposing a reflexive dialogue of communication between real and representational space where the designer plays a mediating role by inhabiting both simultaneously.

[fig 5.33] On-site sketches.

[fig 5.34] Sketch detail.

Isometric Study 4

The fourth and final Isometric study [fig 5.35] empties the drawing of the building structure, leaving behind a cumulative build up of the different ways I have represented my inhabitation of the real space of the building. The intended effect is that of a dense diagrammatic field, allowing the previously precise qualities to communicate an often opaque representational atmosphere of the drawing series. Conventional representation is treated as a 'homogenous space through which meaning passes imperviously' (Wood, 2005: 8). However, by attempting to instill representational techniques with complexity and meaning of real space, the drawings attempt to develop an ability to communicate both the quantifiable characteristics of inhabitation, and the slippage into the more ambiguous, symbolic nature of real space. The drawing appears to hover, there is no obvious start point by which to enter - thus it requires a certain level of engagement from the viewer so that they may find their own way in, and produce their own understanding of it. The image is saturated with information - hovering between the incomplete but engaged relationship with real space, and precise analytical conditions simultaneously addresses the 'constraints of human perception' (Hansen, 2004: 210-211) and the need for representation.

At this point, the Projective Site is attempting to coalesce salient characteristics of both real and representational space in order to explore their overlaps. The primarily instrumental notions of distance and accuracy start to fluctuate toward symbolic characteristics of immediacy, reproduced meaning and ambiguity. By addressing the instrumental and symbolic within a close representational field, I have attempted to see building structures not as autonomous and idealised objects in space, but a between-space where the particulars of inhabitation and perception are represented as equally present. The drawings slip between a precise mathematical language toward the more performative nature of the sketch - each preceding move influencing the next one. The drawings are limited however in translating the experiential characteristics of real space, they are flat on paper and require much explanation. However the drawings mark an important phase in the pursuit of the Projective Site as they directly engage an experience of real space, and how this experience might re-emerge in the space of representation, using the language of representation. Most productively, the *Isometric Series* is the most direct attempt at inhabiting the two sites, the representational and the real, in order to describe a more complex way to occupy architecture. The series suggests the relationships that occur in real space 'with the body and the built' (Twose, Smitheram, 2010: 49), can also happen in the space of representation.

5.6 | Section Model

[fig 5.36] Film positives taken on first visit to shipwright building.

The Section Model directs the Projective Site to a more overtly experiential state. Previous explorations have attempted to take the neutral visual characteristics of instrumental representation and push them into an experiential condition, allowing them to become more analogous to real space. The Section Model takes this notion to a more complex state where the psychological effects I experienced in the real space of the shipwright building begin to affect the previously homogeneous space of representation.

⁸ The first time the building had an affect on me was walking into it and seeing straight through to the end of its long rectangular shape. The view, if it were to be represented, was similar to a one-point perspective and made clear the scale of building, the weathering of the materials and the quality of light. All of which were not disclosed to me prior to arriving at this position.

The model is constructed as a one-point perspective, a reconstruction of the first time I understood the nature of the building⁸ [fig 5.36]. The model is comprised of 41 laser-etched acrylic planes representing section cuts through the real space. The scale of the section at the front of the model is 1:50, while the section drawing on the final plane is 1:100 - the progressively diminishing scales between the front back occur at a rate of 1.21 ($50/41=1.21$) per plane, forming a space equivalent to the construction of a one point perspective [fig 5.37 - top]. The conventional instrumental representation of space in a one-point perspective would present a static, highly controlled view of reality. This model in contrast starts to shift as the viewer does: an attempt to communicate more directly the nature of real space. The model represents the building, but also produces new perceptions and meaning unique to an individuals relationship to it. As one moves around the model, the precise section drawings shift and blur to resemble a space before flattening out again once more to reveal the construction of each segment of the building.

[fig 5.38] Scan overlay of on-site sketch. Sketch appears in Isometric Series, and was additionally laser-etched and inserted into the Section Model (see image above + fig 5.37 - bottom).

Additionally, I have inserted the cumulative sketch used in Isometric drawings 3 and 4 into the model. This translation through different representational spheres creates interesting perceptual moments where the section drawings and the sketch collapse into the same visual language [figs 5.37 - bottom + 5.38], before shifting back again to semi-discrete elements. The intended effect is to provoke an engagement with space that is both analytical and experiential.

[fig 5.37] Section Model | 01

[fig 5.39] Section Model | 02 - see previous spread.

[fig 5.40] Section Model - inverted one-point perspective as viewed from behind.

Fig 5.39 (previous spread) is derived from the Section Model and marks a significant attempt to communicate the spatial atmosphere of the Projective Site. In this image I have sought to meld the psychological effects of a *personal experience* of the actual space of the shipwright building, into the instrumental representation of the building. The most salient effects include the impression that the internal space is of an overwhelming scale, which is not apparent when viewing the building from the outside, and the quality of light as it filters through the trusses, which appeared to float high above me. To generate this effect, I collapsed the spacing of the section drawings close together and shone a table light through the side of the trusses. My bodily orientation within the space was primarily defined by this relationship to the trusses - I was interested in the connection between the precise engineering of them in representational space, and the current experiential qualities they now evoke as the building falls into disrepair. By inhabiting the neutral representation of the trusses in this drawing, the drawings start to infer the experiential qualities present in the real space of the building. Rather than place an avatar into the space to indicate that someone has, or is, inhabiting the representational space - I instead sought to create an effect where a previously stable and analytical drawing becomes heavily distorted - as if it has been merged with the irrational memory of the exact same space.

[fig 5.41] Section Model | 04

Section planes flattening out to reveal their material construct.

[fig 5.42] Section Model | 05

[fig 5.43] Section Model | 06

The mirror located underneath the suspended section model [figs 5.42 + 43] intends to further situate the viewer. The impossible dual views of the structure created by this unstable ground plane further complicates the originally simple concept of a reproduced one-point perspective.

[fig 5.44] Section Model | 07

[fig 5.44] The precise one-point perspective disappears into the multiple section planes when viewed at an oblique angle.

[fig 5.45] Section Model | 07 - see previous spread.

[fig 5.39] Section Model | 02 - see pages 126-127

[fig 5.46] Section Model - photographed in VUW atrium.

These images were taken before a critique and provide another example of the model as a perceptual object, creating different visual effects depending on where it is situated. In this instance the acrylic planes disappear and the surrounding context blurs into the space of the model.

Fig 5.45 (preceding spread) develops further the notion of psychological effects occurring in real space, affecting the space of representation. This image differs from the previous full-page spread [fig 5.39] in that the position of the viewer is noticeably outside the building structure. The aim of doing this is to collapse the normative relationship of the viewer to a representation. This notion that the 'privilege of the viewing subject is maintained' (Allen, 2009: 24), refers to the position established in Section 1 - *Thinking Inside / Outside Site*: when one exists outside of a site, everything is reduced to the observable, measurable and defined. However, because the experiential qualities of the real space have been merged into this image, the distinction between being inside or outside of the site is lost. In this sense, one is caught between in a *Projective Site*, where the characteristics of the instrumental and symbolic understandings of the building dissolve into one another. This space is a *metaphorical interval* between the two, the instrumental and the symbolic. That is, it is only available as metaphor but provides an argument for their reciprocity.

The Section Model attempts to challenge the viewer's conventional relationship to representation. In this model 'vision has... been assimilated into the body' (Hansen, 2004: 232) - one cannot change the image of the model without changing their bodily relationship to it. Instead of being granted an idealised image that approximates real space, those engaging with the model establish their own views and relationships to it. At this stage of the explorations, it is important to note that the external site - the wider context of the shipwright building is never shown directly, rather, the external site is shown in the way it *conditions* the internal space. This is most obviously through qualities of light and dark, and effects of the weather. The reason for doing this is to form a metaphorical link to the overall thesis argument - the neutral qualities of instrumental representation become *conditioned* by greater external forces - that of a direct experience of space. Thus the oscillation between notions of interiority and exteriority (introduced in the introduction to this design chapter), are more explicitly addressed in the imagery derived from this model. The section model, and the precisely framed moments that I have generated from it [figs 5.39 + 5.45] build on concepts of a Projective Site that have been developing in earlier explorations as well as themes introduced in the Chapter 4 reading of Guarini's SS. Sindone. This is especially apparent in the Projective Site, considering that for the symbolic reading of the real space to become more complex, the instrumental must be increasingly controlled and precise, in order for the model to be communicative to others.

[fig 5.47] Section Model | 09

[fig 5.48] Section Model | 10

5.7 | Cumulative Section Study

note: the original drawing for [fig 5.49] is full scale at A1.

[fig 5.50] Examples of iterative study sketches.

This fifth and final drawing [fig 5.49] collapses all the different ways I inhabited the building back into a view that represents my first encounter with the building - down its length - as referenced in 5.6 | *Section Model*. The drawing came at the end of a long series of iterative sketches [fig 5.50] that attempted to draw out the most recurrent themes in the previous design explorations. The purpose of this exercise was to return to my most immediate encounter with the real space of the building, re-reading it with the distance afforded by representation. This allowed a stable analysis of the complex ways that architecture can be occupied.

While each of the previous explorations maintains the orientation of its original position, the view of the Cumulative Section Study is clearly from a new perspective. What was once measured and analytical in one drawing, is translated into a distorted, perceptual field in this image. The diagrammatic techniques used in the Isometric Series flatten and foreshorten in perspective, and the truss drawing in the top-left corner starts to streak off the page. The instability of the ground plane re-emerges in this drawing. The structure of the building floats, the isometric field occupies a middle ground, and a reflection of the structure is located at the bottom of the image. The reflection appearing as material as the actual structure can be seen from the Photogram Model onward, and emerges in the following design experiment 5.8 | *Inhabitation Model* also. There is no stable reference point, rather a dense atmospheric field where the structure of the building appears to act as a prop for the multitude of inhabitation techniques occurring within and through it - in its actual and the virtual space.

Although not attempting to replicate the experiential qualities of previous explorations, the Cumulative Section Study translates many of the ideas that have been developed thus far back into a single image. It provides a stable reading by which I am able to see which spaces of the building have occupied me most - through memory, physical inhabitation. The drawing provides a moments pause for analysis before developing one further design exploration and drawing conclusions on the wider application and relevance of a Projective Site.

CUMULATIVE SECTION STUDY

5.8 | Inhabitation Model

The Inhabitation Model [fig 5.51] was designed to achieve two aims: firstly, to order to analyse and to perceive my parallel inhabitation of real and representational space more directly. Secondly, to treat the model as a generative design tool by which new architectural possibilities may emerge on the real site. The model is not a definitive end-point: all of the experiments thus far have been valuable in illustrating characteristics of the Projective Site. Rather, this model represents another attempt to further dissolve the distinction between the instrumental and the symbolic.

The exploration is a progression from the Section Model where I sought to develop the role of the autobiographical sketch more directly [fig 5.38]. The exploration of how the inhabitation of real space affects the neutrality of representation has provided a rich enquiry of the latent inter-dependence between these two spheres of reality. The Inhabitation Model seeks to build on these narratives by examining the affect the real space of the building has on the inhabitation of the individual, and to treat built space and the inhabitation of it as equal presences within the model.

The model slips out of the picture planes of the Section Model toward a stripped back version of the building's structure. This transition marks the emergence of a complex mapping of inhabitation which is represented by the rapid-prototyped model [fig 5.52]. The process of deriving this form started by returning to earlier drawings that had mapped out my physical inhabitation of the real space, I then translated this to a dataset of K-values to examine which areas were most occupied [fig 5.53]. Using this as a base, the form started

[fig 5.38] On-site sketch as it appears in the Section Model - see page 124.

[fig 5.52] Rapid-prototyped model emerging as the structure slips out from the picture planes.

Rapid Prototyping is a process by which a digital model is 3d printed into real space. The prototyped form is made out of white resin.

[fig 5.53] Translation of Isometric Study. Higher K-values indicate a darker black, and therefore higher density of inhabitation.

[fig 5.51] Inhabitation Model | 01

to develop complexity through manipulations driven by a consideration of all the other ways I had occupied the building. This included the less direct means such as the memory of spaces, spaces I had drawn in my sketch book, and spaces that I had imagined emerging within and through the existing structure as a direct response to it. While manipulating the model in digital space, I found myself emphasizing the spaces I hadn't been able to occupy physically - the spaces I had inhabited *projectively* rose to the surface. I believe the reason for this is that my engagement with the real space of the building primarily involved an awareness of my bodily positioning relative to the spaces that were only accessible through a view. The end result collapses the oneric nature of the inhabitation into an instrumental framework. The form gains density, becoming more opaque when the multiple ways I have inhabited the space begin to overlay. Conversely, less significant spaces resulted in a thinner, more transparent form. The rapid prototype form attempts to combine hints at a new architectural space emerging, and the cumulative mental wanderings of inhabitation. The intention is not to display a definitive final form, rather it serves to present a crystallised moment of complex inhabitation that is only available through representation. It attempts to serve as a design tool where the designer can discern how the inhabitation of space is more complex than the merely physical, how this holistic form of inhabitation is influenced by site qualities, and how it could potentially serve in the production of new architecture.

During the process of mapping my inhabitation, it became clear that the south end of the building was of great significance - it was the direction of the first significant view of the building, and the space that recurred most in my sketchbook. As a result, this is where the rapid-prototyped form is situated. The parabolic shift from picture plane to structure [fig 5.54] articulates this relationship, providing a metaphor for the dissolving of any distinction between representational and real space, and by extension, the instrumental and symbolic interpretations of it.

Drawing on observations made of Guarini's work discussed in Chapter 4.0⁹, I was concerned with how the instrumental complexity inherent in the model would relate to the perceiving subject in an effort to better communicate the metaphorical narrative of the model. This develops the union of the body and vision explored in the Section Model. In this instance, when one engages with the model, moving their body toward the ground plane - the perceptual moments become most engaging [fig 5.55]. The precise control of each plane to generate the parabolic slippage from drawing to structure exaggerates the exploration of the unstable ground plane initiated in prior drawings and mod-

⁹ As noted in Chapter 4.0 - Baroque Projections, Guarino Guarini's complex geometrical figures were conceived in direct relation to the viewing subject in real space, rather than as autonomous, abstract entities. This suggests that the symbolic as an innate presence within the instrumental.

[fig 5.54] Inhabitation Model | 02

[fig 5.55] Inhabitation Model | 03

¹⁰ See pages 137, 139 and 140-141 respectively.

¹¹ I have also made the assumption that a grid was used to layout the shipwright building, due to the repetitive nature of the structure.

¹² Emergent in the sense that it alludes to the *emergence* of new architectural spaces - both in terms of the Projective Site, and built architecture as it is conventionally understood.

[fig 5.56] Inhabitation Model | 04 - see previous spread

This image is markedly similar to fig 5.51 however the images focus on different aspects of the model. fig 5.51 shows the mirroring of space in sharp focus in order to communicate the immaterial space appearing as present as the material. Conversely, fig 5.56 shows the rapid-prototyped form in focus.

els . As one's eye level moves to the hovering ground plane, the mirrored space becomes as material as the actual modelled space [fig 5.57]- and the mirrored parabola - the moment of transition, generates the most unstable space of this ground plane [figs 5.51 + 5.55 + 5.56]¹⁰. This is because it defines the ambiguous space of transition between picture plane and structure. The addition of a grid of mirrors, located along this ground plane [fig 5.60]. The purpose is to critique the modernist grid which imposes a level of control and order over representational space that never occurs in real space¹¹. Thus, the mirror grid is employed to explore this contradictory notion, instead of acting as a mechanism of control, the grid of mirrors flicker abstractly with the surrounding qualities of where the model happens to be situated.

The Inhabitation Model examines the emergent¹² possibilities generated by collapsing cumulative experiences of real space into the representational space of a building. Thematic issues addressed in previous explorations become translated into this model with varying degrees of transparency - in particular the simultaneous presence of the precise qualities of instrumental representation, and the ambiguity of real space - where the user/viewer generates their own meaning through engagement with it. The model operates in the Projective Site by attempting to coalesce the transparent and the opaque, the precise and the ill-defined. While the model engages the viewer, creating unique views that link their instrumental *inception* to the symbolic *reception*, the rapid-prototyped form is difficult to read. The prototyped form's interaction with the existing structure provides interesting parameters by which to explore the affect of site on the way space is inhabited, however the underlying intentions often get lost and are only understood with prior explanation. The model exists on a borderline - between being an inward device of communication to myself in a design process, and being outwardly communicative as a perceptual object. In setting out to achieve this indeterminacy, this model sets up a framework for exploring the conceptual resolution that is achieved in representational space, and how it interacts with more unpredictable occurrences of real space.

[fig 5.57] Inhabitation Model - shot from the VUW atrium. The thematic of the unstable ground plane is most resolved in this model - the actual and the virtual appearing equally present in real space.

[fig 5.58] Inhabitation Model - views illustrating the parabola carving out the space created by the picture planes.

[fig 5.59] Inhabitation Model | 05

[fig 5.60] Detail of steel - acrylic connection + mirror grid.

EXIT

5.9 | Design Conclusion - Critical Reflections

The site described in the preceding design investigations which does not necessarily exist anywhere physically, and is essentially held in the imagination, ironically puts forth the importance of architecture's relationship to site and context as it is conventionally understood. However, the observation remains that this whole process could be codified and thus rendered wholly instrumental. The analytical nature of design work in a thesis, and by extension, the need to explain my position means that the design process could be codified and reduced to an architectural type or *style*. However, the underlying ideologies of a Projective Site suggest that the processes and outcomes should be different in each individual context - this is because each existing site has qualities that are unique to it. The Projective Site then, works in direct opposition to the master-narrative concept introduced in Section 1. I believe that the type of framework that is being explored resists such fixity – such is the nature of the Projective Site. Seeing the instrumental and symbolic as concomitant phenomena provides a freedom to operate between and through boundaries that are often regarded as discrete modes of architectural production. This lack of boundary in a Projective Site does not infer that the specific characteristics of real and representational space are lost, rather, they hold more potential to be creatively appropriated and become more communicative than their implied syntactical limits. This research by design suggests that our direct perceptions of real space can radically alter the universal nature of instrumental representations. This not only makes the instrumental meanings of architecture more flexible and able to be creatively appropriated, but also sets a framework for a more poetic integration of architecture and site.

¹³ In the scope of this thesis, the focus was on the *individual* inhabitation of real and representational space. Whilst there is a limitation to this work in not addressing the *collective* inhabitation of space, I felt I had to use my own perceptions because my background as an architecture student meant I had prior knowledge of representational conventions and could thus draw connections to real space. I would hope that the notion of a Projective Site could be applied to larger real sites of greater complexity and inhabitation, but in order to understand the characteristics of a Projective Site, the focus had to be narrow in this instance.

The occupation of a Projective Site differs from the conventional occupation of architecture because it simultaneously engages the two primary ways of understanding space. It is at once experiential and analytical. These psychological effects have attempted to produce a site where one can observe an inter-dependence between the two ways on perceiving and designing space¹³. The sensory and embodied complexities of real space are mentioned often in the explorations of a Projective Site. Allowing these qualities of inhabitation in real space to permeate into representational space enabled a more explicit reciprocity between them. Therefore it is important to address what the materiality of a Projective Site is, as materials are inherently bound to the sensory, haptic engagement with architecture. The understanding of materiality in the Projective Site that I have described is complex: my direct experience of the

materiality of the shipwright building is what is *translated* into representational space, not the actual materials themselves. In this sense the materials are the ones that can be seen in the preceding explorations: paper, pencil, acrylic, steel, resin and digital space. I have attempted to instill these materials with the sensory characteristics of the materials of the real space, which elevates them as experiential objects.

The notion of a space that exists between a physical building and its representation in drawing and modelling prompts the question: who is this project for? At first glance, the idea of a Projective Site presents the danger of pursuing techniques that are too far removed from the people that architects should be designing for. Architecture should be, after all, be a practice concerned with its effectuality in real sites and situations. However this project sought to establish a continuity between external reality, and the internal aspects of the architectural discipline. It did this by re-examining the tools that architects work with and instilling them with the sensory and embodied observations derived from a specific site. It endeavoured to collapse the boundaries that are so clearly defined in conventional practice. For practicing architects, it suggests there is a reflexive dialogue that deserves close attention between conceptual representation, the particularities of site, and the specific requirements of the client. The function of a Projective Site is to provide an argument for collapsing the distances between these variables in an architectural project.

It is important to address the relevance of projects of this nature - projects about representation. I believe it is especially relevant to re-examine the role of representation in architectural practice: in the current context of rapid technological growth and instrumental certainty, it is increasingly important to examine how these developing tools for architectural design become culturally situated, relate to their context, and our direct perceptions of them. By exploring the gap between how architecture is *designed* and *represented* and how it is experienced as built space, I believe representation can become a more effective tool in bringing the role of critical practice to everyday sites and situations. This has been the role of the Projective Site. By engaging a parallel process of inhabiting representational and real space, an in-between site was located where the instrumental and the symbolic are equally present. The focus of the design research in this instance may be small, but it attempts to contribute to the study for the engagement of these wider questions about the architectural practice.

[fig 5.62] A Projective Site - presentation
| 02

References

Allen, S. (2009). *Practice: Architecture Technique + Representation* (2nd ed.). Abingdon and New York: Routledge.

Evans, R. (1995). *The Projective Cast: Architecture and its Three Geometries*. London: The MIT Press.

Fascari, M. (1991). *Monsters of Architecture - Anthropomorphism in Architectural Theory*. United States of America: Rowman and Littlefield Publishers Inc.

Hansen, M. (2004). The Affective Topology of New Media Art. In M. Hansen (Ed.), *New Philosophy for New Media* (pp. 197-232). Massachusetts: The MIT Press.

Hays, K. M. (2010). *Architect's Desire - Reading the Late Avant-Garde*. Cambridge, Massachusetts: The MIT Press.

Hill, J. (2006). *Immaterial Architecture*. Oxon and New York: Routledge.

Twose, S., Smitheram, J. (2010). The Paper Life of Building: Performative Intra-Action. *Interstices*, 11, p. 49-61.

Vesely, D. (2004). *Architecture in the Age of Divided Representation – The Question of Creativity in the Shadow of Production*. Cambridge: The MIT Press.

Wigley, M. (1992). *Untitled: The Housing of Gender*. In B. Colomina (Ed.), *Sexuality and Space* (pp. 327-389). New York: Princeton Architectural Press.

Wood, P. (2005). 'A woman asks her psychiatrist, "My husband only seems to want to use the dining room table for sex. What should I do?" The psychiatrist responds, "I would stop eating in bed."'. *Performance - Tracey Publishing*, p. 1-10.

CONCLUSION

Architecture is not a *fast* discipline. This is evidenced in the substantial gap between an idea and its practical application in built form. The discourse surrounding film, music and art develops at a comparatively faster rate - there is little or no gap between the idea and its application in these disciplines. In this sense the construction of these disciplines happens in parallel with their critical understanding. This understanding that architecture cannot 'approach the transparency and speed of these other media' (Allen, 2009: xiv) has been framed in this thesis as having led to a complete demarcation of the two primary areas that architecture operates in: real space and representational space.

The frustration born of this distinction between real and representational space, and by extension architecture's instrumental and symbolic meaning, has led to the common conception that architecture is only effectual in external reality if it turns inward toward pure instrumentality. Section 1 critiqued this notion of architecture's agency being bound up in the inert notion of a purely instrumental discipline. Reducing the practice of architecture to the objectification of the defined and measurable was argued to create a discipline only able to refer to its own internal processes from which to derive meaning. Thus the abstract, instrumental characteristics of representation distantiate themselves, purporting a reality that is independent of the sensory and embodied complexities of real space. That architecture must engage with the complex social and ecological forces of external reality means that Section 1 was above all concerned with a deep gap that has emerged between the instrumental and the symbolic understandings of architecture.

While Section 1 described a gap between abstract representation and direct perception, Section 2 explored the notion that real and representational space are always affecting the structures of the other. Of Section 2, chapters 3 and 4 served to explicate the complex relationships and overlaps that occur between the conceptual space of representation and the comparatively direct nature of embodied perceptual space.

Chapter 3 concerning Michael Webb's Temple Island project is marked by an inward turn to question the existing structures representational space. Since 1966, Temple Island has for Webb been two sites - the representational and the real, he has inhabited both in order to see how the qualities of one are

not discrete to the other. This was significant to the direction of the thesis because it challenged the role of representation in architecture projects. The project was analysed as an inversion of the conventional architectural project - one that was less about *object* as it was about *subject*. The instrumental conception of architecture as an object in space, is replaced by its symbolic *perception* - how it is understood beyond the control of pure instrumentality. This questions the very way in which architects design. Working in reverse from an existing real site to the site of representation, Webb conceived an oneiric space in which the instrumental characteristics of representation served to communicate and stabilise deeper truths about experiential and embodied space of perception.

The instrumental drawings of Guarino Guarini's Santissima Sindone, described in Chapter 4 prefigure the experiential conditions of the chapel by treating geometry not as its own self-referential product, content with instrumental accuracy - but as that which is not separate from the cultural context of the chapel. In contrast to the 'sublime uselessness' (Tafuri, 1976: ix) of self-referential formal manipulations, Guarini's treatment of geometry - one of architecture's most instrumental characteristics, as loaded with transcendental intentions established a meaningful link between the specificity of the architectural discipline and its application in wider culture. This treatment of architecture's instrumental characteristics provided significant impetus for the subsequent design project re-examining the numerical complexity of geometry as something that was not dissociative to the embodied user of space.

The translations and projections occurring within and through the representational and the real in Section 2 reinforced the idea that pure instrumentality only truly exists in the realm of representation, and that the instrumental is inherently bound to the symbolic and is thus far more flexible than when it is considered in isolation - as a superior, more *accurate* representation of reality. Architecture's ability to mediate conditions that are conventionally read as opposites can be framed as a strength. The conflicting conditions the discipline engages with in practice is something to be explored not suppressed - in this sense legitimacy can not be derived from autonomy. By engaging these notions, the instrumental finds new application beyond its generally accepted syntax and our symbolic perceptions can become more communicative to a wider sphere of discourse - in other words, they are capable of greater reach. The observation that the direct inhabitation and the attendant perceptions of real space, are not dissociative to the abstract, analytical nature of representational space prompted the practical application of this thesis in the design

work in Section 3. If one could inhabit the supposedly neutral and specific space of representation as one would real space, then it is my hope that the distinctions between these instrumental and symbolic understandings of architecture become lost. The project was to engage a parallel process of inhabiting real and representational space simultaneously to create a metaphorical interval where the instrumental slips into a perceptual state, wholly affected by the phenomenal effects of real space. Instead of creating a nowhere space, the design project aimed to be sited at a crucial interval between the immediacy of perception and the instrumentality of representation.

In practice, this thesis attempts to provoke a rethinking of the gaps between architecture's interiority of representation and the exteriority of its situatedness. It does so by arguing that the inhabitation of architecture is more complex than what is conventionally assumed. This re-reading of inhabitation occur in the tools that the architect works with directly - the tools of representation. It is my hope that by loading the space of representation with the depth, complexity and experiential characteristics of real sites and situations that the instrumental and the symbolic meanings of architecture can be seen to be bound in a reciprocal relationship, where one functions simultaneously with the other.

References

- Allen, S. (2009). *Practice: Architecture Technique + Representation* (2nd ed.). Abingdon and New York: Routledge.
- Tafuri, M. (1976). *Architecture and Utopia: Design and Capitalist Development* (B. La Penta, Trans.). Cambridge: The MIT Press.

BIBLIOGRAPHY

- Allen, S. (2009). *Practice: Architecture Technique + Representation* (2nd ed.). Abingdon and New York: Routledge.
- Antin, D. (2005). the existential allegory of the rothko chapel. In T. G & Crow (Ed.), *Seeing Rothko* (pp. 123-134). Los Angeles: Getty Research Institute.
- Baird, G. (2005). "Criticality" and Its Discontents. *Havard Design Magazine*, Fall 2004 / Winter 2005(3), 16-21.
- Barnes, L. (2007). *Measures of Time*. Berkeley: The Regents of the University of California.
- Barnes, S. J. (1989). *The Rothko Chapel - An Act of Faith*. Austin: University of Texas Press.
- Bataille, G. (1929). Formless (A. Stoekl, Trans.) *Visions of Excess, Selected Writings 1927-1939*. Minneapolis: University of Minnesota Press (1985).
- Benjamin, W. (2007). The Work of Art in the Age of Mechanical Reproduction. In H. Arendt (Ed.), *Walter Benjamin - Illuminations* (pp. 217-251). New York: Schocken Books.
- Bowen, D. (2009). *An Examination of Introspection and Subversion*. Thesis 2009 - College of Environmental Design, UC Berkeley, 10.
- Breton, A. (1978). What is Surrealism? In F. Rosemont (Ed.), *Selected Writings*. New York: Monad Press.
- Burger, P. (1984). *Theory of the Avant Garde* (M. Shaw, Trans.): University of Minnesota Press.
- Ciborra, C. (2006). Situatedness Revisted: The Role of Cognition and Emotion. In S. Bagnara, G. Crampton Smith, (Eds.), *Theories and Practice in Interaction Design* (pp. 107-116). London: Laurence Erlbaum Associates Publishers.

Davidson, B. (2009). Schizophrenia and Compromise. In R. Glynn, S. Shafiei, (Ed), *Digital Architecture - Passages Through Hinterlands* (pp. 52-55). London: www.digital-architecture.org.

Debanné, J. (1999). Surface and Appearance in Guarino Guarini's SS. Sindone Chapel. In A. Perez-Gomez, S. Parcell, (Ed.), *Chora Three - Intervals in the Philosophy of Architecture* (pp. 45-77). Montreal: McGill-Queen's University Press.

de Certeau, M. (1984). Walking In The City in *The Practice of Everyday Life* (pp. 91-110). Berkeley: University of California Press.

de Zegher, C., Wigley, M. (2001). *The Activist Drawing - Retracing Situationist Architectures from Constant's New Babylon to Beyond*. New York: The Drawing Center.

Darden, D. (1993). *Condemned Building - An Architect's Pre-Text*. New York: Princeton Architectural Press.

Diller, E. (2001). Autobiographical Notes. In C. De Zegher, M. Wigley, (Eds.), *The Activist Drawing - Retracing Situationist Architectures from Constant's New Babylon to Beyond*. The Drawing Center (pp. 130-133). New York: The Drawing Center.

Diller, E., Scofidio, R. (1994). *Flesh - Architectural Probes*. New York: Princeton Architectural Press.

Evans, R. (1997). *Translations from Drawing to Building and Other Essays*. Cambridge: The MIT Press.

———. (1995). *The Projective Cast: Architecture and its Three Geometries*. London: The MIT Press.

Feininger, A. (2004). *Andreas Feininger - That's Photography* (A. Plath-Moseley, Trans.). Tübingen: Hatje Cantz Verlag.

Foucault, M. (1989). *The Order of Things*. New York: Routledge.

Frascari, M. (2007). *From Models to Drawings - Imagination and Representation in Architecture*. Oxon and New York: Routledge.

———. (1991). *Monsters of Architecture - Anthropomorphism in Architectural Theory*. United States of America: Rowman and Littlefield Publishers Inc.

———. (1990). The New Angel/Angle in Architectural Research. *Journal of Architectural Education*, 44(1), p. 11-19.

Fraser, I., Henmi, R. (1994). *Envisioning Architecture - An Analysis of Drawing*. New York: Van Nostrand Reinhold.

Gargus, J. (2005). The Tangency of the World to Itself - The Casa Malaparte and the Metaphysical Tradition. In T. Mical (Ed.), *Surrealism and Architecture* (pp. 168-178). New York: Routledge.

———. (1989). Guarino Guarini: Geometrical Transformations and the Invention of New Architectural Meanings. *Harvard Architecture Review*, v.7, p. 116-131.

Guarini, G. (written 1686, published 1737). *Architettura Civile*. London: Gregg Press (1964).

———. (1671). *Euclides adauctus et methodicus mathematicaq(ue) universalis*. Turin.

Hansen, M. (2006). *Bodies in Code - Interfaces with Digital Media*. London and New York: Routledge, Taylor and Francis Group.

———. (2004). The Affective Topology of New Media Art. In M. Hansen (Ed.), *New Philosophy for New Media* (pp. 197-232). Massachusetts: The MIT Press.

Haralambidou, P. (2007). The Fall - The Allegorical Architectural Project as a Critical Method. In J. Rendell, J. Hill, M. Fraser, M. Dorrian, (Eds.), *Critical Architecture* (pp. 225-236). Oxon and New York: Routledge.

Hays, K. M. (2010). *Architect's Desire - Reading the Late Avant-Garde*. Cambridge, Massachusetts: The MIT Press.

Hendrix, J. (2006). *Architecture and Psychoanalysis - Peter Eisenmann and Jacques Lacan*. New York: Peter Land Publishing Inc.

Hight, C. (2009). Meeting After The New Boss - The Death of Theory. *Architectural Design*, 79(1), p. 40-45.

Hill, J. (2007). Centuries of Ambiguity - Sublime and Beautiful Weather at the Farnsworth House. In J. Rendell, J. Hill, M. Fraser, M. Dorrian, (Ed.), *Critical Architecture* (pp. 170-181). Oxon and New York: Routledge.

———. (2006). *Immaterial Architecture*. Oxon and New York: Routledge.

James, P. (2008). Walter Pichler's House Next to the Smithy: Atmosphere and Ground. *Architectural Design*, 78(3), p. 60-63.

Kazi, O. (2009). Architecture as a Dissident Practice - An Interview with Diller Scofidio + Renfro. *Architectural Design*, 79(1), p. 56-59.

Koolhaas, R. (1978). *Delirious New York - A Retroactive Manifesto for Manhattan*. New York: The Monacelli Press, Inc.

Kerouac, J. (1957). *On The Road*. New York: The Viking Press.

la Marche, J. (2005). Surrealism's Unexplored Possibilities in Architecture. In T. Mical (Ed.), *Surrealism and Architecture* (pp. 273-289). New York: Routledge.

Lefebvre, H. (1991). *The Production of Space* (D. Nicholson-Smith, Trans.). Oxford: Blackwell.

Linder, M. (2004). *Nothing Less Than Literal*. Cambridge: The MIT Press.

Mallgrave, H. F. (2010). *The Architect's Brain - Neuroscience, Creativity, and Architecture*. London: John Wiley and Sons Ltd.

Martin, R. (2005). Critical of What? Toward A Utopian Realism. *Havard Design Magazine*, 22(Spring/Summer), 104-109.

Meister, S. H. (2004). *Michael Wesely Open Shutter - The Museum of Modern Art*. New York: Department of Publications - The Museum of Modern Art.

- Merleau-Ponty, M. (1962). *The Phenomenology of Perception* (C. Smith, Trans.). London and New York: Routledge.
- Paz Gutierrez, M. (2009). Post Thesis Summary Discussion. :AM - University of California, Berkeley Independent Student Publication.
- Perez-Gomez, A. (1983). *Architecture and the Crisis of Modern Science*. Cambridge, Massachusetts: The MIT Press.
- . (1977). *The Use of Geometry and Number in Architectural Theory: From Symbols of Reconciliation to Instruments of Technological Domination (1680-1820)*. Doctor of Philosophy, University of Essex, Essex.
- Perez-Gomez, A., Pelletier. (1992). Architectural Representation Beyond Perspectivism. *Perspecta*, 27, p. 20-39.
- Phelan, P. (2005). Building The Life Drive: Architecture As Repetition. In P. Upsprung (Ed.), *Herzog and de Meuron - Natural History* (pp. 289-299). Montreal: Canadian Centre for Architecture and Lars Muller Publishers.
- Rendell, J. (2007). Seeing Time / Writing Place. In M. Frascari, J. Hale, B. Starkey, (Ed.), *From Models to Drawings - Imagination and Representation in Architecture* (pp. 179-192). Oxon and New York: Routledge.
- Rice, C. (2007). Critical Post-Critical - Problems of effect, experience and immersion. In Rendell, J., Hill, J., Fraser, M., Dorrian, M. (Ed.), *Critical Architecture*. Oxon and New York: Routledge.
- Robinson, E. C. (1991). Optics and Mathematics in the Domed Churches of Guarino Guarini. *Journal of the Society of Architectural Historians*, 50(4), 384-401.
- Rosenthal, S. (2007). Mark Rothko: A Stage For Tragedy. In S. Rosenthal (Ed.), *Black Paintings - Robert Raushenburg, AD Reinhardt, Mark Rothko, Frank Stella* (pp. 55-64). Munich: Haus der Kunst.
- Saunders, A. (2009). Baroque Parameters. *Architectural Design*, 79(1), p. 132-135.
- Schumacher, P. (2010). Parametric Diagrammes. In M. Garcia (Ed.), *The Diagrams of Architecture* (pp. 260-269). London: John Wiley and Sons Ltd.

- . (2009). A New Global Style for Architecture and Urban Design. *Architectural Design*, 79(4), p. 14-23.
- Shohat, E., Stam, R. (2010). Narrativizing Visual Culture - Toward A Polycentric Aesthetics. In N. Mirzoeff (Ed.), *The Visual Culture Reader* (2nd ed., pp. 37-57). London: Routledge.
- Smout, M., Allen, L. (2007). *Augmented Landscapes*. New York: Princeton Architectural Press.
- Solà-Morales, I. d. (1997). Place: Permanence or Production (G. Thompson, Trans.). In S. Whiting (Ed.), *Differences - Topographies of Contemporary Architecture* (pp. 92-104). Cambridge: The MIT Press.
- Somol, R., Whiting, S. (2002). Notes Around the Doppler Effect and Other Moods of Modernism, *The Yale Architectural Journal*, p. 72-77.
- Sorkin, M. (1987). Canticles for Mike. *AA Files*(15), p. 67-72.
- Spiller, N. (2008). Radical Experimentation as Research: Avatar in *Architectural Design* 78(4), p. 130-131.
- . (2006). *Visionary Architecture - Blueprints of the Modern Imagination*. London: Thames and Hudson Ltd.
- Tafari, M. (1986). There is no Criticism, Only History. *Design Book Review*, 9, 8-11.
- . (1980). *Theories and History of Architecture* (G. Verrechia, Trans.). London: Granada.
- . (1976). *Architecture and Utopia: Design and Capitalist Development* (B. La Penta, Trans.). Cambridge: The MIT Press.
- Teyssot, G. (2008). Architectural Embodiment: Prosthetics and Parasites. In M. Carpo, F. Lemerle, (Ed.), *Perspective, Projections & Design* (pp. 175-188). New York: Routledge.
- Tierney, T. (2007). *Abstract Space - Beneath the Media Surface*. New York: Taylor and Francis.

Trieb, M. (2008). *Drawing/Thinking - Confronting the Digital Age*. New York: Taylor and Francis.

Twose, S., Smitheram, J. (2010). The Paper Life of Building: Performative Intra-Action. *Interstices*, 11, p. 49-61.

Varriano, J. (1986). *Italian Baroque and Rococo Architecture*. Oxford, New York and Toronto: Oxford University Press.

Vesely, D. (2004). *Architecture in the Age of Divided Representation – The Question of Creativity in the Shadow of Production*. Cambridge and London: The MIT Press.

———. (1994). Architecture and the Question of Technology. In Pelletier, L., A. Perez-Gomez, (Ed.), *Architecture: Ethics and Technology* (pp. 28-49). Montreal: McGill-Queens University Press.

Vidler, A. (2000). *Warped Space – Art, Architecture, and Anxiety in Modern Culture*. Cambridge: The MIT Press.

Webb, M. (2010). *Archigram Archival Project, Temple Island*, <http://archigram.westminster.ac.uk/project.php?id=236>. Retrieved 6/12/10

———. (1997). *Michael Webb - A True Archigrammer*. New York: Pidgeon Audio Visual and the Museum of Contemporary Art - Los Angeles.

———. (1987). *Temple Island - A Study By Michael Webb*. London: Architectural Association.

Wigley, M. (2001). Paper, Scissors, Blur. In C. de Zegher, M. Wigley, (Ed.), *The Activist Drawing - Retracing Situationist Architectures from Constant's New Babylon to Beyond* (pp. 57-74). New York: The Drawing Center.

———. (1992). Untitled: The Housing of Gender. In B. Colomina (Ed.), *Sexuality and Space* (pp. 327-389). New York: Princeton Architectural Press.

Wolf, E. M. (2010). *American Art Museum Architecture*. New York and London: W.W. Norton and Company Inc.

Wood, P. (2005). 'A woman asks her psychiatrist, "My husband only seems to want to use the dining room table for sex. What should I do?" The psychiatrist responds, "I would stop eating in bed."'. *Performance* - Tracey Publishing, p. 1-10.

———. (2002). *Drawing the Line: A Working Epistemology for the Study of Architectural Drawing. Doctor of Philosophy in Architecture*. Auckland: The University of Auckland,

Woods, L. (1987). Henley and the Enigma of Michael Webb. In M. Webb (Ed.), *Temple Island - A Study by Michael Webb* (pp. 54-56). London: Architectural Association.