EMBODIED REMEMBRANCE

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EMBODIED REMEMBRANCE

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“But let a sound, a scent already heard and breathed in the past be heard and breathed anew, simultaneously in the present and in the past, **real without being actual, ideal without being abstract...**”

- Marcel Proust, *Time Regained*, p. 264

I N C I P I T

*for my family,
and everyone who helped me get this far*

ABSTRACT

This thesis introduces embodied remembrance, to mediate the experience of the body and the digital in architecture. The rise of the digital has enabled an architecture which primarily responds to abstract desires and commodification. Embodied remembrance opposes this divorce from the digital to allow the architecture to access the affective richness embodied in mnemonic narratives. A 'design as research' methodology solidifies the theoretical proposition through four stages of design. The first three designs incrementally scale-up in the design of a spatial installation, medium-scale house-museum, and a public-scale care facility/archive. The final design shifts downwards in scale to consolidate the research findings. Each design shifts the theoretical framework, allowing critical reassessment of the design and research proposition. This research suggests an alternative architectural paradigm, sensitive to the complex issue of embodied remembrance experienced by the body.

P R E F A C E

Growing up as a person of mixed Māori and European background exposed me to both cultures. While I was raised and educated in design through a primarily Eurocentric framework, I am deeply privileged to have always been welcomed by the Māori community. This thesis represents my personal attempt to reconcile these divergent cultural influences, and determine my own design identity.

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INTRODUCTION

BACKGROUND

This thesis opposes the removal of the body by digital architecture. Following Betsky (2007) “architecture is falling apart into engineering, art, and the pursuit of monumental forms meant to express the spirit of our times” (p. 448). The digital has enabled an architecture which primarily responds to abstract desires and relegating the built to a pallid imitation of the self-stratifying utopia offered by the virtual. Schumacher (2015) typifies this position in his defence of architecturally institutionalised, laissez-faire capitalism: “Only market processes can process the new diversity and complexity of information, and generate the knowledge required to deliver land and real estate reliably to productive and desired uses...” (p. 36). Cruz (2015) directly opposes this:

[...] it would be naïve not to acknowledge the crypto-political dimension of this project as it smoothly aligns itself with the power of a neoliberal political economy of urban growth that has been characterized by an anti-public agenda, engendering unprecedented urban asymmetry and socioeconomic inequality[...] (p. 190).

For Cruz, the digital may negotiate a democratic plurality of experience, contrasting Schumacher’s institutionalised rejection of the body. Andrews (2015) highlights this disconnect: “[digital architecture] prefers the perception of a seamless transition from design to building without human interference and all our messy, irreconcilable frailties” (p. 153). Schumacher’s political project obscures the digital’s potential to challenge authoritarian homogenisation and catalyse diversified architectural experiences. This thesis introduces embodied remembrance to allow the digital to access the affective richness of embodied mnemonic narratives.

SCOPE

This thesis does not offer a panacea for the digital in contemporary architectural praxis. Instead, it explores the possible effects of introducing embodied remembrance to design. Although many conditions contribute to embodied remembrance, this thesis underscores the design's intimacy with the body, treatment of thresholds and experience. This positions the inquiry in terms of affect and controls the inherent complexity of bodily experience in architecture. The thesis' overall structure is allocated 25% on writing, and 75% on design per the course directive. Within the 75% allotted to design, the installation and medium-scale comprise 25% each. The public-scale comprises the final 50%. These scale divisions were a prerequisite of the research stream and not elected by the author. In reality, the size of the public-scale projects would necessitate a collaborative design approach. Hence, this thesis suggests specialised design where appropriate, but the project's size means its exact design is outside of the research scope.

RESEARCH PROPOSITION

This thesis proposes to explore how embodied remembrance mediates bodily experience in architecture through four design experiments. The first three tests shift incrementally upwards in scale to investigate embodied remembrance within an installation, a medium-scale memorial house-museum, and a public-scale care facility/archive. The design of a rehabilitation centre then shifts downwards in scale to consolidate the research findings.

METHODOLOGY

This thesis explores embodied remembrance through an experimental “design as research” methodology. This allows for some initial ambiguity in the research proposition, which acknowledges the indeterminacy and subjectivity of embodied remembrance. Hence, a strictly linear methodology could subvert the research’s findings. After Rendell (2013), design as research “... operates through generative modes, producing works at the outset that may then be reflected upon later” (p. 117). This perpetual critical reflection and reinterpretation form a feedback loop between the proposition and design.

The method of ‘scaling’ explores embodied remembrance. Following Yaneva (2005): “scaling can be considered as an experimental situation in the sense that it is subjected to constant and well-equipped observation of possible consequences [...] it is an apparatus for conducting, recording and interpreting[.]” (p. 868). Scaling controls the resolution immediately demanded for design. The first experiment examines the tension between the body and an intimately-scaled spatial installation. The principles established here are challenged to incorporate a simple architectural programme by scaling-up to the medium-scale. Scaling-up to the public-scale forces a reconciliation with a complex, large-scale architecture. The final downwards scale shift advances the resolution of the public-scale design.

	INTRODUCTION
<i>i. Research for Design</i>		THEORETICAL CONTEXT
	CASE STUDIES
	NO MAN'S LAND
<i>ii. Research Through Design</i>		HOUSES OF THE HOLY
	RANDOM ACCESS MEMORIES
	SOMA
<i>iii. Reflection on Design</i>		CONCLUSION

THESIS STRUCTURE

1

This thesis is composed of eight chapters. The introduction establishes the background, scope, proposition, and methodology for the exploration of embodied remembrance.

2

The theoretical context chapter highlights the body's position in the affective exchange of experience and remembrance within mnemonic assemblages. The collapse of linguistic meaning in the aesthetics of traumatic remembrance highlights a remembrance of cultural and contextual values that is fundamentally embodied. These discussions highlight how an intimacy with the body, threshold conditions, and experience convey the essential conditions of embodied remembrance.

3

The case study chapter first considers how Jane and Louise Wilson's installation, *A Free and Anonymous Monument* situates remembrance for the moving body. Next, Walter Pichler's work, suggests embodied remembrance could effloresce from the divergent collapsing and unfolding of temporal conditions. At the public-scale, Alvar Aalto's Paimio Sanitorium suggests embodied remembrance emerges in the imbrication of thresholds of intensity between architecture and the body. Finally, Le Corbusier's *La Tourette* suggests embodied remembrance can emerge through the imbrication of irreconcilable experiential strata. Through their intimacy with the body, treatment of threshold conditions, and experience, these case studies enhance the understanding of embodied remembrance across shifting scales.

4

The first design chapter explores embodied remembrance through a spatial installation. This installation focuses on its relationship to the body and operates as a layering and collapsing of experience and remembrance.

5

The memorial house-museum explores embodied remembrance at the medium-scale. This introduces a basic programme to clarify the position of the digital and the qualities of embodied remembrance in the design.

6

The public-scale care facility and archive introduce a more sophisticated programme to explore how embodied remembrance manifests in a complex, large-scale architecture.

7

The rehabilitation centre scales down to consolidate how the public-scale architecture addresses embodied remembrance. This elaborates on the care centre, to resolve the dualism of the body and the digital.

8

The conclusion chapter critically evaluates the exploration of embodied remembrance. This summarises and reflects on the research, before suggesting potential future directions.

THEORETICAL CONTEXT

INTRODUCTION

Following the research framework established in the previous chapter, this chapter establishes the theoretical context for embodied remembrance. This chapter intentionally does not provide the theoretical context for the digital. I have approached this thesis from a personal background in digital design, having previously pursued it through critical theory and design-led research. My research resonated with Pallasmaa's (2007) assertion that "the buildings of our time may arouse our curiosity with their daring or inventiveness, but they give us little sense of the meaning of our world or our own existence" (p. 242). Hence, despite the digital's prominence to this research, this chapter intends to clarify the complex nature of embodied remembrance. Given the brevity of this thesis, this chapter focuses on the philosophical position of remembrance, although remembrance overlaps with other fields of study, for example, physiology and psychology. Firstly, the taxonomy of memory distinguishes it from remembrance. Conceptions of remembrance separately establish its intimacy with the body. The notion of affect questions the thresholds between remembrance, the body, and space in contemporary critical theory. This chapter then analyses how embodied remembrance could manifest in architecture. Daniel Libeskind's *Jewish Museum Berlin* implicates the collapse of linguistic meaning in the aesthetics of traumatic remembrance. Carlo Scarpa's *Brion Tomb and Sanctuary* then suggests a remembrance that is fundamentally embodied. This chapter concludes by identifying conditions to examine embodied remembrance in further design work.

▲ **Figure 005** *In Memory of George Dyer*, 1971 (CR 71-09) • Francis Bacon
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I. THE TAXONOMY OF MEMORY

The taxonomic divisions of memory contextualise its distinction from remembrance. This section presupposes the historical division of memory into three different forms. Bergson (1896/2004) and Russell (1921), distinguish between ‘habit’ memory and ‘recollective memory.’ Broad (1925) and Furlong (1951) further separate propositional memory from recollective memory. Michaelian and Sutton (2017) analogue these categories to the taxonomy developed by Squire (2009).

DECLARATIVE AND NONDECLARATIVE MEMORY

Squire’s (2009) taxonomy, divides memory into declarative and nondeclarative forms. ‘Declarative’ memory concerns the conscious recollection of facts and events, and is divided into ‘episodic,’ or recollective memory, and ‘semantic,’ or propositional memory. Squire draws upon research into memory by other authors, such as Tulving:

Episodic memory receives and stores information about temporally dated episodes or events, and the temporal-spatial relations among these events [...] Semantic memory is [...] organized knowledge a person possesses about words and verbal symbols, their meaning and referents, about relations among them, and about rules, formulas and algorithms for the manipulation of these symbols, concepts and relations (1972, pp. 386-387).

Hence, a person may have memories of their past (episodic memory), but also the world in general and past events witnessed secondarily. Semantic memory also incorporates previously forgotten events in the person’s life, reconstructed from second-hand accounts (Michaelian & Sutton, 2017).

Squire’s (2009) taxonomy also acknowledges an opposing ‘non-declarative’ memory which does not involve the conscious encoding, storage, and recollection of information. Nondeclarative memory is experienced through performance as a “personality trait rather than as a memory” (p. 12711). This parallels

Wittgenstein's (1980) assertion that memory can amount to doing or saying something, rather than retrieving stored content. However, nondeclarative memory is far less understood due to an overwhelming interest in declarative memory's unique access to past events (Hume, 1738/1890; J. Locke, 1689/1836; Reid, 1764/1810; Sorabji, 1972/2004). Russel (1921), and Klein (2015) even suggest that episodic memory alone merits the name 'memory,' much less the nebulous conception of nondeclarative memory.

REMEMBRANCE AS OPPOSED TO MEMORY

In addition to distinguishing between forms of memory, epistemologists broadly differentiate between memory and remembrance. In epistemology, remembrance is knowing something continuously since one first learned it (Annis, 1980; Holland, 1974; D. Locke, 1971; Munsat, 1967; Zemach, 1968). The epistemological theory has been advocated in contemporary philosophical discourse (Adams, 2011; Audi, 2002; Michaelian & Sutton, 2017; Williamson, 2002). However, it relies on the questionable assertion that remembered knowledge requires justification, truth, and belief (Senor, 2014). The claim that remembering requires belief the event happened, as well as the claims of justification and truth have been convincingly challenged (Audi, 1995; Bernecker, 2011; Debus, 2007; Lackey, 2005). Hence, this thesis considers remembrance separately (but linked) to the concept of memory.

II. CONCEPTIONS OF REMEMBRANCE

Remembrance's diverse conceptions further distinguish it from memory. Most theories broadly fit within two incompatible models. Koriat and Goldsmith (1996) use the metaphor of the 'storehouse,' in opposition to 'correspondence.' Robins (2016) presents this dichotomy as the 'archive,' versus the 'construct.' Michaelian and Sutton (2017), describe these conceptions as 'preservationist' or 'generationist.' There are outliers to these generalisations (Kolers & Roediger, 1984; Malcolm, 1977; Roediger, 1980). However, due to the brevity of this thesis, the preservationist and generationist dichotomy will be used to focus the discussion.

PRESERVATIONIST AND GENERATIONIST REMEMBRANCE

Preservationist positions remembrance as a function of encoding, storing and retrieving past information. Plato (360BCE/1990) compares this to inscribing information on a wax tablet:

[...] there is in our souls a block of wax [...] whenever we wish to remember anything we [...] hold this wax under the perceptions and thoughts and imprint them upon it, [...] and whatever is imprinted we remember and know as long as its image lasts, but whatever is rubbed out or cannot be imprinted we forget and do not know (p. 325).

Contemporary authors further this position using the metaphor of retrieving information from a technological device, such as a computer's hard drive (Depper, 2016; Draaisma, 2000; Kanayama, 2018). Until recently in philosophical discourse, the preservationist theory has been widely influential (Michaelian & Sutton, 2017).

Recently, however, the influence of the 'generative' conception of remembrance has been increasing (Debus, 2010; Michaelian, 2011a, 2011b). Generationism positions remembrance as an active, epistemologically generative process beginning in psychology with Bartlett (1932/1995), who suggested remembrance

▲ **Figure 006** *Triptych August 1972, 1972 (CR 72-07)* • Francis Bacon
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creates and recreates memories in response to external stimuli. Bartlett has influenced contemporary epistemologists, who have distinguished two forms of remembrance which address the 'Justified true belief' model of knowledge. The first suggests remembrance creates the justification for knowledge (Audi, 2002; Bernecker, 2010; Huemer, 1999; Lackey, 2005; Michaelian, 2011a; Owens, 1996). The second suggests remembrance creates new reasons for belief (Huemer, 1999; Michaelian, 2011a). The growing influence of generationist remembrance reflects an increased interest in false and recovered memories (Campbell, 2003; Campbell et al., 2014; Hacking, 1995; Hamilton, 1998). Recovering memories implicates Virtuality, contemporised by Gilles Deleuze, following the works of Henri Bergson and Marcel Proust.

VIRTUAL REMEMBRANCE

Virtuality intimately connects remembrance to the bodily experience of intersecting actual and non-actual (virtual) components. Bergson, citing Marcel Proust, codified the "virtual" as "real without being actual... ideal without being abstract" (Cited in Deleuze, 1994, p. 208). Bergson suggests the duality of Matter and Memory: "we perceive things where they are, perception puts us at once into matter" (Cited in Deleuze, 1991, p. 25). Deleuze implicates the body's duration in time as remembering "puts us into mind" (p. 26). Experience actualises the material body, while remembrance implicates its duration in time. The sympathetic exchange of the material and the virtual creates and recreates the body's experience. The virtual incorporates an intimacy with the body, with the embodied affect of remembrance. This intimacy with the body is significant later in this thesis.

III. EMBODIED REMEMBRANCE AND AFFECT

This section elaborates on embodied remembrance's affect on the body. First, a brief overview of the body's diverse historical conceptions contextualises its relationship to affect. Assemblage theory then exposes the affective relationship between remembrance, the body becoming-durational, and the external. 'Traumascapes' apply the affect of embodied remembrance to space, to implicate how embodied remembrance is defined, prior to shifting to architecture.

REMEMBRANCE AND THE AFFECTED BECOMING

Before discussing affect, it is essential to acknowledge the body's diverse historical conceptions and position in contemporary discourse. Vidler (1999) questions how the history of the body is artificially 'defined within specific periods,' yet proceeds to do so for clarity and brevity. This thesis adopts these boundaries, as a full history is outside the scope of this chapter. In antiquity, the body occupied a privileged position as a model to produce 'ideal' forms. The enlightenment through to modernism withdrew from the body as an authoritative foundation for architecture (de Sola-Morales, 1997; Vidler, 1999). Postmodern discourse reacted against the loss of the body, conceiving it separately from experience (Pallasmaa, 1991/2005), as a symbol (Vidler, 1999), and as a fluid/formless assemblage of components (Deleuze & Guattari, 1987/2016; Grosz, 2001; Lynn, 1998). The cyborg (Haraway, 1991), and fragile body (Andrews, 2015) indicate the body's ongoing multiplicity in contemporary discourse. The notion of 'architecture as verb' continues to respond to Deleuze and Guattari's formless and fluid body (Davidson, 1997).

Reflecting the continued pertinence of the formless/fluid body, embodied remembrance affects the movements within its assemblage. Deleuze and Guattari (1987/2016) distinguish between the affects which induce deterritorialization (movement to another state) and reterritorialization (the colonisation of that state) within an assemblage. They argue that "memories always have a reterritorialization function." However, they extend this "wherever we have said 'memories'

in the preceding pages [...] we were saying becoming” (pp. 342-343). Deleuze and Guattari liken this process to remembering-childhood, which coexists with the becoming-adult, as opposed to the child that was. Embodied remembrance affectively composes the body in dialogue with the body becoming-durational.

Contemporary authors foreground the body’s interaction with the external through the affect of embodied remembrance. Casey (1999) amplifies the body-remembrance assemblage’s relationship to the virtual. ‘Through the ‘glance’ the body “brings its own past to bear on that ongoing present” (p. 84). Becoming-durational “continually becomes; it keeps on consolidating its own gains and losses in the whole that is at once abyssal and comprehensive” (p. 85). Casey suggests that past-present-future are only perforations of duration’s dense tissue, unravelled by the instant of the glance. Freeman et al. (2016) shift away from the purely literary, to suggest mnemonic objects are constituted by a thing’s assemblage with the mnemonic body:

Objects become mnemonic things when they become part of a meaningful assemblage, when they have rubbed up against the human in a memorable way (or when the human has rubbed up against them), and when traces of past experiences have been created with and held within them (p. 4).

Following Freeman et al., confronting the body imbues the external with mnemonic meaning. Pallasmaa (2000) emphasises the significance of touch in the mnemonic confrontation between the human and non-human, as “haptic experience evokes the experience of a temporal continuum” (p. 78). Following Pallasmaa, hapticity integrates the mnemonic experience of space, and ourselves.

PERFORMATIVE TRAUMASCAPES

Tumarkin (2004) suggests the body creates a mnemonic-assemblage in its confrontation with ‘traumascapes.’ Traumascapes are places that “embody our traumatic histories; it is to them that we turn to mourn, remember and make sense of the pain and loss around us” (p. 23). Here the body experiences remembrance as an affective quality of the space:

The invisible made visible, the yet-to-be-manifest made palpable, the ghostly made visceral, human body revealed to be both an archive of feelings and a tuning fork [...] adept at capturing the affective power of traumascapes as we encounter them first-hand or through acts of secondary witnessing, as inheritors of traumatic histories [...] or as strangers passing through on our way somewhere else (Tumarkin, 2015, p. 36).

Remembrance affectively reconciles the body with the immense, unhealable trauma embodied in traumascapes. Space becomes the focusing threshold for the distribution of the affective intensities of embodied remembrance. This notion of the threshold is pursued further in this thesis.

The reconciliatory function of Traumascapes parallels Connerton's (1989) definition of embodied remembrance as a communal reflection upon mnemonic narratives habituated through the "bodily substrate of the performance" (p. 71). Connerton positions embodied remembrance against the privileged object to suggest that bodily performance may subconsciously or otherwise evoke the past "without explicitly representing it in words or images" (p. 72). However, Conway (2007) criticises the fixity of embodied remembrance after Connerton: "past practices are [...] selectively incorporated and reformulated constantly according to changing circumstances in our lives: in this sense the practices prolong the past within the present, but at the same time reformulate its legacy" (p. 107). This chapter next pursues the instability of embodied remembrance through an architectural lens.

IV. EMBODIED REMEMBRANCE AS ARCHITECTURE

Shifting to architecture requires a break in this chapter's continuity. After Grosz (2001) "architecture is a discipline seeking self-definition, and for that self-definition it looks outside of itself, to see what others say about it" (p. 5). This thesis recognises architecture's distinction from, but receptivity to the incursion of philosophy and critical theory. Writing is (not) architecture – but in presenting it this way, this section continues the pursuit towards embodied remembrance in architecture. First, this section questions how the *Jewish Museum Berlin*, by Daniel Libeskind situates embodied remembrance in discussions on the 'memorial uncanny,' and 'evil sublime.' Reflecting upon the collapse of linguistic meaning in representations of trauma, *Brion Tomb* by Carlo Scarpa implicates a remembrance that is fundamentally embodied. This section could draw upon many other architectural examples (and some are where relevant). However, due to the brevity of this thesis, these two well-published examples are used to focus the discussion.

THE AESTHETICS OF TRAUMA

The *Jewish Museum Berlin* (1989-1999 – **Figure 008**) by Daniel Libeskind connects embodied remembrance to discussions on the 'memorial uncanny,' and 'evil sublime.' Following Libeskind (1992): "[...] very little remains of the Jewish presence in Berlin—small things [...] evocative of an absence rather than a presence. I thought therefore that this "void" that runs centrally through the contemporary culture of Berlin visible, accessible" (pp. 85-86). Gross (2006) parallels this emphasis on gaps, voids, and incongruities to the *Berlin Holocaust Memorial* (**Figure 009**). These irregularities "both reflect and try to make up for geographical and historical distance, introducing visitors to a range of experience beyond their immediate knowledge" (p. 76). Engaging visitors as secondary witnesses to trauma has been praised as 'prosthetic memory' (Landsberg, 1997) and criticised by other authors as 'memory envy' or 'trauma envy' (Hartman, 1996; Mowitt, 2000).

THE MEMORIAL UNCANNY

Young (2000) locates the Jewish museum's excavation of suppressed memories in the affect of the 'memorial uncanny'. Hook (2005) aligns affect theory with Freud et al.'s notion of the 'Uncanny' to suggest "the uncanny may help us understand how monuments produce insidious ideological and interpellative affects by incurring affects of uncanniness" (p. 702). Hook identified that the modality of the uncanny engaged with affect is based on "repetitions of time, hauntings, overlaps, problematic, precisely uncanny relationships between what is past and what is present" (p. 698). The uncanny thereby emphasises the affective role of recurrence in creating an affect of unsettling familiarity.

Young (2000) refers to Lydenburg's 'uncanny narrative' to describe the experience of the Jewish museum as a mnemonic structure: "It is a memorial architecture that invites us into its seemingly hospitable environs only to estrange itself from us immediately on entering" (p. 3). In the affective anxiety this subversion inspires, the Jewish museum is anti-redemptive of the trauma which it remembers. The uncanny memorial "never domesticates such events, never makes us at home with them, never brings them into the reassuring house of redemptory meaning. It is to leave such events unredeemable yet still memorable, unjustifiable yet still graspable in their causes and effects" (Young, 2000, p. 3). Young situates the architecture's embodied mnemonic qualities as a rapprochement between the body, and the ghostly vestiges of the past made visible through built form. The uncanny memorial is, therefore, a subversion: an architecture which is outwardly the domain of the inviting, while inwardly given over to the insubstantial and haunting affect of the formerly-familiar.

THE NEGATIVE SUBLIME

However, this aesthetic subversion also implicates the *Jewish museum* in discussions on an emerging 'evil,' or 'negative' sublime in representations of the Holocaust. Jean-François Lyotard (1988) designates the representational crisis precipitated by the Holocaust as the "differend," which is "the unstable state and instant of language wherein something which must be able to be put into phrases cannot yet be" (p. 13). The differend does not describe the collapse of language per se, but

it does signal a collapse of meaning analogous to the sublime, in which “the absolute is not presentable” (p. 77). Friedländer (1993) suggests to represent the Holocaust “we would need a new category equivalent to Kant’s category of the sublime, but specifically meant to capture inexpressible horror” (p. 115). The *Jewish Museum* presents this ‘nonrepresentable absolute,’ as the immense embodied trauma exceeds representation through language.

Lang (1992) develops the ‘nonrepresentable’ in his argument for a ‘negative sublime’ in representations of the Holocaust like the *Jewish museum*. Lang suggests that instead of ‘individualising’ traumatic remembrance, holocaust remembrance should strive for “nonrepresentational representation” (p. 12). However, Felman and Laub (1992) made a case for personal testimony in traumatic remembrance: “[testimony] does not need to ‘possess or own the truth, in order to

▲ Figure 009 Peter Eisenman - The Berlin Holocaust Memorial • Luca Onniboni

effectively bear witness to it' (1992, p. 15). In their usage, personal testimony does not convey facts; instead its distortions index the overwhelming trauma. Both positions are critical of the representation of holocaust remembrance; however, they are fundamentally irreconcilable. Felman and Laub aestheticise the vagaries of individual remembrance, whereas Lang suggests an anti-aesthetic which rejects individualisation.

ARCHITECTURE AS MONUMENT

The *Brion Tomb and Sanctuary* complex (1968-1978 - **Figure 010**) by Carlo Scarpa negotiates this linguistic disconnect through implicating a remembrance that is fundamentally embodied. This section adopts the practice of many authors writing on the *Brion Tomb*, who use the terms 'monument' and 'memorial' interchangeably. This is usually distinct from monumental architecture, which is another complex, politicised issue (Huyssen, 1996), and as such is outside the scope of this brief chapter. Alt (2017) positions the *Brion Tomb* in Peter Homans' discourse on monuments:

Experienced unconsciously as objects, the monument is a sort of compromise formation by means of which a group can unconsciously immerse itself in an experience of loss [...] move on into the present (the construction of the monument), and from there to release into the future (the ability to mourn and return to, or create a rapprochement with, the great necessities of life) (p. 288).

Embodied remembrance in monuments serves a reconciliatory function with traumatic memories. Indeed "the cemetery is not a place of mourning; it provides for social engagement while supporting the act of remembrance, the connection to the traditions and understandings of the culture" (Kacmar, 2018, p. 59). Through monuments, people can reconcile actively and communally with embodied remembrance.

The reconciliatory function of monuments like the *Brion Tomb* is politically significant. Schwartz (1982) suggests that "commemoration lifts from an ordinary historical sequence those extraordinary events which embody our deepest and most fundamental values" (p. 377). Blair et al. (1991) note "conflicts over whom

or what to memorialize and in what ways have occurred frequently, and these conflicts often are registers of present and future political concern” (p. 263). Through commemoration, monuments adopt an inherently political agenda. Blaire et al. further suggest “commemorative monuments ‘instruct’ their visitors about what is to be valued in the future as well as in the past” (p. 263). This analysis is pertinent, as ‘monument’ derives from the Latin ‘monere,’ which means not just ‘to remind’ but also ‘to admonish,’ ‘warn,’ ‘advise,’ ‘instruct’” (Griswold, 1986, p. 691). In this way, Stern (1994) suggests that the *Brion Tomb* embodies cultural funerary rituals, demonstrated in the prominence of the liminal space, bridging zones of separation and incorporation. Embodied remembrance within monuments then reflects and enshrines the cultural values involved in its creation.

Brion Tomb’s embodied rituals amplify the disconnect between architecture and philosophy/critical theory. Significantly, the architectural experience of embodied remembrance extends beyond aesthetics. As in Fisher (2016): “A far-reaching philosophy of architecture extends beyond even a broadly aesthetics-based assessment, to include considerations of ethics, social and political philosophy, and philosophical reflections on psychology and the behavioural sciences” (n. p.). In *Brion Tomb*, the body experiences embodied remembrance through the architecture’s assembled cultural, social, political, and even disciplinary contexts. Applying embodied remembrance to architecture thereby supports Conway’s (2007) definition of embodied remembrance as unstable—mobilised through mutable constructions and reconstructions of group identity. This manner of experientially conveying embodied remembrance is pursued further in this thesis.

CONCLUSION

Through its distinct conceptualisations separate from memory, remembrance attains an intimacy with the body becoming-durational. In affectively ‘rubbing’ up against the thresholds of objects and spaces, the body implicates ever-expanding mnemonic assemblages. Embodied remembrance has been variably defined in the social sciences, but emerges in communal reflections upon mnemonic narratives habituated through bodily performance. This thesis recognises architecture’s distinction from, but receptivity to the incursion of philosophy and critical theory in pursuing embodied remembrance. Daniel Libeskind’s *Jewish museum* indicated the collapse of linguistic meaning in representations of trauma. Carlo Scarpa’s *Brion tomb* then suggested the bodily experience of embodied remembrance through the diverse cultural, social, and political strata enshrined in the architecture. Architecture thereby highlighted the instability of embodied remembrance mobilised through mutable constructions and reconstructions of group identity. The intimacy with the body, the threshold conditions it rubs up against, and the complex experience of embodied remembrance are pursued further in this thesis.

■ ■ ■ ■

CASE STUDIES

INTRODUCTION

This chapter analyses case studies which suggest strategies to facilitate embodied remembrance across different scales of architecture. Each case study was conducted alongside the comparatively-scaled design chapter. The design process considered other precedents (these are signalled where relevant), but the case studies were critical to designing for embodied remembrance. Jane and Louise Wilson's installation *A Free and Anonymous Monument* collapses remembrance into a spatial experience for the moving body. At the medium-scale, Walter Pichler's work suggests how embodied remembrance could effloresce from a divergent collapsing and unfolding of temporal conditions. Alvar Aalto's *Paimio Sanitorium* suggests strategies to invoke embodied remembrance in a public-scale architecture. Finally, Le Corbusier's *Sainte Marie de La Tourette* suggests strategies to facilitate the incongruities and paradoxes of embodied remembrance in the second public-scale design. This chapter applies the fundamental conditions of embodied remembrance identified in the previous chapter to evaluate how the case studies utilise a sense of intimacy with the body, threshold conditions, and experience. Each condition is examined through its architectural expression (under 'expression') and an analysis thereof (under 'analysis'). The 'experience' of works draws from architectural evidence and other's first-hand accounts.

JANE AND LOUISE WILSON

A Free and Anonymous Monument

Jane and Louise Wilson's *A Free and Anonymous Monument* (2003 - **Figure 013**) collapses remembrance into a spatial experience for the moving body. The Wilsons reengineer work by the artist Victor Pasmore to explore the ruination of modernism. Embodied remembrance forms a dynamic element of the architecture through its intimacy with the body, consideration of threshold conditions and the architectural experience.

INTIMACY WITH THE BODY

Expression: The Wilsons create an intimacy with the body by abstracting kinaesthetic qualities from Pasmore's work, such as *An Exhibit* (1956) and the *Apollo pavilion* (1969 – **Figure 015**). Their traces form tangible elements of the space. The body enters the installation through a concrete vestige of the *Apollo pavilion* (**Figure 014**). Beyond, 'Exhibit's' layered planes haunt the installation's spatial configuration.

Analysis: *A Free and Anonymous Monument* inherits Pasmore's language of the relief: "a form of art that ... is appreciated by way of touch— for touch alone can reveal its formal structure and nuances" (Bruno, 2007, p. 54). The inter-relationship of the layered screens abstracts out this hapticity: "one senses the layers and the depth of the space. One is physically engaged in its plastic density and can experience it kinaesthetically" (Bruno, 2007, p. 54). The installation's abstracted screens form layered boundaries to be negotiated by the moving body. The Wilsons' implicate the body's position in and movement through space to embody a kinaesthetic remembrance.

THRESHOLDS

Expression: In the Wilson's response to the moving body, threshold conditions index a collapsed plurality of temporal and experiential strata. Entrance through the *Apollo pavilion* frames present experience with the ruins of the past. Screens overlay and blend to portray shifting images of factories and oil rigs. The installation becomes a plane to walk on, and through, uninterrupted by plastically evolving state changes.

Analysis: Through the *Apollo pavilion* remnant the Wilsons invite the intersection of experience and remembrance upon the substrate of Pasmore's work, to diffuse the thresholds between past and present. Beyond this, the Wilson's diffuse the thresholds between multiple perspectives. Bruno (2007) parallels this with the picturesque's evolving vistas. The installation reflects modernity's "disjointed, split, fragmented, multiplied, mobile, transient, and unstable" visual terrain (Bruno, 2007, p. 57). As an aggregate mnemonic structure, the installation memorialises this new visual culture. The installation becomes a mediating threshold

▲ Figure 015 Victor Pasmore - *Apollo Pavilion* • James O. Davies

◀ Figure 014 *A Free and Anonymous Monument*, 2003 • Jerry Hardman-Jones

through which the body may access collapsed strata of architectural remembrance.

EXPERIENCE

Expression: The Wilsons compose the work kinetically. The changing orientations of screens forces the body to respond. The body thereby encounters further perspectives, as space is conceived and reconceived through the motion of the body, and mutable projected images.

Analysis: *A Free and Anonymous Monument* inherits and extends the moving experience of Pasmore's work. Pasmore's work presupposes that the spectator must displace themselves to appreciate subtle shifts in light and colour on projecting forms (Bruno, 2007). The Wilson's elaborate upon this conception of an engaged architectural spectator as the beholder of a moving, fluctuating, plastic spatial experience. After Bruno (2007): "If Pasmore's viewer, impelled to move, was made into a spectator, here the viewer is quite literally [...] a film spectator" (p. 48). The body is both audience to the Wilson's direction and the lead actor in the scenes that unfold around it. *A Free and Anonymous monument* embodies a remembrance of modernity, experientially conceived for the moving body.

CONCLUSION

Jane and Louise Wilson's *A Free and Anonymous Monument* collapses remembrance into a spatial experience for the moving body. The installation attains an intimacy with the body through inheriting traces of hapticity, recomposed as a kinaesthetic frame. The Wilson's diffusion of thresholds between diverse temporal, perspectival and mnemonic strata position the installation as an index to embodied remembrance. The experience of the installation is conceived for the body in motion, as both spectator and actor in filmic remembrance. *A Free and Anonymous Monument* invokes embodied remembrance in the kinaesthetic imbrication of diverse temporal and mnemonic strata. Next, Walter Pichler's work suggests how embodied remembrance could effloresce from a divergent collapsing and unfolding of temporal conditions.

WALTER PICHLER

Various Works

Walter Pichler's work suggests how embodied remembrance could effloresce from a divergent collapsing and unfolding of temporal conditions. Due to their consistent themes (Lewis, 2001b), this section will analyse several of Pichler's works. For Lewis (2001b), Pichler's work "is the attempt of one individual to confront objects and structures that come from a civilization's collective memory, from its rituals and its magic" (p. 52). Pichler's work thereby becomes a notation for embodied remembrance through its intimate relationship to the body, treatment of threshold conditions and the experience of the architecture.

INTIMACY WITH THE BODY

Expression: The *Old Figure* (1960-c1963 – **Figure 018**) evidences Pichler's 'sculptural' modality of the body. A 'facial' relief expresses the elongated 'body's' mysterious inner workings. Works like the *Bed* (1971 – **Figure 019**) fit directly to the body.

Analysis: Pichler's work portrays the body as the subject and operator of the designed object. The 'sculptural' body is "reduced to machined and machine-like objects highly polished and wrought, a body that is clothed and housed metaphorically and mythically..." (Dunster, 2005, p. 91). Pichler's 'sculptural' body echoes the lived body as its subject. However, the sculptural body is abstracted through its projection into structure, physiognomically unifying face and façade. By contrast, the *Bed* locates the lived body as its operator and inhabitant, as the same wrought and polished structures extend to clothe the body. Pichler's work abstracts the body as the object of representation, while enveloping outer layers embody the work's intimate relationship to the lived body.

THRESHOLDS

Expression: In ‘en-dressing’ the body, Pichler’s work negotiates the thresholds of intensity within an assemblage. The *House for the Steles* (**Figure 021**) expresses these thresholds in its stepped concrete footings which necessitate and create the passage upwards. Pichler situates almost all of his works at his home/studio in St Martin (**Figure 020**). Each new pavilion sprawls out ad hoc from the central workshop. Older works, such as the House for the Movable Figure, are juxtaposed against newer works, such as the House for the Two Troughs.

Analysis: Pichler mediates the juxtapositions of figure/ground, and past/present through a gradation materialised in the architectural threshold. Achleitner (1993) notes that “the bases are [...] the prerequisite site for the levitation of the figure,

▲ **Figure 019** *Walter Pichler - “Bed” (1971)*

◀ **Figure 018** *Walter Pichler - “Old Figure” (1960-c1963)*

for its detachment from the ground [...]” (p. 15). The stacked layers of the bases materialise and gradate the threshold between the ground and the levitated figure. Through juxtaposing past and present constructions Pichler’s thresholds bridge diverse temporal conditions. Lewis analogises this to Semper:

The transition from the phase of decay into the next phase, that of the fermentation of elements in preparation for the birth of a new system of monumental art is so imperceptible that the borderline between the two phases cannot be detected [...] (Cited in Lewis, 2001a, p. 5).

Semper’s imperceptible ‘borderline,’ indicates the diaphanous temporal threshold between decayed and emergent tissue. Pichler’s work bridges the threshold between experience and remembrance tacitly bound within the designed objects.

EXPERIENCE

Expression: The feedback between Pichler’s architectural interventions at *St Martin* inexorably connects the experience of each work, with the whole temporal assemblage. The sprawling pavilions shield Pichler’s inner sanctum. The consistent rural vernacular language of gable roofs and timber frames ascribes each space to a wider ‘family’ of experience.

Analysis: The spatial network concretises an experience of the works’ chronology and context. The individual architectural components of the *St Martin* assemblage occupy and index an interpolated series of collapsed temporal strata. Achleitner (1993) notes that “all of the houses [...] are either expansions, alterations, or detached objects with a strong, unmediated relationship to one of the old buildings” (p. 11). The familial relationship between works integrates the experience of multiple spatiotemporally separate elements. The body experiences each work interiorly as a finality, but new possibilities effloresce from their proximal and visual relationships. Each of Pichler’s works is encountered within a divergent collapsing and unfolding of temporal strata, embodying a remembrance that weaves together the chronological tissue of the spatial experience.

◀ **Figure 021** (Top) Walter Pichler - “House for the Steles” (1987)

◀ **Figure 020** (Bottom) Plant St. Martin on the Raab • Deitmar Trummer

CONCLUSION

Walter Pichler's work suggests strategies to address embodied remembrance. Pichler projects an intimacy with the body onto his architecture as site and internal revelation. Pichler's works thereby bridge the threshold between juxtaposing experiential and temporal conditions. The parallel experience of the old and new at his home/studio in *St Martin* further concretises remembrance as an experiential condition. Pichler's work suggests embodied remembrance may effloresce from a divergent collapsing and unfolding of temporal conditions, performed within and between the architecture as an enclosure for the body. Next, this chapter considers how Alvar Aalto's *Paimio Sanitorium* suggests embodied remembrance could be enacted in a large-scale architecture.

ALVAR AALTO

Paimio Sanitorium

Paimio Sanitorium (1932 - **Figure 023**) by Alvar Aalto, integrates embodied remembrance with a complex, large-scale architecture. Here, “Aalto conceived the sanatorium as a carefully and empathetically studied instrument of healing for the benefit of human beings at their weakest” (Pallasmaa, 2000, p. 79). *Paimio Sanitorium* progresses beyond the techno-rationalism of its contemporaries to respond to the complex phenomena of embodied remembrance. *Paimio Sanitorium*’s intimacy with the body, consideration of threshold conditions and the architectural experience suggest strategies to respond to embodied remembrance.

INTIMACY WITH THE BODY

Expression: *Paimio Sanitorium* creates an intimacy with the body across several scales of engagement. In each patient room, darkened ceilings and wall-mounted lighting fixtures reduce glare to the reclining body (**Figure 024**). Ceiling radiators are positioned to keep the patient’s head out of the direct heat rays. The flexible, wooden chairs are “psycho-physically” appealing to the human touch (Aalto, 1940/1997, p. 103 - **Figure 026**).

Analysis: *Paimio Sanitorium*’s somatic details intimately embody the architecture. This exemplifies Aalto’s (1940/1997) agenda to ‘humanise’ architecture: “since architecture covers the entire field of human life [...] Its purpose is still to bring the material world into harmony with human life” (pp. 102-103). *Paimio Sanitorium*’s intimacy with the body suggests “something more,” (Mumford, 1977, p. 13) in its treatment of bodily experience. The architecture situates the body as its intimate mnemonic, emotive and imaginative interpreter (Williams, 2012). *Paimio sanitorium*’s intimate somatic details sensitise the architecture to the complex phenomena of bodily experience. The embodiment of the architecture suggests it may enact embodied remembrance at its intersection with the body.

THRESHOLDS

Expression: The humane intersection of conditions fundamentally embodies Paimio Sanatorium's thresholds. Handrails in circulation spaces present a place for the hand. Sharp corners are rolled-off to ease movement past (**Figure 025**). Strip windows signal the corridors running along the northern side of the patient wings which fan out into the pine forest. The large square windows on the southern side project the individual rooms out. The entrance is signalled and sheltered by a large, cantilevered awning (**Figure 027**).

Analysis: *Paimio Sanatorium's* imbrication of architecture/landscape and architecture/body embodies the thresholds. Aalto noted in "a functional architecture [...] the exterior faithfully corresponds with the interior" (Cited in McCarter, 2014, p. 69). *Paimio Sanatorium* adapts this hallmark of modernist functionalism (McCarter, 2014) for a humane agenda, as it "nestles in, opens to, grows into and embraces its natural setting of the Finnish pine forest" (p. 69). Despite its large

▲ **Figure 026** *Paimio sanatorium chairs* • Gustaf Welin, Alvar Aalto Museum

◀ **Figure 024** (Top) *Paimio Sanatorium room interior* • Leon Liao

◀ **Figure 025** (Bottom) *Paimio Sanatorium Lobby* • Leon Liao

scale, *Paimio Sanitorium* retains a humane correspondence across the threshold of landscape and built form. The thresholds are visually not hard-edged, as even the wardrobes are spatially diffuse. Aalto diverges from modernism's predominant 'techno-rationalism' to a treatment of thresholds that is "fundamentally embodied" (Williams, 2012, p. 19). The embodied thresholds suggest a way to engage embodied remembrance. Pallasmaa (2000) suggests remembrance derives "from real or ideated bodily confrontations rather than visually observed entities" (p. 79). This mirrors Proust (1922), where the body constructs its world through remembering "its ribs, knees, and shoulder-blades" (p. 8). *Paimio Sanitorium*'s humane softening of thresholds suggests embodied remembrance may emerge in architecture's harmony with the body.

EXPERIENCE

Expression: The harmony of experiential conditions with the body thereby suggest a strategy to address embodied remembrance. *Paimio Sanitorium*'s planning sequesters spaces experienced by the individual body. The liminal corridors mediate between the individually experienced rooms, and collectively experienced spaces, such as the dining room, and library.

Analysis: *Paimio Sanitorium* expresses Aalto's (1940/1997) agenda to protect the individual's experience from the "pressure from collectivity" (p. 103). This concern for the fragility of the individual's experience is a recurring theme in Aalto's work (Hoddé, 2013; Menin & Samuel, 2003; Schildt, 1997; Treib, 1998). When responding to the individual "[...] a building has to be conceived from inside outwards, that is, the small units and details with which a person is engaged form a kind of framework, a system of cells, which eventually turns into the entity of the building" (Aalto, 1956, p. 3). *Paimio Sanitorium* suggests aggregate individual experiences may form the communal reflection inherent to embodied remembrance after Connerton (1989). Although *Paimio Sanitorium* is not a monument, sensitive treatments of form, colour, light, heating as above, suggest a means to amplify the body's experience of embodied remembrance.

CONCLUSION

Paimio Sanatorium expresses strategies which can facilitate embodied remembrance in a large-scale architecture. The thresholds are fundamentally embodied to suggest embodied remembrance can be conveyed in the architecture's harmony and confrontation with the body. *Paimio Sanatorium* contributes to the exploration of embodied remembrance, through its dependency on imbricated thresholds of intensity within and between the architecture and the body. Next, this chapter considers how Le Corbusier's *Sainte Marie de La Tourette* can facilitate the incongruities and paradoxes of embodied remembrance.

▲ Figure 027 *Paimio Sanatorium Entrance* • Leon Liao

LE CORBUSIER

Sainte Marie de La Tourette

Sainte Marie de La Tourette (1956-1959 - **Figure 028**) by Le Corbusier suggests how architecture could convey the incongruities and paradoxes of embodied remembrance. Located above Éveux-sur-L'Abresle, in the Rhône-Alpes region of France, the Dominican monastic order commissioned Le Corbusier to “create a silent dwelling for one hundred bodies and one hundred hearts” (Cited in Barba, 2017, n. p.). Due to the vast quantity of writing on *La Tourette*, a full account is outside the scope of this brief section. Hence, the most relevant accounts of *La Tourette*'s intimacy with the body, use of threshold conditions, and the architectural experience are used to analyse how it can facilitate embodied remembrance.

INTIMACY WITH THE BODY

Expression: *La Tourette*'s intimacy with the body invokes the haptic and anthropomorphic qualities of the built. The angular thrust of the belfry frames the approach to the rectilinear architecture, rendered in brut concrete. Decorative 'logs' interrupt the Corbusian *fenêtre en longueurs* in the courtyard (**Figure 029**). The rough finish continues into the living cells, close to the body (**Figure 031**).

Analysis: *La Tourette*'s intimacy with the body suggests an affective strategy to convey embodied remembrance. Le Corbusier (2003) referred to touch as “a second kind of sight. Sculpture or architecture [...] our hands are impelled towards them” (p. 59). However, *La Tourette*'s hapticity is “abrasive, unsympathetic, and downright defensive” (Samuel, 2007, p. 45). Samuel (2007) links this to the façade's decorative logs: “there was a reminder of some more ancient architecture ... these almost archetypal – in the Jungian sense – details trigger a basic response from us” (p. 51). *La Tourette*'s primaeval detailing embodies a remembrance of the body in archaic modes of architectural production. The projection of the Modulor in *La Tourette*, as in much of Le Corbusier's work, is significant (Samuel, 2007). In the undulating façades and paving stones the Modulor

is rhythmically abstracted for the moving eye and soles. However, the affective anthropomorphism of the built extends beyond this abstracted symbol of the body. The juxtaposition of angular/curved versus rectilinear forms presents a “marriage of these two opposite types – opposite in both meaning and appearance [...] a highly charged and erotic interplay intended to awaken echoes deep within its inhabitants” (Le Corbusier, 1950/1954; Samuel, 2007, p. 41; 2010). *La Tourette* situates the body as the interpreter of the affects conveyed by the archetypal, somatic details and implied eroticism of masculine and feminine elements.

THRESHOLDS

Expression: *La Tourette*’s varied thresholds suggest strategies to amplify the affect of embodied remembrance. Exposed ducts run the length of the u-shaped residential wing, whose fenestrated façade incorporates its context, juxtaposing the

▲ Figure 031 *La Tourette Interior* • Timothy Brown

◀ Figure 029 (Top) *La Tourette Courtyard* • Luca Omiboni

◀ Figure 030 (Bottom) *La Tourette church* • Montse Zamorano

fully-enclosed church (**Figure 030**). The church is significant for its treatment of the vertical threshold which introduces zenithal light through its tapering skylights (**Figure 033**) and floating roof.

Analysis: The divergent affects of the horizontal versus the vertical threshold illustrate a diverse relationship between interior and exterior conditions. The residential wing is “a ‘radiant city’ open to the woods” where the box-shaped church is “entirely introverted” (Von Moos, 1979, p. 165). The residential bloc’s permeability softens the horizontal threshold between the interior and its surroundings. The church’s solid walls invert this relationship. The enclosure sensitises the body to the potent affect of the vertical threshold. The controlled relationship of the horizontal and vertical threshold embodies *La Tourette*’s intractable, but utterly inter-connected relationship with its context.

La Tourette’s pervasive asceticism further invokes an affect across the threshold of the body and the built. Von Moos (1979) compared this to Le Corbusier’s earlier Unite d’Habitation: “there are less curves and sensuous volumes [...] and more right angles and sharp corners; less unity through smooth transitions from angular to organic forms[...]” (p. 165). The increased heterogeneity within *La Tourette*’s formal composition ossifies its internal thresholds. Samuel (2007) suggests Le Corbusier hoped that the materials and forms would subliminally act upon their inhabitants, “encouraging and reinforcing particular modes of existence” (p. 32). The coarse materiality, austere residential cells, exposed service ducts and restricted views all contribute to the prevailing asceticism which affectively traverses the frictional thresholds between the body and architecture. *La Tourette*’s thresholds thereby embody a remembrance of a lived modality and experience of being within the architecture.

EXPERIENCE

Expression: *La Tourette*’s sensitivity to experience continues into its portrayal of the architectural promenade. According to Le Corbusier, “the building was designed from the top down” (Cited in Petit, 1961, p. 20), and the journey down through the building begins at the rooftop promenade. The body walks down a thin stairway to arrive at the living cells. Below that, the body encounters the

library, common room and teaching/study spaces. At the lowest level, the communal refectory connects to the cruciform cloister leading to the church and the building's entrance.

Analysis: The journey down and through *La Tourette* analogises the body's experience to the incongruities and paradoxes of monastic life. Le Corbusier hoped to instil an appreciation for walking in the building: "Walking is from the first a part of those phenomena constituted in perspectives through the play of all the kinestheses together [...] everything is thus constituted in the same way as real things spatiotemporally exterior to one another (Cited in Damisch & Rose, 2005, p. 48). Following Samuel (2010), *La Tourette* possesses none of the easy movements and obvious clues experienced in Le Corbusier's domestic work. Le Corbusier remarked: "I think you've all been on the roof and seen how beautiful it is. It is beautiful because you don't see it [...] the pleasures of sky and clouds are perhaps too easy." (Cited in Petit, 1961, p. 28). The access to the rooftop promenade, as the denouement to the journey, is paradoxically restricted. The experience of the architectural promenade suggests embodied remembrance dwells in the painful and complex route leading down into the bowels of the earth.

CONCLUSION

La Tourette invokes the body to initiate a temporal experience which could facilitate embodied remembrance. The primaeval detailing embodies a remembrance of the body in archaic modalities of architectural production. The pervasive asceticism affectively decomposes threshold conditions to embody the remembrance of a lived modality and experience of being within the architecture. The journey down and through *La Tourette* analogises the body's experience to the incongruities and paradoxes of monastic life. *La Tourette* suggests embodied remembrance could be enacted through juxtaposing incongruous experiential strata marked by a tumultuous treatment of the architectural vista.

CONCLUSION

Each of the previous case studies convey strategies to address embodied remembrance through different scales of architecture. *A Free and Anonymous monument* by Jane and Louise Wilson embodies remembrance in the collapsing and unfolding of memories spectated by the moving body. Walter Pichler's work suggests embodied remembrance may effloresce from a divergent collapsing and unfolding of temporal conditions, inscribed within the architecture as an enclosure for the body. *Paimio Sanatorium* by Alvar Aalto suggests embodied remembrance may be conveyed through an imbrication of thresholds of intensity, within and between the architecture and the body. *La Tourette* by Le Corbusier suggests embodied remembrance may condense from encounters with incongruous, paradoxical strata walking through architecture. This case study analysis highlighted the centrality of the body, whether guided, enclosed, supported, or repulsed—it remains affected. Embodied remembrance emerged in the indeterminacy of diverse temporal, mnemonic, and experiential strata, whose meanings are intertwined, yet utterly irreconcilable. The case studies' portrayal of embodied remembrance thereby resonates with Conway's (2007) definition of embodied remembrance as fundamentally unstable. The following design chapters apply the knowledge attained from this case study analysis in four design investigations of ascending scale/complexity.

▲ *Figure 034 Installation bodily interaction close-up*

NO MAN'S LAND

Spatial Installation

DESIGN INTENT

Introduction

An installation is the first design experiment examining how design could facilitate embodied remembrance to mediate bodily experience in architecture. The theoretical proposition developed in the preceding chapters is critically evaluated through design, to clarify the position of the body in embodied remembrance. The installation examines the tension that emerges in this intimate relationship between architecture and body.

Aim

The installation aims to investigate how the relationship between the body and the digital could convey embodied remembrance at an intimate scale.

Method

Following Yaneva's (2005) methodology of 'scaling' to advance the research, the Installation begins the design component of this thesis at a small scale. Digital drawing and modelling are the primary methods used to explore this design proposition. The secondary methods utilised include photo-manipulation, coding and diagramming. Translating the digital into a physical design output also engages with digital fabrication techniques and the physical limitations these author into the work.

DESIGN PROCESS

Exploration 1

This exploration examines the site's physical characteristics, as context and material for exploring embodied remembrance (**Figure 036 - 037**). After Bergson (Cited in Deleuze, 1991), the perception of things “where they are ... puts us at once into matter” (p. 25). Deleuze notes that this is without duration, which the material body only attains through its intersection with remembrance. This experiment challenges a static reading of the chosen site (matter). The impacts of Topography, wind, and daylight are examined across varying time and condition to deconstruct the complexity of embodied remembrance, by first addressing the site as a physical entity.

▲ **Figure 037** *Mt Crawford Prison*

◀ **Figure 036** *Mount Crawford Prison Site Plan*

I. 10 seconds

II. 20 seconds

III. 40 seconds

IV. 60 seconds

V. 90 seconds

VI. 120 seconds

VII. 150 seconds

VIII. 190 seconds

Topography/Rain Runoff

Figure 038 describes a computational multi-agent system exploring the site topography and the likely runoff routes of surface water. This process was captured as a time series to acknowledge and document the site through time. Agents were generated at equidistant grid points across the site topography and were acted upon only by a gravity force. This series documented the reciprocal relationship between the site's topography and hydrology (**Figure 039**). It also explored them through time, noting the varied dynamic behaviours engendered by the site topography.

▲ **Figure 039** *Run-off density visualisation*

◀ **Figure 038** *Run-off simulation time-series*

January
Bearing (mode): 0
Velocity (mean): $7ms^{-1}$

February
Bearing (mode): 0
Velocity (mean): $6ms^{-1}$

March
Bearing (mode): 190
Velocity (mean): $7ms^{-1}$

April
Bearing (mode): 0
Velocity (mean): $6ms^{-1}$

May
Bearing (mode): 20
Velocity (mean): $6ms^{-1}$

June
Bearing (mode): 10
Velocity (mean): $6ms^{-1}$

July
Bearing (mode): 190
Velocity (mean): $6ms^{-1}$

August
Bearing (mode): 20
Velocity (mean): $6ms^{-1}$

September
Bearing (mode): 0
Velocity (mean): $7ms^{-1}$

October
Bearing (mode): 0
Velocity (mean): $7ms^{-1}$

November
Bearing (mode): 0
Velocity (mean): $8ms^{-1}$

December
Bearing (mode): 0
Velocity (mean): $7ms^{-1}$

Wind Exposure

Figure 040 describes an algorithm to determine the wind exposure characteristics over the site. The algorithm outputs were captured in monthly denominations to communicate the range of conditions present on the site through time. The wind bearing and strength were taken from the monthly data reported by NIWA (Ben et al., 2008). This exploration quantified the range of conditions present on site over time (**Figure 041**). This represents a determinate factor of experience on site and architecture that must withstand or shelter from the wind.

▲ **Figure 041** *Average wind exposure visualisation*

◀ **Figure 040** *Wind exposure simulation by month*

Exposure = 0.25

Exposure = 0.50

Exposure = 0.75

Exposure = 1.00

Exposure = 1.25

Exposure = 1.50

Exposure = 1.75

Exposure = 2.00

Exposure = 2.25

Solar Exposure

Figure 042 describes an algorithm to determine the solar exposure (due to topography and built form) that is available over the site. The analysis was captured as a series to explore how the variability of climatic factors such as time, season, and weather, may affect the solar exposure available on site. This has future design implications, as a prospective architecture would need to consider solar availability within the design. However, the preceding inquiries contextualise the site, and do not account for its embodied mnemonic qualities.

▲ **Figure 043** *Site hours of direct sunlight*

◀ **Figure 042** *Solar exposure by exposure intensity*

Exclusion Filter

Exclusion Filter Doubled

Black and White Filter

Mosaic 20px

Mosaic 40px

Mosaic 60px

Mosaic 80px

Mosaic 100px

Mosaic 120px

Exploration 2

This exploration examines the non-actual attributes of the site, complimenting the previous exploration of its physical/material attributes. It tests how this may be extracted and codified in design. Smout and Allen (2007) suggest that in subverting “normative demonstrations of architectural space,” the design may access an intensity of diverse “ephemeral conditions” tacitly bound within the site (p. 7). This iterative series of photo manipulations uses historical images to trace remembrance embodied in the site (**Figure 044**). Distorting and deconstructing these images explores potential methods to extract ephemeral qualities tacitly present in these images. At each stage, the incident step overlays and augments the last, distressing the perfect recollection of the photography. The substrate into which these memories are inscribed eventually yields to pure abstraction. However, this exploration only exposed surface-level qualities, which require elaboration to extract the remembrance embodied in the site.

▲ **Figure 045** *Abstracted site image detail view*

◀ **Figure 044** *Extracting ephemeral qualities from site imagery*

Divide Filter

Divide Filter Doubled

Black and White Filter

Colour Burn Filter

Colour Dodge Overlay

Overlay Filter

Mosaic 20px

Mosaic 40px

Mosaic 60px

Black and White Filter

Hard Mix Filter

Photocopy distortion

Blur 6px + Difference Filter

Blur 12px + Difference Filter

Mosaic 20px

Mosaic 40px

Mosaic 60px

Mosaic 80px

Memory Overlays

Figure 046 augments site aerial photography utilising a photomontage of connected historical photography, as a mnemonic device for the narratives that converge at Mt. Crawford prison. A concentration on key prisoners, staff, and trends, gradually bleeds out into more general narratives, which contextualise the affective extents of the site's remembrance. Digital manipulation reduced the mnemonic images to their barest formal propositions. Each was overlaid and correlated by proximity based on their narrative relationships, thus demonstrating the site as remembrance embodied. This exploration identified the prison site as a coalescence of racial and political intolerance. This required further engagement.

▲ **Figure 047** *George Errol Coats (centre), was one of four men hanged at Mt Crawford jail*

◀ **Figure 046** *Site augmentation with historic photos*

Ward Map Overlays

Figure 048 augments the site utilising a collage of site aerial photography, and the Thomas Ward maps of Te Aro, Wellington. The Ward maps erase the former site of a prominent Wellington Pā (**Figure 049**). Digital editing overlaid the Ward maps over the site. The result analogises the confronting memory of racialised repression present on the site (Baxter, 1966), and elsewhere in Wellington. The resultant collage inverts this erasure and repression, positioning them as formal and abstract conditions of the site. However, this exploration only explored conditions of remembrance embodied in the site, and did not suggest how these could translate into spatial conditions. Another approach was required.

▲ **Figure 049** *Te Aro Pā* • George Richard Hilliard

◀ **Figure 048** *Site augmentation with historic maps of Te Aro*

Abstracted Pattern generation

*Codification and translation of
Measurements*

Measurement UV Grid

Physical Trace of Site Memory

Site Topography

Exploration 4.1

This exploration introduces a more structured and less subjective extraction of the site's ephemeral qualities (**Figure 050**). This exploration also introduces the digital to the developing proposition. An algorithm was developed that extracted information from historic site aerial photography (**Figure 051**). The input photography was analysed for pixel saturation, hue and brightness. The output measurements influenced the creation bearing of line segments bisecting a given frame. The algorithm used these lines as seeds to generate secondary perpendicular segments. This repeats as the trace of the site creates further generations of elements. A robust formal correlation in the patterns generated from the hue denoted a trend of stratification and alignment/simplification through time. This trend recorded the erosion of the prison's territory over the final years of its operation. Later patterns directly followed the disappearance of ancillary facilities, of which only vestiges remain. However, this generated pattern was only in two dimensions and required more development to formulate a spatial proposition.

▲ **Figure 051** *Grasshopper script and seed images*

◀ **Figure 050** *Grasshopper script extraction process*

▼ **Figure 052** *(Overleaf) parametrically generated iterations*

1996

Saturation

1996

Hue

1996

Brightness

1999

Saturation

1999

Hue

1999

Brightness

2009

Saturation

2009

Hue

2009

Brightness

1996 5 generations

1996 50 generations

1996 500 generations

1999 5 generations

1999 50 generations

1999 500 generations

2009 5 generations

2009 50 generations

2009 500 generations

Extruded 3-Dimensional form

Z Axis Translation

*Measurement/ Communication
with topography*

Site Topography

Exploration 4.2

This exploration extracts three-dimensional form from the previously highlighted series of patterns (**Figure 053**). The algorithm was expanded to measure and extrude each cell relative to its vertical distance from a model of the site topography. This reconciled the two-dimensional patterns, with the three-dimensional site. Each of the selected pattern series from exploration 4.1 was also inversely spatialised from the site measurements. Through directly reflecting the site, the first series of experiments represented a very literal translation from two-dimensional to three-dimensional form. The inversion of the spatial arrangement of the site in the second series was more successful (**Figure 054**). The extrusion was manipulated by the physical but did not directly represent it. The physical attributes of the site leave vestiges of conveyable meaning within the virtual's idealised structure. However, in remaining strictly digital in the derivation of form, this exploration neglects the installation's interaction with the body.

▲ **Figure 054** *Form extrusion outputs by stage*

◀ **Figure 053** *Three-dimensionalising generated pattern*

Exploration 4.3

This exploration reconsidering the previous exploration's output, and its interaction with the body. This engaged with the passage of the body to, past, and through the installation. **Figure 055** iteratively explores the potential articulations to the form of the installation to engage the experience of the body. Compression and extrusion encourage the viewer to consider their body's engagement with several distinct viewpoints, created by simultaneous shifts in position across the form. **Figure 056** elaborates upon the chosen iteration, which demonstrated a more engaging surface for the body to touch and move past. However, this is achieved very singularly, only for a body of a certain average height. Also, this exploration exposed the static nature of the installation's form. Further layerings must engage it as a temporal experience.

▲ **Figure 056** *Installation relationship to the body*

◀ **Figure 055** *Iterative form manipulations*

Film distortion overlay. Representative of material presence in film making

Site photography superstrate as representation of frozen memories of the site

Site photography substrate

Abstracted Topography Screen

Exploration 4.4

This exploration reconsiders the outputs of the previous three explorative stages as the substrate, upon which projected film invites the delicate, emergent experience of embodied remembrance (**Figure 057**). Digital site photography became the content and mechanism behind these interactions, as frozen experiences remembering the site. Each photo slowly crossfades with the next, engaging with the variability of the temporal continuum. Single or several images may cross each screen, organically coalescing and dissociating. The projection of this temporal, mutable record over the vestiges of the physical site, flattens the exchange of experience into memory (**Figure 058**). The site exists simultaneously in the past and the present. This advanced to the final design.

▲ **Figure 058** *Projection detail view*

◀ **Figure 057** *Virtual projection onto installation form*

FINAL DESIGN

PREAMBLE

The installation is composed primarily of three wall-supported panels. Three plinths support film projectors set back one metre from the main panels. Each projects a constant, slowly shifting and changing stream of images. From a distance, the panels appear as simple screens, and the images distorted. As the viewer approaches, the detailed relief in the panels reveals the source of the distortion. The sweeping curve to the forms draws the body's awareness across the series of melancholy, fragmentary objects, and its relationship to the architecture. The installation engages with elements of the physical and virtual site. The body negotiates with the digital. The mechanisms of embodied remembrance are flattened and condensed into architecture.

INTIMACY WITH THE BODY

The fragmentation of the architectural surface invokes an intimate haptic and kinesthetic relationship with the body. Touch reveals the formal structure of the relief and the body reads the depth of each panel in its layers. The vestigial traces of the physical site remain in the final installation. Twisted, reflected, the topography of the Mt. Crawford site manipulates the final panels. This lends a viscera to the installation that engages and actualises the tactile experience, and material presence of the body. The haptic intimacy with the body excavates the history of the site.

As forms shift outward and inward, each panel is distorted into the shape of a hyperbolic paraboloid. The formal movements accentuate the fragmentation, increasing and decreasing depth according to its intimacy with the body. The fragmented surface coheres along the path of the installation, increasing its availability to the moving body.

THRESHOLDS

The body reads the softened threshold between past and present in the panels inter-relationships. Each is a representation embodying a different instant in the site's history. They are all after-images, traces of surface effects generated by actual causal interactions at the material site. The shifts and changes in each panel follow and reflect the dereliction of the prison. Holistically, remembrance across the threshold of past and present actualises the installation's durational presence in time.

The mutable nature of the projected elements of the installation challenges a static and linear remembrance. Varying records of the site play across each panel, aligning, orienting, and dissociating in delicate emergent interactions with the physical substrate. Further layers of virtual feedback collapse the hierarchical exchange directly from experience to remembrance, past to present. The installation acts at once in the past and the present.

Across the length of the installation, the paraboloid forms of the panels align to present a coherent path between them. The internal thresholds between the installation's multiple perspectives plastically evolve over the panels and are dissolved as an index of remembrance accessed by the moving body.

EXPERIENCE

The shifting articulation of each panel forces the viewer to consider the position of their body. A path of least resistance etches across each panel to negotiate with the axial orientation of the body moving through the installation. Multiple, simultaneous shifts in depth oscillate the viewpoint of the body. These formal shifts mobilise a democratic plurality of experience for the emergence of ad hoc orders of confrontation and cohesion between architecture and the body. The installation implicates the moving body as the site of the imbrication of temporal and mnemonic strata.

▲ *Figure 063 Installation detail view 3*

CRITICAL REFLECTION

Embodied remembrance proved difficult to reconcile with parametricism in the installation. The design process presumed remembrance is an active, epistemically generative process as in the theoretical context chapter. Generally, the design process taken in the installation was one of generation. However, this generation stemmed from the digital, which only operates in a milieu of binary conditions. A digital algorithm responds to conditions that are entirely subjective to the designer. The digital services this intent with absolute numeric clarity and does not recognise the fragile imperfections of the body. The digital's memory is flawless and objective. This required manual resolution with the body, which challenges the original presupposition that the digital may be made sensitive to this input. Reconciling ephemerality and ambiguity with parametricism is not possible with current approaches.

This also concerns the perception of meaning embodied in remembrance. The Installation focuses on the remembrance of the site, and society which coalesce there. Thus the design's representation of remembrance functions as a "prosthetic" (Landsberg, 1997) to introduce the viewer to an experience beyond their immediate first-hand knowledge. However, after Pallasmaa (1991/2005): "When experiencing a work of art [...] the work projects its aura, and we project our own emotions and precepts on the work" (p. 68). Experience of the design presupposes its sympathetic exchange with the individual's remembrance. The remembrance articulated in the installation is not necessarily personal to the viewer, yet it is still understood through their bodily perception. Hence, the singular height of the panels does not address a diverse range of bodily experience. This introduces unpredictability into the installation. The qualitative embodiment of remembrance into architecture requires further investigation.

The following chapter translates these findings to the design of a medium-scale memorial house-museum.

▲ Figure 067 Housse-museum internal perspective

HOUSES OF THE HOLY

Medium-scale Memorial House Museum

DESIGN INTENT

Introduction

A medium-scale memorial/house-museum is the second design experiment examining how design could facilitate embodied remembrance to mediate bodily experience in architecture. The medium-scale design operates at a larger scale to critically reflect on the Installation's findings. Following this upwards scale shift, the architecture must incorporate a basic architectural programme. This exploration evolves the proposition by engaging analogue design methods earlier than in the previous chapter. The medium-scale design tests the implications of embodied remembrance on architecture before scaling-up to the public-scale.

Aim

The medium-scale design aims to address the problem of embodying a specific and clear historical narrative to facilitate embodied remembrance.

Method

'Scaling-up' advances this research through design as it "accelerates the visualization process" (Yaneva, 2005, p. 882). Analogue/mixed-media/digital drawing and digital modelling are the primary methods used to explore this scale-shift. Digital printing, stencilling and collage augment the physical drawing process. Subsequent methods include diagramming and photo-manipulation.

Final Installation Panel

Extracted Geometry Subset

Traces of historic building

Interpolation on Site

DESIGN PROCESS

Exploration 1

Figure 069 reinterprets the installation as architecture through an upwards scale-shift. This process interpolated the form which represented the decline of the residential-scale ancillary buildings over the site, embodying the site's remembrance (**Figure 070**). The resultant form far exceeded the medium-scale, disrupting the intimacy with the body experienced within the installation and problematically representing the forms as static temporal conditions. The interpolation also scales-up concerns with the digital, where the imposed form is not sensitive to the inputs of the body.

▲ **Figure 070** *Installation scaled-up to spatial qualities*

◀ **Figure 069** *Scaling-up installation process*

i. Toilet Cleaner

ii. Call-Girl

iii. Housewife

iv. Office Clerk

v. Sad Old Quean

vi. Alcoholic priest

Description of the Maori Jesus

Section Concerning the description of the Maori Jesus' disciples

One cloned toilet in the railway station;
His hands were scrubbed red to get the shit out of the pines.

One was a call-girl who turned it up for nothing;

One was a housewife who had forgotten the Pill
And stuck her TV set in the rubbish can

One was a little office clerk
Who'd tried to set fire to the Government Buildings

One was a sad old quean;

One was an alcoholic priest
Going slowly mad in a respectable parish.

I saw the Maori Jesus
Walking on Wellington Harbour
He wore blue dungarees
His beard and hair were long
His breath smelled of opium and piss
When he spoke the air was thick with smoke
When he laughed the ground shook
When he walked the sky would sink.

The Maori Jesus came on horse
And picked out his twelve disciples;
One cloned toilet in the railway station;
His hands were scrubbed red to get the shit out of the pines.
One was a call-girl who turned it up for nothing;
One was a housewife who had forgotten the Pill
And stuck her TV set in the rubbish can
One was a little office clerk
Who'd tried to set fire to the Government Buildings
Yes, and there were several others;
One was a sad old quean;
One was an alcoholic priest
Going slowly mad in a respectable parish.

The Maori Jesus said 'Men,
From now on the sun will shine.'
He did no miracles;
He played the guitar sitting on the ground.
The first day he was arrested
For having no lawful means of support.
For telling a lie he was beaten up by the cops
The third day he was charged with being a Maori
And given a month in Mt Crawford.
The fourth day he was sent to Formosa
For telling a lie the sun would stop rising.
While the world in the Asylum laundry
The fifth day he lost seven years
I am the Light in the Void;
The sixth day he lost the head doctor.
The seventh day he was cut in half.
On the eighth day the sun did not rise.
It did no rise the day after.
God was neither alive nor dead.
The darkness of the Void
Mournful, mile-deep, evil, dark
Sat on the earth from then till now.

Exploration 2.1

Figure 071 extracts characters from James K. Baxter's (1966) poem *The Māori Jesus*, to diverge from a direct scale-up. Baxter references the Mt Crawford prison, where the eponymous character is incarcerated "for being a Māori" (n. p.). Incorporating this narrative negotiated the disconnect between the subjectivity of the body, and embodied remembrance in the design (**Figure 072**). After Ganoe (1999), "Narrative theory provides an additional framework that synthesizes the external/symbolic with the internal/phenomenological response to environment through the vehicle of language" (p. 4). Narrative's humane communicative format helps architecture construct and represent "the rich and messy domain of human interactions" (Bruner, 1991, p. 4). Architecturalising Baxter's characters embodies the confronting remembrance of racialised repression present on the site (as identified in the installation chapter). However, the poem's brief accounts of these characters require elaboration as a foundation for architecture.

▲ **Figure 072** *Interaction of narrative with the body*

◀ **Figure 071** *Extracting characters from the Maori Jesus by James K Baxter*

				Toilet Cleaner	<ul style="list-style-type: none"> ▼ Living Room — Master Bedroom — Storage ▲ Main Bathroom ▲ Ensuite — Guest Bedroom ▲ Living Room ▲ Master Bedroom 	B 1
				Housewife	<ul style="list-style-type: none"> — Storage — Main Bathroom — Ensuite — Guest Bedroom ▲ Nursery ▲ Office/Study ▼ Living Room ▼ Master Bedroom 	B 2
		2 line Description		Office Clerk	<ul style="list-style-type: none"> — Storage — Main Bathroom ▲ Living Room — Master Bedroom — Storage — Main Bathroom — Ensuite — Guest Bedroom ▲ Office/Study ▲ Sitting Room ▲ Wine Cellar ▲ Living Room ▼ Master Bedroom 	B 3
	Disciples			Alcoholic Priest	<ul style="list-style-type: none"> — Storage — Main Bathroom — Ensuite — Guest Bedroom ▲ Office/Study ▲ Sitting Room ▲ Wine Cellar ▲ Living Room ▼ Master Bedroom 	B 4
				Call Girl	<ul style="list-style-type: none"> — Storage — Main Bathroom — Ensuite x 2 ▲ Guest Bedroom ▲ Living Room — Master Bedroom — Storage — Main Bathroom — Ensuite ▲ Guest Bedroom x 2 ▲ Living Room — Master Bedroom — Storage — Main Bathroom — Ensuite — Guest Bedroom ▲ Communal Space 	C 1
		1 Line Description		Sad Old Queen	<ul style="list-style-type: none"> — Storage — Main Bathroom — Ensuite ▲ Guest Bedroom x 2 ▲ Living Room — Master Bedroom — Storage — Main Bathroom — Ensuite — Guest Bedroom ▲ Communal Space 	C 2
	Shepherd			Māori Jesus	<ul style="list-style-type: none"> — Storage — Main Bathroom — Ensuite — Guest Bedroom ▲ Communal Space 	A 1

The Māori Jesus (c1966)

Exploration 2.2

This exploration elaborates on Baxter's brief character descriptions to adapt them into architecture. **Figure 073** establishes the programmatic requirements of each character, based on their implied lifestyle. Each was attributed a living room, master bedroom, storage, and main bathroom. The majority also featured at least one guest bedroom and ensuite. Less relevant spaces to the character's description were atrophied, while imperative spaces were enlarged to avoid imposing a homogenous order. Deriving the spatial requirements directly from each character, imbued the architecture with the narrative's ironic critique (**Figure 074**). However, this exploration only dealt with programme conceptually, at the expense of the practical relationships comprising the architectural experience.

▲ **Figure 074** *body as a determinate site for programme development*

◀ **Figure 073** *Elaborating on characters through programme*

Toilet Cleaner Iteration 1

Toilet Cleaner Iteration 2

Office Clerk Iteration 1

Sad Old Quean Iteration 1

Sad Old Quean Iteration 2

Sad Old Quean Iteration 3

Call Girl Iteration 1

Call Girl Iteration 2

Housewife Iteration 1

Housewife Iteration 2

Alcoholic Priest Iteration 1

Alcoholic Priest Iteration 2

Exploration 2.3

Figure 075 develops the connections between spaces from the architectural programme's practical requirements. The default size of each space was derived from the Metric Handbook (Chown, 1979/1999), and manipulated per the previous exploration. Privacy was considered, with more intimate spaces placed further along circulation routes. Iterations minimised unnecessary 'dead' space, ensuring rooms had convenient and active connections. Developing the pragmatic connections between spaces precluded further explorations which consider embodied remembrance.

▲ **Figure 076** *initial development sketches*

◀ **Figure 075** *programme zoning iterations*

▲ Figure 077 Contextual strategic plot

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Eroded

but still recognisable

Exploration 3.1

Considering embodied remembrance, this exploration elaborates on the Māori cultural values imbued in Baxter's poem which contextualise the site. Narrative design must be performed in context as it: "assimilates social, political, religious, artistic, and other values within a complex and multivalent process" (Ganoe, 1999, p. 10). Following Awatere et al. (2008) 'Wairuatanga' respects connections between persons, their ancestors and their deities. 'Mātauranga' necessitates community identification through histories, mythologies and cultural traditions. Following Kulper (2014), a location plan staged the Miramar peninsula over time, which mediated between Māori testimonials and impersonal histories to subvert linear remembrance (**Figure 077-81**). "Rather than defaulting to the ease of homogenization - prevalent in assumptions regarding architectural drawing" the drawing augments this reductionism through "multiple ecologies of language (words, notation, indexes, analogs, imagery, and drawing conventions)" (p. 13). This drawing suggested implicit design opportunities in the intersection of Māori values and the site's context. However, the broad grain of this inquiry resisted the extraction of delicate implications in-situ.

▲ **Figure 079** *Strategic plot detail view 2*

◀ **Figure 078** *Strategic plot detail view 1*

▲ Figure 080 Strategic plot detail view 3

and this too shall pass

AWAY

▲ Figure 083 Annotated strategic plot 2

M 9 4

I am the Light in the Void,
I am who I am?

+ M 9 5

A6

A5

A4

T12

11

12

and this too shall pass

AWAY

09

A3

A2

13

A1

K 1

07

06

08

from now on the sun will shine

One cleaned toilets in the railway station,
His hands were scrubbed red to get the dirt out of the pores.
One was a sailor who had spent his life on the sea,
One was a housewife who had forgotten the war.
One stuck her TV set in the rubbish bin,
One was a little office clerk
Who'd tried to get free to the Government Buildings.
Yes, and there were several others.
One was a sad old queen,
One was an alcoholic priest
Going slowly mad in a respectable parish.

On the eighth day the sun did not rise,
It did not rise the day K 1
God was neither alive nor dead.
The darkness of the Void,
Mournful, mile-deep, cold and dry,
Saw into the world before the sun did shine.

Exploration 3.2

Figure 082 relocates the strategic plot to represent the site's immediate context. The drawing again layers phrases, notation, indexes and drawing conventions to spatialise non-linear remembrance (**Figure 083**). Leveraging the material qualities of the film media foregrounded the intersection of diverse fields and voids to implicate possible spatial opportunities. The layered representational languages further leveraged the ephemerality of the body's experience and its interaction with the site-as-durational. How this exploration evoked architecture required further translation to produce form and volume.

▲ Figure 085 Strategic plot 2 detail view 2

◀ Figure 084 Strategic plot 2 detail view 1

▲ Figure 086 Strategic plot 2 detail view 3

and this too shall pass

AWAY

A3

A4

Final extracted spatial conditions

Refining grid definitions

Spatial grid divisions

Base form extraction

Information foregrounded through drawing

Exploration 3.3

This exploration consolidates the spatial information foregrounded by the previous strategic plot as a precursor to architecture. The extracted information indexes the larger drawing to acknowledging the relational opportunities that evoke design decisions (**Figure 089**). **Figure 088** translates and deciphers the drawing, to evoke finite scale, geometry, and spatial/climatic relationships. However, these ordering principles and geometric relationships required the incorporation of further factors to suggest exact spatialisation.

▲ **Figure 089** Information foregrounded through drawing

◀ **Figure 088** Extraction of ordering principles from the second strategic plot

i

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iii

iv

Exploration 4

This exploration unifies all proto-architectural elements, such as site, spatial organisation, form, and programme, heretofore developed in isolation. Initial iterations reinterpreted the architectural form from exploration 1 using the previously translated ordering principles. This referenced the installation's embodied remembrance of the site's dereliction. Through applying the derived spatial ordering principles, this practicably scaled-up the installation elements. **Figure 090** reciprocally develops both propositions emphasising spatial organisation/articulation and form. Each character's residence was compared to the grain of the overall form to incorporate the programme. The centre of each relevant cell located the residences within the spatial matrix. This tacitly embodied the installation's remains into the emergence of a new architectural condition. However, this design still required refinement to engage the ephemeral qualities of embodied remembrance.

▲ **Figure 091** *Affected form in-situ*

◀ **Figure 090** *Applying strategic plot ordering principles*

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Exploration 5

This exploration refines the previously created masterplan. After Hoskins et al. (2002), Māori architecture preserves the separation of ‘Tapu’ (sacred) and ‘Noa’ (profane) spaces. For example, food preparation (Tapu), must be separated from bathrooms, toilets and laundries (Noa). **Figure 093** explores these relationships, where a cross represents a conflict between the two functions, and a circle represents a desirable relationship. A horizontal line denotes a neutral relationship. The designation of spaces as ‘Tapu’ or ‘Noa’ (**Figure 092**) refined the masterplan. Accommodating these principles facilitated Māori cultural practice. However, despite these plan refinements, the form’s engagement with the body remains undeveloped.

	Entry	Laundry	Toilet	Bathroom	Living	Dining	Kitchen
Bedroom	×	–	–	–	–	×	×
Kitchen	–	×	×	×	○	○	
Dining	–	×	×	×	○		
Living	○	×	×	×			
Bathroom	×	–	×				
Toilet	×	×					
Laundry	×						

▲ **Figure 093** Matrix of Tapu/ noa spaces and their interactions

◀ **Figure 092** Master-plan refinement

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Exploration 6.1

This exploration iteratively explores potential form articulations that implicate bodily occupation (**Figure 094**). Initial iterations derived sculptural form inspired by Walter Pichler's Underground city (**Figure 096**), but this failed to address the whole assemblage. In later iterations, stepping forms forward and backwards suggested a kinaesthetic engagement across distinct vertical planes. This interaction with the body mediated the development of forms across the whole assemblage. However, these formal manipulations were isolated from the embodied remembrance of Māori cultural narratives.

▲ **Figure 096** (Top) Walter Pichler - "Underground Building" (1963)

▲ **Figure 095** (Bottom) initial development sketches

◀ **Figure 094** iterative form developments

Pontama pattern research

Initial development sketches

Three-dimensionalising form

Brion Tomb stepping form research

▲ Figure 098 Wall relief bodily interaction detail - Scale 1:5

Exploration 6.2

This exploration leverages Māori weaved patterns to furnish the preceding form developments (**Figure 097**). The research noted the symbolic association of 'Poutama' the 'stairway to heaven' to Baxter's *Māori Jesus*. Adapting this pattern to three-dimensions highlighted the resemblance to the stepping forms in Carlo Scarpa's Brion tomb. This guided the forms' application in the architecture. The ornamentation more fully articulated the shifts in depth for the body. **Figure 098** describes the haptic relationship to these details. However, this exploration only engages an intimacy with the body in the vertical plane, detaching the experience of the horizontal.

◀ Figure 097 adapting Māori patterns to furnish forms

Exploration 7.1

This exploration elaborates on the horizontal plane as the site of a constructed journey for the body (**Figure 099**). This begins at the entry threshold, circulating through decompressed, public spaces, to arrive at intimate spaces (**Figure 100**). This journey identified the thresholds between interior and exterior, and within interior spaces as distinct conditions for design. However, current approaches do not signal the kinetic inter-relationship between spaces, thus disincorporating the temporality of the moving body, which experiences each space as a static end. Actualising this within the architecture required further development.

▲ **Figure 100** level-shift development process within an example space

◀ **Figure 099** Example journey through the architecture

Exploration 7.2

This exploration develops a daylighting strategy to punctuate the journey through the architecture. This primarily addresses interior experience but also articulates the building's facade. **Figures 101** and **102** document the prominent strategies which highlight points of intimacy with the body. The limited views create insular experiences within the architecture, rarefying the glimpses to the outside. However, this overly privileged the visual experience of the journey, at the expense of the body's other senses.

▲ **Figure 102** *Side and top-lighting to punctuate journey through architecture*

◀ **Figure 101** *Restricting views strategy*

Exploration 7.3

This exploration develops a light/material strip to addresses the journey as a haptic/kinaesthetic experience. As per **Figure 103**, the strip incorporates a relief and a materially distinct brass strip as an invitation to touch. Movement and kinesthesia are evoked by the illumination of the strip to reinforce the journey through the architecture (**Figure 104**). However, the fragility of this device was not suitable to address the exterior experience of the architecture.

▲ **Figure 104** relief interaction with the moving body

◀ **Figure 103** Wall light strip bodily interaction detail - Scale 1:1

Exploration 7.4

This exploration develops handrails to engage the body's exterior haptic/kinaesthetic experience. The handrails' level of resolution reflects their proximal relationship in assisting the moving body and integrating into the facade. **Figure 105** draws dimensions and performance standards from clause F4 of the building code (Ministry of Business Innovation & Employment, 2017b) to develop the handrails. **Figure 106** details the relationship of the moving body to a typical balustrade. However, this exploration does not address how the juxtaposed experiential conditions of the interior and the exterior meet at the threshold.

▲ Figure 106 Handrail relationship with moving body

◀ Figure 105 Handrail bodily interaction detail - Scale 1:1

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xxiv

Exploration 8

This exploration iteratively develops the threshold to mediate the exterior and interior experience of the architecture (**Figure 107**). As in Pallasmaa (2000), the body's haptic confrontation with the threshold implicates the experience of the temporal continuum. Hence, the threshold-door became a sophisticated component of how the design conveys embodied remembrance. Development began with simple formal manipulations, advancing through to more sophisticated and detailed arrangements reflecting the threshold's prominent role in embodied remembrance. **Figure 108** describes the threshold's resistance to the passage of the body, embodying the struggle of each character in Baxter's poem.

▲ **Figure 108** *Body interaction with thresholds*

◀ **Figure 107** *Door form iterations - Scale 1:50*

FINAL DESIGN

PREAMBLE

The final design acknowledges that while the *Māori Jesus*' characters are important archetypes of disadvantaged people in society, they are fictional and could not inhabit the architecture. The final design, therefore, memorialises this inhabitation as a house-museum, composed of seven residences, and a central amenity building, cresting and cascading down the hilltop. The architecture is shrouded from Wellington Prison site by a monolithic curved wall. The wall bifurcates to enter onto the main promenade. Sombre towering structures, guide movement deeper into the midst of the memorial. Concrete steps deviate from main arteries, to access the structures. Behind the heavy steel doors, small apertures punctuate interior spaces with shafts of sunlight. The moving body is guided through each space by an illuminated strip recessed into the walls. Material treatment shifts highlight the deviation of floor levels, that rise to compress intimate spaces, and fall to release profane spaces.

i	Call Girl's house
ii	Alcoholic Priest's house
iii	Sad Old Quean's house
iv	Homes of the Office Clerk and Toilet Cleaner
v	Home for the Housewife
vi	Communal Building
vii	<i>Māori Jesus</i> ' house and Wharenuī

◀ Figure 109 House-museum site plan - Scale 1:300

▲ Figure 110 *Call Girl's House plan* - Scale 1:100

▲ Figure 112 *Sad Old Queen's House plan - Scale 1:100*

▲ Figure 114 Home for the Housenife plan - Scale 1:100

▲ Figure 116 Māori Jesus' house and Wharenui level 1 plan - Scale 1:100

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§ 9

§ 8

§ 7

§ 6

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§ 4

- i *Sad Old Queen's house - Living room*
- ii *Sad Old Queen's house - Circulation*
- iii *Sad Old Queen's house - Guest room 1*
- iv *Office Clerk - Living room*
- v *Office Clerk - Toilet*
- vi *Toilet Cleaner - Main Bedroom*
- vii *Toilet Cleaner - Guest room*

▲ Figure 118 Transverse Section A-A - Scale 1:100

S 3 S 2 S 1 N 0 N 1 N 2 N 3 N 4 N 5 N 6 N 7 N 8 N 9 N 10

E 10

E 9

E 8

E 7

E 6

E 5

E 4

▲ Figure 119 Longitudinal Section B-B - Scale 1:100

- i Toilet Cleaner - Bathroom
- ii Toilet Cleaner - Ensuite
- iii Toilet Cleaner - Main Bedroom
- iv Communal Building - Dining
- v Communal Building - Bathroom
- vi Wharenuui - Main chamber
- vii Wharenuui - Vertical circulation
- viii Maori Jesus - Landing
- ix Maori Jesus - Sitting room
- x Maori Jesus - Living room
- xi Maori Jesus - Circulation
- xii Maori Jesus - Toilet

▲ Figure 120 Longitudinal Section C-C - Scale 1:100

W 4 W 3 W 2 W 1 E 0 E 1 E 2 E 3 E 4 E 5 E 6 E 7 E 8 E 9 E 10

INTIMACY WITH THE BODY

The architecture's form shifts to invoke a haptic/kinaesthetic intimacy with the body. The stepped movements in the vertical architectural surface increase their tactile availability to the hand. Touch reveals the depth of forms, read in the viscera of the relief which embodies the Māori cultural context, and the memorial's architectural context.

The brass-trimmed relief guides movement, illuminating points of intimacy with the kinetic body. The relief presents a respite for the hand against the rough board-formed walls. The body explores the architecture tactually, as well as kinetically. Illumination punctuates the crepuscular interior atmosphere, drawing the body along shifts of level and intimacy.

THRESHOLDS

The heavy steel doors embody the intractability of the threshold. As Baxter's characters struggle, so too the moving body is slowed by the hardened doors. The bodily effort required to cross the threshold reinforces the enclave aspect of the architecture. However, the threshold is mediated by liminal steps and voids that encouraging outside incursion in the spaces beyond.

The architecture variably distorts the threshold with the site as the buildings are levitated, buried or rested upon it. Opposing conditions are gradated by the base, as the tissue of each new threshold emerges from the past. These stacking thresholds prelude the levitation above and disruption of the ground plane.

The variable thresholds between buildings embody a remembrance of each character's narrative position. The house for the Sad Old Quean is separated from the assemblage, hardening the threshold condition to reflect their isolation. The imbricated threshold between the houses for the alcoholic priest and call girl inverts this relationship. The thresholds conditions embody a remembrance of how Baxter's narrative groups these juxtaposing characters.

EXPERIENCE

This feedback at the threshold inexorably connects the experience of spaces memorialising a single character, with the whole museum-assemblage. Taller buildings loom along the promenade, exposing the structure of the journey through the assemblage. Within each building, the body moves from distant to intimate spaces, accentuated by glimpses to the outer assemblage. These moments of transparency present a denouement to the journey through. Each end alludes to the broader experience of the spatial network and the temporal continuum. The body's moving experience of space implicates embodied remembrance, codified and spatialised through narrative.

CRITICAL REFLECTION

The design process of the house-museum effectively inverted the research proposition in response to the Installation's critique of the digital. The digital serviced the ephemeral, analogue qualities imparted by the body. This successfully reconciled the previous disconnect between the digital's numeric clarity, and the body's messy, irreconcilable frailties. However, this lack of an authoritative digital process in the house-museum atrophied the expression of the digital in the final design. This requires conscious reintegration in further designs.

This bodily fragility also manifests in the disconnect of remembrance from history. Per the theoretical context chapter, remembrance involves a slippage between factual history and perspective, that is entirely specific and subjective to the body. It does not possess or own the truth, but following Felman and Laub (1992), this is not necessary to witness the site's embodied remembrance. Cultural testimony collapses the hierarchies between 'factual' history and mythologies. Remembrance intersects at the factual and subjective observations of history. The un-remembered is unknowable and cannot be defined. However, this may be a productive site for inquiry in further designs.

The slippage between observation and recollection also highlights the problem surrounding the embodied remembrance imparted by Baxter's poem's inherent social critique. Spatialising the narrative required elaborating upon each character, as was supported by Ganoe (1999). The architecture does not advance the position of these characters. This raises the difficult question of architecture as the moral arbiter of the issues the narrative conveys. Following Wigley (2001), the discussions of race, gender and sexual orientation require a more open-ended discourse in architecture. This implicates diverse, subjective readings of the design's embodied remembrance from distinct bodies. The faithful transcription of the narrative intentionally avoids making difficult claims of how to solve these complex issues. This is outside the scope of this research.

A final issue with the house-museum was its scale of engagement with the

narrative. In spatialising each character, the scope of the design was far over-extended. The individual houses address the medium-scale problem, but the treatment of the whole large-scale assemblage is less considered. This must be addressed in a further scale-shift up, as the architecture imposes more upon the site. This relationship may be leveraged to address the research proposition.

The following chapter translates these findings to a public-scale architecture, in the design of a care facility and prison archive.

▲ Figure 123 *Care facility entrance perspective*

R A N D O M A C C E S S M E M O R I E S

Public-scale part one: Care Facility and Archive

DESIGN INTENT

Introduction

A public-scale care facility and archive is the third experiment examining how design could facilitate embodied remembrance to mediate bodily experience in architecture. The public-scale design operates at a larger scale to build upon the house-museums inversion of the digital as subservient to the body. The further upward scale-shift forces the proposition to incorporate a sophisticated architectural programme. This exploration evolves the research proposition by positioning the architecture as a reconciliation between the body and the site's traumatic embodied remembrance (as per the previous two design-scales).

Aim

The public-scale design aims to pursue the inversion of digital versus the analogue, to explore a large-scale, complex architecture as a reconciliation between the body and the site's traumatic embodied remembrance.

Method

Continuing the method of 'scaling,' the house-museum is scaled-up to a care centre and archive. After Yaneva (2005), the small and large scale inform each other simultaneously (p. 885). Hence a twofold process of scaling up and down is employed. Digital coding, diagramming, analogue/mixed-media/digital drawing and digital modelling are the primary methods used to explore this scale shift. Subsequent methods include simulation, physical modelling and photo-manipulation/montage.

DESIGN PROCESS

Exploration 1

This first design exploration analyses the public-scale design's hybrid programme potential. The set programme of an archive directly addresses remembrance in the design. Subsequent SWOT analyses evaluated potential complimentary or unexpected programme combinations (**Figure 125**). After Olson (2017): there is “an inevitable closeness between caring architecture and imprisoning architecture” (p. 1). The care facility was selected for further exploration given the former use of the site, and following the SWOT analysis outcomes.

▲ **Figure 126** Herzog and De Meuron - REHAB Basel • Margherita Spiluttini

► **Figure 125** Hybrid programme SWOT analysis

	DEMENTIA CARE FACILITY
S Strengths	Strong connection to concept of remembrance. Introduces the humane treatment of space to the exploration of embodied remembrance
W Weaknesses	Implies the loss of embodied remembrance. Public-scale building may be detrimental to how this programme operates.
O Opportunities	Leads on from the potential identified in reflections on the previous scale to explore the loss of remembrance.
T Threats	It is not ethical to leverage the needs of a vulnerable group of people. The specialist infrastructure may supercede the exploration of embodied remembrance.
	SCHOLARS RETREAT
S Strengths	Reduced rigour demanded of the public-scale programme
W Weaknesses	Public-scale building may be detrimental to how this programme operates. What type of scholar is this for?
O Opportunities	Leverages the isolation of the site Positively inverts the original function of the site
T Threats	Lack of local precedent Controversial
	MUSEUM
S Strengths	Strong connection to concept of remembrance Following Libeskind, conducive to more extreme form and atmospheric exploration
W Weaknesses	What is the museum for/housing? What kind of museum is it?
O Opportunities	Large-scale site Isolated site may pose a problem to the operation of this programme
T Threats	Very similar to previous inquiry - lack of diversity in the the design responses
	SANITORIUM / CARE FACILITY
S Strengths	Following Aalto and Pallasmaa - strong connection to the body Introduces the humane treatment of space to the exploration of embodied remembrance
W Weaknesses	Programme is not typically connected to remembrance
O Opportunities	High quality views Close relationship to green space
T Threats	Isolated site may pose a problem to the operation of this programme

▲ Figure 127 Prison site strategic plot

cold capillary dilation

T12

276

holding on to false memories

Exploration 2

Design began with creating another strategic plot which directly focused on the prison site (**Figure 127-131**). As previously, the plot subverted phrases, notation, indexes and drawing conventions to spatialise non-linear remembrance. This uncovered the tacit radial geometry which augments the site, established by nearby ancillary buildings. The language of this drawing evoked architectural opportunities but required translation to suggest form and volume.

▲ **Figure 129** *Prison site strategic plot detail view 2*

◀ Figure 128 Prison site strategic plot detail view 1

cold capillary dilation

12

T12

276

Layer 3 extrusion

Layer 2 extrusion

Layer 1 extrusion

Digitised strategic plot layers

Public-scale strategic plot

Exploration 3.1

This exploration extrudes the previous strategic plot into three-dimensions, using the layer and type of mark to determine height and width. This directly spatialised the plot, with fewer conditions lost in translation than in the previous chapter. **Figure 132** deconstructs and extrudes the drawing's layers. However, this resulted in layering discrete spatial conditions (**Figure 133**), which did not reflect the translucency and ephemerality of the drawing.

▲ **Figure 133** *Extruded strategic plot*

◀ **Figure 132** *Extruding strategic plot process*

Condensed spatial information

Layer 3 extrusion

Layer 2 extrusion

Layer 1 extrusion

Digitised strategic plot layers

Exploration 3.2

This exploration re-examines the strategic plot's spatialisation, through leveraging the layered dispersion of elements to determine their extrusion from a common starting point (**Figure 134**). This successfully condensed each layer's spatial content into an inter-connected assemblage (**Figure 135**). However, translating from analogue to digital, this process neglects the physical occupation of these spaces by the body.

▲ **Figure 135** *Extruded strategic plot version 2*

◀ **Figure 134** *Extruding strategic plot process version 2*

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Exploration 3.3

This exploration derived physical models from the strategic plot to suggest bodily occupancy and hapticity (**Figure 136**). These models were 3d printed from the digitised strategic plot (**Figure 137**). However, translating to the physical highlighted the pervasive two-dimensionality of the layering, and its disconnection from the body's experience of hapticity, and movement/kinesthesia.

▲ **Figure 137** *Index to the segment models*

◀ **Figure 136** *Strategic plot shifted to vertical picture-plane*

▲ Figure 138 *Vignette model detail view 1*

Exploration 4

This exploration addresses the disconnect from the body, through shifting the strategic plot's picture-plane. This follows the method proposed by Chard (2014). Rotating the picture plane suggests diverse vertical spatial conditions. **Figure 140** describes the picture-plane shift, while **Figure 141** documents the output of this process on the strategic plot. However, this and the previous explorations create a closed process which does not address the digital component of the research proposition.

▲ **Figure 140** *Shifting picture plane process*

◀ **Figure 141** *Strategic plot shifted to vertical picture-plane*

*Generated voronoi pattern
abstraction of the strategic
plot*

*Codification and Translation
of Measurements*

Measurement UV Grid

Digitised strategic plot layers

Strategic plot

Exploration 5.1

The strategic plot became a generator to reincorporate the digital component of the research proposition. **Figure 142** uses an attractor grid to codify and reinterpret the strategic plot. **Figure 144** records this analysis using circles of varying radii, while **Figure 145** utilises rectilinear shapes. **Figure 146-147** advance the experiments into three-dimensions by allowing the attractors to extrude vertically relative to the radius/width of the two-dimensional analysis. While this exploration introduces a digital response, it overly privileges the object, isolated from the site and inhabitation. While two-dimensional and straightforward, this exploration preludes more complex digital experiments.

▲ Figure 143 *Developed Grasshopper script iterations*

◀ **Figure 142** *Attractor generative logic*

▲ Figure 144 *parametrically generated 2D attractor iterations - circular language*

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▲ Figure 146 3D attractor iterations - circular language

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▲ Figure 147 3D attractor iterations - rectilinear language

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xviii

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*Attractor output scaled up
and interpolated over site
topography*

*Output from 3D attractor
experiments*

*Vignette of site selected for
processing*

Base site

Exploration 5.2

This design exploration scales-up the attractor experiments into spatial conditions to respond to the digital's isolation from the site. This reconciles the object-oriented digital design process, and its interaction with real qualities of the site and inhabitation. **Figure 148** interpolates the attractor experiment over the site. This alluded to an in-situ architectural response, but the preceding attractor experiments did not adequately address the digital's non-orthogonal potential.

▲ Figure 149 Developed Grasshopper script iterations

◀ Figure 148 3D attractor scale-up process

*Generated voronoi pattern
abstraction of the strategic
plot*

*Codification and Translation
of Measurements*

Seed point manipulation

Extracted repulsion points

Measurement UV Grid

Strategic plot

Exploration 6

This exploration investigates the non-orthogonal digital through a Voronoi distribution. Voronoi is archetypal of the non-orthogonal digital, eliciting criticism for arbitrary overuse (**Figure 151**). The design acknowledges this by introducing an attractor system to manipulate the output based on the strategic plot. **Figure 150** records the development logic, while **Figure 152** documents its iterative outputs. Despite attempts to specify the Voronoi distribution, the results still appeared almost arbitrary.

▲ **Figure 151** Grasshopper 3D voronoi overdose warning

◀ **Figure 150** Voronoi experiment generative logic

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XII.

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XIV.

XV.

XVI.

XVII.

XVIII.

Applied Registration Grid

Multi-agent system operation

Venue of site selected for processing

Base site

Exploration 7.1

A multi-agent system was used to reveal non-orthogonal patterns of inhabitation to oppose the arbitrary application of Voronoi. **Figure 153** records the generative logic. **Figure 154** documents the rules applied to agents. **Figure 155** describes the outputs of this exploration as a time series, acknowledging the temporal component of the script. However, processing power limitations necessitated the simplification of the site to a flat plane. In shifting entirely to a digital landscape, these experiments neglect the previous analogue inquiries.

▲ **Figure 154** Multi-Agent system agent rules

◀ **Figure 153** Multi-Agent system operative logic

I. 0 seconds

II. 30 seconds

III. 60 seconds

IV. 100 seconds

V. 200 seconds

VI. 300 seconds

VII. 500 seconds

VIII. 700 seconds

IX. 900 seconds

I. 0 seconds

II. 10 seconds

III. 20 seconds

IV. 40 seconds

V. 60 seconds

VI. 90 seconds

VII. 120 seconds

VIII. 150 seconds

IX. 180 seconds

Exploration 7.2

The multi-agent system was applied to the extruded strategic plot to unify the preceding analogue and digital inquiries (**Figure 156**). The movement of the agents suggested a finer resolution of inhabitation as dynamic and fluid, alluding to a bodily interaction within these spaces. However, after Bandini et al. (2009) there are challenges with analogising computer agents and the actual body. How the architecture creates spaces for the body requires further development.

◀ **Figure 157** Multi-Agent system inhabitation Grasshopper script

◀ **Figure 156** Multi-agent system inhabiting strategic plot

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Exploration 8.1

The following tests explore how the care-facility rooms create a space for the body. Interlocking adjacent rooms presented a means to complexify the space for the body. This was first investigated in the medium-scale design, although it emerged serendipitously. Steven Holl's Void Space/Hinged Space housing project (**Figure 159**) modelled how interlocking complexifies the relationship between cellular repeating rooms. **Figure 158** iteratively develops this interlocking system, focusing on the internal relationships of bathrooms and living space to the façade. However, where the body interacts with space vertically/in section did not reflect the plan complexity, necessitating further development.

▲ **Figure 159** *Void space/Hinged Space housing concept drawing • Steven Holl Architects*

◀ **Figure 158** *Interlocking rooms iterative development*

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Exploration 8.2

The level-shifting from the medium-scale was reapplied in the care-facility rooms to express a dynamic intimacy with the body. **Figure 160** iteratively develops the space created in the previous exploration. The living/bedroom floor was raised to indicate its intimacy with the body, versus the bathroom. A liminal level mediated this opposition. However, this reintroduced an issue with the inaccessibility of these spaces to some bodies, unresolved by the medium-scale. The level shifts became subtler to retain a similar overall envelope. The liminal space was then expanded to accommodate a clause D1 compliant accessible ramp (Ministry of Business Innovation & Employment, 2017a). Finally, the room entrance was shifted outward, to avoid conflict with the ramp landing. However, the preceding experiments only address one part of the public scale programme.

▲ **Figure 161** *Accessible level-shifts interaction with the body*

◀ **Figure 160** *Process of making level-shifts accessible*

	Entry	Administration	Reception	Single Rooms	Double Rooms	Common Area	Kitchen	Dining Room	Stores/Loading	Laundry	Archive Storage	Archive Cool	Processing	Loading Dock	Film Storage	Art Storage	Restoration	Staffroom	Open Plan Office	Private Offices	Regulatory Office	Meeting Room	Gallery/Exhibition	Register Room	Archive Lobby	Cafe	A/V Gallery	Library	Main Reading	Secure Reading	Reprographics	Training Room	Head of Ref.	Plant
Entry	■	●	●				○	○	○	○																								
Administration	●	■	●						●									●	●	●	●	●						●				●	●	
Reception	●	●	■						●																●									
Single Rooms				■	○	●		○																										
Double Rooms				○	■	●		○																										
Common Area				●	●	■		○																										
Kitchen	○						■	●	●																									
Dining Room	○			○	○	○	●	■																										
Stores/Loading	○	●	●				●		■	●			○	○																				○
Laundry	○								●	■																								
Archive Storage										■	●	●	○		●	●	●																	
Archive Cool											■	●	○		●	●	●																	
Processing								○			●	●	■	●	●	●	●																○	
Loading Dock								○			○	○	●	■	○	○	●									●								○
Film Storage											●	●	●	○	■	●	●																	
Art Storage											●	●	●	○	■	●	■																	
Restoration											●	●	●	●	●	●	■		○	○	○													
Staffroom		●															■	■	●	●	●	○						○						
Open Plan Office		●															○	●	■	●	●	●						●						
Private Offices		●															○	●	●	■	●	●						●						
Regulatory Office		●															○	●	●	●	■	●					●							
Meeting Room		●																○	●	●	●	■						○						
Gallery/Exhibition																						■	○	●	●	●	●							
Register Room																							○	■	○					●	●	●	●	
Archive Lobby			●																				●	○	■	●	●							
Cafe														●									●	○	■	■	●							
A/V Gallery																							●		●	●	■							
Library		●																○	●	●	●	○						■						
Main Reading																								●				■		●	●		●	
Secure Reading																								●				●	■		●		●	
Reprographics																								●				●	●	■				
Training Room		●																													■			
Head of Ref.		●																						●					●	●			■	■
Plant								○					○	○																				

Exploration 9

To fully realise the building's hybrid programme, this exploration considers how functions should intersect, touch, or be separated. After the metric handbook (Adler, 1979/1999), **Figure 162** notes all the functions required of a care facility and archive. Each function is codified based on their necessary, preferable, possible, or impossible connections to other functions. This only addressed the conceptual relationships of the programme, before architectural elaboration.

◀ **Figure 162** *Programme connections matrix*

i. Existing prison infrastructure

ii. Prison volume

iii. Prison Programme separation

iv. Programme separation refinement

iii. Separating archive and care facility functions

iv. Dividing care facility wards

Exploration 10

Broad-grain zoning and massing experiments spatialised the building's programme in-situ. This considered climate, local infrastructure and the site's current zoning strategy to embody these traces in the architecture (**Figure 164**). **Figure 163** iteratively develops a massing proposition which synthesises this information. However, the juxtaposed archive and the care-facility lacked integration.

▲ Figure 164 Massing development logic

◀ Figure 163 Massing strategy development

Exploration 11

This exploration complexifies the integration of programme to address its hybrid nature better. **Figure 165** shuffles room typologies between major wards. **Figure 166** shifted the archive’s administrative functions into the care facility. This failed to alleviate the lopsided nature of the archive programme. **Figure 167** proved more successful in sharing archive space across all wards. This exploration moved away from the three-dimensional massing but preceded a more integrated treatment of the architectural programme in-situ.

◀ **Figure 165** *Shifting room typologies between wards*

▲ Figure 166 Moving archive administration to care facility

▲ Figure 167 Distributing archive space

i. Starting form

ii. Refining programme lengths

iii. Refining programme widths

iv. Connecting wards

iii. Raising to increase view/light accessibility

iv. Splaying wards to increase view/light accessibility

Exploration 12

The more-integrated hybrid programme became the driver to develop in-situ massing experiments. **Figure 168** iteratively refines mass sizes and splays the wards to enhance light and view accessibility (**Figure 169**). This progressed the design to a more complex state. However, the increased hybridity created a visible vertical adjacency between the different level heights of single and double rooms, affecting the appearance of the façade.

▲ **Figure 169** Increasing view and light accessibility

◀ **Figure 168** Iterative massing refinement

i.

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iv.

v.

Exploration 13

This exploration addressed the aesthetic potential in the adjacency of two distinct level heights. Codification explored all combinations this presented, and an ordered oscillation pattern was chosen for its aesthetic unity (**Figure 172**). In setting the vertical adjacency, this created an opportunity for further development of the care facility rooms. **Figure 170** iteratively develops a system of intersection, allowing the single and double rooms (of varying dimensions) to align at the facade. **Figure 171** demonstrates how the complete system intersects. This exploration moved the design to the development stage.

▲ **Figure 171** *Axonometric section of facade and vertically layered and intersecting rooms*

◀ **Figure 170** *Iterative development of room vertical intersection*

00000

01000

00100

10010

01100

00010

01010

11110

00110

01110

10000

00101

11000

10100

11100

01011

11010

10110

10001

10101

00001

01001

11101

11011

01101

00011

10111

10011

00111

01111

11001

11111

i. Base form

ii. Placing primary circulation

iii. Placing secondary circulation

iv. Establishing elevator overheads

DESIGN DEVELOPMENT

Vertical Circulation

Following the relevant clauses of the building code (Ministry of Business Innovation & Employment, 2017a, 2017b), this exploration identifies the most efficient points at which vertical circulation (both manual, and mechanically assisted) may be utilised to ensure the safety of occupants (**Figure 173**). This exploration highlighted the points at which the floor levels may be unified and suggested the presence (or absence) of structure.

▲ **Figure 174** *Stair tread detail - Scale 1:10*

◀ **Figure 173** *Vertical circulation iterative development*

iv. Secondary gravity force resisting structure

iii. Primary gravity force resisting structure

ii. Lateral force resisting structure

i. Combined Structural Systems

Structure

Figure 175 describes the structural design of the care-facility and archive. The size and complexity of the building necessitated the use of steel structure, for its superior strength to size ratio. All lateral structure was modelled in Resist (Charleson & Wood, 2016), while gravity structure was calculated based on rules of thumb (Ioannides & Ruddy, 2000). In the care-facility wards, eccentrically braced frames resist lateral loads in the y-axis. In the x-axis, moment frames allow the occupation of the modular rooms through the structure. The structural solutions are reversed in the archive, with eccentrically braced frames in the x-axis, and moment frames in the y-axis. Moment frames resist lateral loads in the adjoining wards. This consolidation of structure in cores implicates the design of the free-façade.

▲ **Figure 176** Structural zoning diagram, with identified potential structural weaknesses, and seismic separations to accommodate

◀ **Figure 175** Structural solutions exploded axonometric

▲ Figure 177 *Lateral structure eccentricity detail - Scale 1:30*

◀ Figure 178 *Polycarbonate louvre facade development section - Scale 1:30*

Facade Development

Figure 179 dissects the design into three facade topologies: perforated steel panels, fixed vertical timber louvres, and dynamic polycarbonate louvres. The arrangement of facade conditions used repeating elements to create a sense of coherency. Disruptions, as in the forward facade of the archive reflect the different climatic requirements of the programme therein. **Figure 180** develops a tessellation to embody the aesthetic tradition of Māori woven patterns into the architecture. The following spread engages with the construction/detailed design of this system.

▲ **Figure 180** Initial development sketches

◀ **Figure 179** Dissecting design facade typologies

1

▲ **Figure 184** Polycarbonate louvre exploded axonometric - Scale 1:50

Exploration 8.6

Figure 183 shows a part-section through the kinetic polycarbonate-louvre façade, demonstrating its relationship to the office spaces. The louvres protect working spaces oriented on the east/west faces from glare. This system was also utilised as a second skin in front of full-height glazed panels, creating an internal coherency within the design. **Figure 184** describes the composition of the dynamic elements of the façade. The louvre, complete with frame and lateral braces, is pivoted on a mechanism fixed to the building.

◀ **Figure 183** Polycarbonate louvre facade development section - Scale 1:30

▲ Figure 185 *Landscape strategic plot*

T12

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Landscape

A further strategic plot was created at the single building scale to reincorporate the analogue in the design (**Figure 185-187**). This responded to the layering of the new tissue of the building onto the site, as a coalescence of mnemonic narratives. Using the system of spatialisation developed previously, this plot directly formed the landscape between and around the building. This advanced the design to the final stage.

▲ **Figure 187** *Landscape strategic plot detail view 2*

◀ **Figure 186** *Landscape strategic plot detail view 3*

DESIGN REVIEW

The care-facility and prison archive, as well as the previously completed mid-scale house museum, and installation, were presented together in a design review format. This review privileged content from the public-scale design to frame discussions on the progress of the research. These discussions fed into the final resolution of the architectural drawings. **Figure 188** and **Figure 189** present photographs of the presentation set up.

▲ **Figure 189** *Interim review setup 2*

◀ **Figure 188** *Interim review setup 1*

▲ Figure 190 *Development rendered perspectives*

FINAL DESIGN

PREAMBLE

The final design comprises three wards set into the landscape. The dual entrances distinguish the care facility and prison archive programmes. The care facility's ground floor in the northern-most ward contains the lobby and kitchen/dining rooms. The ground floor of the other two wards comprises the lowest level of archive storage, and plant/delivery functions. The first floor of the care facility wards house private accommodation rooms. Common rooms at the end of each ward provide social spaces. The first floor of the archive (connected to the entrance) is split with a mezzanine to house all public access functions. Above this, the archive's second floor houses the archive administrative functions, while the care-facility contains further levels of accommodation rooms.

INTIMACY WITH THE BODY

The care-facility and archive engage an intimate relationship to the body across several different scales. Within the individual rooms, the timber lining and joinery invite touch. The wall near the bed is recessed to keep the head of the reclining patient out of the direct sunlight. The floor levels gently raise to create a more intimate, residence-like space. The fabric of the building recesses and unfolds to accommodate the body as the emotive and mnemonic interpreter of the architecture.

THRESHOLDS

This harmony with the body smooths its interaction with the threshold of the architecture. The recessed handrails and warm materiality present a place for the hand. Rounded inter-spatial columns soften their conflict with the moving body. These harmonious details embody the architectural threshold. However, the body still rubs up against the doors into the rooms, and out onto balconies. These confrontations situate the body as the occupant of the architecture. The

◀ **Figure 192** *Site and ground-floor plan - Scale 1:600*

intersection of the body and the architecture at the threshold reconciles the body to the remembrance of its arms, and its legs.

The dual main entrances vary the threshold to embody the programme's mnemonic meaning. The care facility entrance projects outward, softening the distinction between the large-scale architecture and the human-scale. The awning further mediates the threshold, imbricating interior and exterior conditions. The diffused threshold reconciles the remembrance of the body with the programme of care. By contrast, the prison archive entrance retracts, presenting a hardened threshold to the body. The scale of the threshold exceeds the human-scale, resisting the reconciliation of the body with the remembrance of incarceration.

EXPERIENCE

Confronting conditions further determine how the building orientates a perspectival experience. Balconies open to a screen of timber louvres, which frame views of the green space beyond. This framing accentuates the presence of the exterior in the care-facility rooms. Externally, the design sweeps outward to incorporate the landscape and views of the city beyond. Walls and level/material shifts in the landscape animate the course of the body, necessitating its kinaesthetic negotiation with points of physical intimacy. These glances in time trace the confrontations with the body that allude to remembrance along a temporal continuum.

This confrontation is also present in the sequestration of individually experienced spaces from common spaces. Individual rooms are differentiated, but implicate the collective in their interlocking, and inter-association. The collective confronts individually experienced spaces recursing out into the whole entity of the building, mediated by the liminal corridor. In mediating this juxtaposition, the architecture reconciles with the embodied remembrance of the individual body, constructed in its intersection with the haptic, mnemonic architecture.

◀ Figure 193 *Typical Room Plan - Scale 1:50*

- i Single Room
- ii Common Area
- iii Circulation
- iv Open Plan Offices
- v Single Room
- vi Circulation
- vii Common Area
- viii Open Plan Offices
- ix Head Office
- x Open Plan Offices
- xi Conference Room
- xii Staff Room
- xiii Private Office

▲ Figure 194 Third-floor plan - Scale 1:600

- i Double Room
- ii Common Area
- iii Circulation
- iv Open Plan Offices
- v Double Room
- vi Circulation
- vii Common Area
- viii Open Plan Offices
- ix Archive Storage

A

B

C

▼ 25200

▼ 21500

▼ 16800

▼ 13100

▼ 8400

▼ 4700

- i Entrance Plaza
- ii Entrance/ lobby
- iii Administration
- iv Vertical Circulation
- v Rooftop Promenade
- vi Main Landscape

▲ Figure 197 Transverse Section B-B - Scale 1:200

▲ Figure 199. Archive entrance perspective

CRITICAL REFLECTION

A critical weakness encountered in the care-facility and prison archive was the lack of definition surrounding ‘care.’ This was intentionally left vague, given the focus on embodied remembrance. This also acknowledged the ethical concerns of leveraging the needs of a vulnerable group of people to explore something only tangentially connected to their whole lived experiences. However, this means the ‘care’ programme exhibits a degree of obscurity which requires clarification. Further design development must consider the facility’s user-base. Then, integrating design with the possibility for embodied remembrance without marginalising the occupant’s lived experiences must also be considered.

The relationship of the digital to the body further demonstrates this poor integration of concepts. The public-scale design continues the inversion of the original proposition, such that the digital augments the ephemeral qualities imbued by the body into the design. This leveraged the digital’s rapid iterative potential, and the slippage between analogue ideation, and digital translation. However, only the design process evidences this analogue-digital harmony. Further design development must emphasise the expression of the relationship of the digital to analogue in the final design.

The overwhelming scale of the final design is also poorly integrated with its relatively isolated site. This isolation inherently questions the viability of a large-scale facility on this site. Such a facility might better justify its size situated closer to a main centre. The current design’s poor integration with its context represents a mismatched typology of building. This excessive scale may be attributed to further scaling up the design inquiry, from the already oversized medium-scale. The design’s predilection for the large scale atrophies the ability for the small scale to inform design (Yaneva, 2005). While the opportunity for a similar building on site remains, a shift-downwards in scale would be pertinent to advance the resolution of the design. The following chapter shifts down in scale, to address these findings in finer resolution.

◀ Figure 200 *Care facility entrance perspective*

▲ Figure 201 Public-scale 2 Accommodation room interior perspective

S O M A

Public-scale part two: Rehabilitation Clinic

DESIGN INTENT

Introduction

The second public scale design is the fourth design experiment examining how design could facilitate embodied remembrance to mediate bodily experience in architecture. This chapter directly responds to critical reflections on the previous public-scale design's overwhelming scale, and the obscure 'care' programme, which overtook the archive as the most prominent design challenge. Hence, this chapter evolves the proposition by shifting-down in scale to relate a large-scale architecture and embodied remembrance in finer resolution.

Aim

The second public-scale design aims to leverage a hybrid design process to consolidate how a large-scale architecture could reconcile the body and the site's embodied remembrance through a downwards scale-shift.

Method

This chapter differs methodologically through shifting downwards in scale. Following Yaneva (2005), the small scale and the large scale inform each other. Hence this chapter complements the previous increases in scale. This scale-shift is primarily explored through digital coding, diagramming, analogue/digital drawing and digital modelling. Secondary methods include simulation, material testing and photo-manipulation/montage.

i. Public-scale 1 starting form

ii. Removing archive ward

iii. Removing unnecessary bridging volume

iv. Removing floors to balance form

v. Removing forward levels to increase light/view accessibility

DESIGN PROCESS

Exploration 1

This first exploration iteratively tested the design/affective potential of the downward scale-shift (**Figure 204**). Iterations (**Figure 203**) began by removing the archive ward, reflecting its reduced importance to this design stage. The now unnecessary bridging volume and upper floors were shed to balance the lop-sided form. In its loosened rigour, the downwards scale-shift implicated the potential for a more animate formal strategy.

▲ **Figure 204** *Scaling-down relationship to the body*

◀ **Figure 203** *Scaling-down axonometric series*

Exploration 2

This exploration iteratively develops a more active and humane formal strategy (**Figure 210**). The research considered how *Mobius House* by UNStudio (**Figure 205**) and *Musée des Confluences* by Coop Himmelb(l)au (**Figure 207**) create animate forms. Further investigation identified the *Centre for Cancer and Health* by Nord Architects (**Figure 208**), and *Rehab Basel* by Herzog and De Meuron (**Figure 209**) to model humane forms befitting a care centre. The final form also drew from the case study of *La Tourette* by Le Corbusier, for the strategies it suggests to design for embodied remembrance. This brutalist reference identified concrete as a critical material for exploration moving forward in the design process.

▲ Figure 206 UN Studio - *Mobius House Exterior* • Eva Bloem

◀ Figure 205 UN Studio - *Mobius House Stairs* • Eva Bloem

▲ Figure 209 REHAB Basel • Margherita Spiluttini

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xviii.

CLEAN UP
YOUR MESS
PLEASE

Exploration 3

Given the emerging design's brutalist reference, this exploration documents one-to-one scale material experiments with concrete (**Figure 211**). After Illies and Ray (2009), raw concrete is considered unappealing by non-architects. In response, early tests experimented with how the concrete mixture affected casting. A mixture with a higher water content proved significantly more malleable but also required more finishing than one with a lower water content. The next swatch was brush-finished to test inscribing a texture into concrete. The final test experimented with colourising the concrete, in a manner that could achieve a finish like La Muralla Roja by Ricardo Bofill (**Figure 212**). Colour successfully removed the presupposed harsh nature of raw concrete. While the previous inquiries explore the qualities embodied in the downwards scale shift, they have not yet addressed the architectural programme.

▲ **Figure 212** Ricardo Bofill - La Murella Roja • Andres Gallardo Albajar

◀ **Figure 211** Concrete experimentation equipment

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Stages Milestone	Body	Mind	Estimated Time Frame	Substage(s)	Relevant Description (Frankl, 1946/2004)
0.1 Incarceration	▶		Years	Sentencing	
				Arrival	
				Prison	
				Parole	
0.2 Release	▶		Days		
1 Depersonalisation	▶		Days	Delayed Response	<i>"The body has fewer inhibitions than the mind. It made good use of the new freedom from the first moment on. It began to eat ravenously, for hours and days, even half the night. It is amazing what quantities one can eat" (p. 83).</i>
				Increased Appetites	
				Mind Responds	
2 Deformation	▶		Months	Decompression	<i>"Many days passed, until not only the tongue was loosened, but something within oneself as well; then feeling suddenly broke through the strange fetters which had restrained it" (p. 83).</i>
				Recovery	
3 Disillusionment	▶		Years		<i>"The experience of disillusionment is different. Here it was not one's fellow man (whose superficiality and lack of feeling was so disgusting that one finally felt like creeping into a hole and neither bearing nor seeing human beings any more) but fate itself which seemed so cruel" (p. 86).</i>
3 + Post-Rehabilitation	▶		Ongoing Support		

Exploration 4.1

This exploration refines the architectural programme into a rehabilitation centre for individuals returning from long term incarceration, inverting the traumatic remembrance embodied in the site (Tumarkin, 2004) while responding to the obscurity of ‘care’ in the previous public-scale. The New Zealand Department of Corrections’ (2014 - **Figure 214**) current rehabilitation strategy focuses on drug and alcohol issues, with some programmes tailored to specific offences. Following Victor Frankl (1946/2004), this approach does not support holistic rehabilitation from long term incarceration. Frankl identified three stages of recovery (**Figure 213**). The first is ‘Depersonalisation,’ marked by an inability to emotionally respond to sudden release. The next stage is ‘Deformation,’ where intense mental pressure is released, threatening mental health damage. Finally, ‘Disillusionment’ requires ongoing support to prevent the onset of bitterness. These stages require integration within the holistic rehabilitation programme enacted through the architecture.

▲ **Figure 214** Department of Corrections approach to rehabilitation pamphlet

◀ **Figure 213** Process of returning from long term incarceration

Exploration 4.2

The following spreads support Frankl's three stages within the architecture. Presenting the full, pre-elaborated diagram demonstrates the inter-dependencies of the suggested systems. For clarity, only the components relevant to each discussion are highlighted. This exploration considers how architecture supports the immediate recovery of the body. Following Frankl, the architecture must accommodate vastly increased appetites for food and rest. Only once the needs of the body have been met, can the mind appropriately respond: "feeling suddenly broke through the strange fetters which had restrained it" (p. 83). Despite coming from different branches of psychology, these bodily needs correlate with the pre-potent physiological needs described by Maslow (1943). This includes food and rest, as in Frankl, but also physical activity and healthcare. **Figure 215** describes a programmatic strategy to support these physiological needs. While some elements implicate the recovery of the mind and community reintegration, these require individual elaboration.

▲ **Figure 216** Rehabilitation stage diagram

◀ **Figure 215** Programmatic approach to the rehabilitation of the body

Exploration 4.3

Following the recovery of the body, the architecture shifts to support the recovery of the mind. Frankl likens the mind to a caisson worker injured by sudden decompression. Frankl offers Logotherapy, his psychotherapeutic method, to support people going through this kind of emotional deformation to find meaning for living. However, Pytell (2006) criticises Logotherapy for imposing Frankl's personal Eurocentric/religious values. Contemporary Logotherapy has evolved into Meaning-centred counselling which connects it to contemporary research in counselling and the principle of meaning (Wong, 2012). **Figure 217** describes a programmatic strategy to support the returning individual's search for meaning. Initially, the architectural response included psychotherapy rooms. The network of amenities available in the architecture was then expanded to include library and information services, gardens for growing food, and teaching spaces to allow occupants to find personal fulfilment. Having supported the recovery of body and mind, the mechanisms supporting rehabilitation require further development.

▲ **Figure 218** Rehabilitation stage diagram

◀ **Figure 217** Programmatic approach to the rehabilitation of the mind

Exploration 4.4.1

This exploration considers how architecture can support the healthy reintegration of people returning from incarceration into the community. This addresses the creeping onset of ‘Disillusionment,’ due to a perceived “superficiality and lack of feeling” from the outside world (p. 86). The Department of Corrections (2018a) currently assists through providing training in “construction, farming, nurseries, forestry, timber processing, furniture making, textiles, catering, engineering, concrete product manufacturing, printing and laundries” (n. p.). Many of these require a space to work outside of a typical classroom environment. Hence, **Figure 219** provides workspaces to support education and training. However, supporting rehabilitation into the community goes beyond the provisions of the singular building.

▲ **Figure 220** Rehabilitation stage diagram

◀ **Figure 219** Programmatic elements supporting healthy community reintegration

Exploration 4.4.2

This exploration considers the network available in the Wellington community to support reintegration. **Figure 221** charts the known locations of centres which offer support and accommodation to people reintegrating with the community. The Department of Corrections (2018c) contracts both responsibilities to the Salvation Army in the Wellington region. This contract precludes a dedicated support network, as exists in Auckland and Dunedin. Hence, there is a gap in the services supporting reintegration into the Wellington community.

▲ **Figure 222** *Mansfield court hotel* • WCC - Charles Collins

◀ **Figure 221** *Centres offering supported accommodation*

Exploration 4.4.3

Figure 223 proposes the locations for community outreach and aftercare facilities, that accommodate the existing non-specialised infrastructure surrounding rehabilitation. This also responds to previous public-scale design's failure to address its community isolation. Although it is outside the scope of this chapter to specifically design these outreach facilities, **Figure 224** describes general design principles, to guide in-situ responses. Scaling-down to suggest these principles informs the design of the larger-scale architecture in kind (Yaneva, 2005). However, advancing the research requires refining how the main design addresses rehabilitation.

▲ **Figure 224** Design principles to guide in-situ design

◀ **Figure 223** Expanded network of satellite facilities

	Entry	Administration	Reception	Private rooms	Common Area	Kitchen	Dining	Stores/Loading	Laundry	Waiting Room	Medical Consultation	Triage Room	Pharmacy	Pharmacy Stores	Staff Facilities	Record Room	Gymnasium	Equipment Storage	Changing Rooms	Pool	Sauna	Therapy Consultation	Ornamental Landscape	Walking Tracks	Edible Gardens	Library Collection	IT Facilities	Librarian's Space	Conference Rooms	Reprographics	Theory Classrooms	Practical Teaching	Bathrooms	Plant			
Entry	■	○	●			×	×	×		×			×				×							●													
Administration	○	■	○					○		×	●		●		●	●						●							●								
Reception	●	○	■							●			○			●													×		×				○		
Private Rooms				■	●		○																														
Common Area				●	■		○																												○		
Kitchen	×					■	●	●							●																						
Dining	×			○	○	●	■																												●		
Stores/Loading	×	○				●		■	●					×				×																	×		
Laundry								●	■																											×	
Waiting Room	×	×	●						■		●	●	●									●													●		
Medical Consultation		●								●	■	●	○	○	●	●						×													●		
Triage Room										●	●	■	○	○	●	○						×													●		
Pharmacy	×	●	○							●	○	○	■	●	●	●																					
Pharmacy Stores								×			○	○	●	■	×	×																					
Staff Facilities		●				●					●	●	●	×	■	×						●											●	●			
Record Room		●	●								●	○	●	×	×	■																					
Gymnasium																	■	●	●	×	×																
Equipment Storage								×										●	■	×	●	○															
Changing Rooms																			×	■	●	●													●		
Pool																		×	●	●	■	○													●		
Sauna																		×	○	●	○	■													●		
Therapy Consultation		●								●	×	×			●							■															
Ornamental Landscape																							■	●	●												
Walking Tracks	●																						●	■	●												
Edible Gardens																							●	●	■												
Library Collection																										■	○	●	×	●	×				●		
IT Facilities																										○	■	●	×	●	×				●		
Librarian's Space		●	×																							●	●	■	×	●	×						
Conference Rooms																										×	×	×	■	×	×				●		
Reprographics			×																							●	●	●	×	■	×						
Theory Classrooms																										×	×	×	×	×	■				●		
Practical Teaching															●																		■		●		
Bathrooms			○		○		●			●	●	●			●					●	●	●					●	●		●		●	●	■			
Plant							×	×																												■	

Exploration 5

This exploration advances the previous programme developments towards a resolved planning strategy. **Figure 225** considers the pragmatic connections between spaces and the quality of the thresholds between them where the body ‘rubs’ up against the architecture. Early iterations directly passed from one space to another (**Figure 227**). However, these default thresholds lacked the sophistication to create an affective journey within the space. Hence, interstices were applied to soften thresholds and guide the spatial experience. This exploration advanced the design to the development stage.

▲ **Figure 226** (Top) Threshold connections key

▲ **Figure 227** (Bottom) Initial development sketches

◀ **Figure 225** Thresholds/ connections between programme spaces

DESIGN DEVELOPMENT

Architectural Promenade

This exploration examines the plan as the site of a journey through the architecture. This exploration takes precedence from the case study of La Tourette. Samuel (2010) notes that in Le Corbusier's work, the sequence of images that unfolds before the eyes of the observer supersedes mere circulation. The so-called 'promenade architecturale' therefore intimately addresses the human experience of space. However, Samuel (2010) criticised the architectural promenade for unfairly privileging the disembodied eye. **Figure 228** records the haptic/somatic conditions encountered by the body to augment the purely visual architectural promenade. This exploration highlights the development of critical points of the journey undertaken in the following pages.

◀ **Figure 228** *Architectural Promenade diagram*

Landscape

This exploration designs the landscape/approach in the promenade architecturale. The architecture's block-like form, and steep topography of the site restricted the folding together of indoor and outdoor conditions in initial designs. Research returned to La Tourette's (**Figure 229**), assertion over the landscape as a "radiant building [...] would impose its influence upon the surrounding [...]" (Cited in Samuel, 2010, p. 10). This paralleled Le Corbusier's *Unité d'Habitation* (**Figure 230**). Following this, **Figure 231** developed the landscape to frame the architecture. Later iterations allowed for some meandering and distraction while walking. This recognised the holistic therapeutic implications of mobility and walking in the landscape (Doughty, 2013). **Figure 232** describes the iterative development landscape's planting strategy, solidified in **Figure 233**. The developed landscape recognised the Māori legend of Wellington harbour. Moments of pause coincide with views to Wellington heads, where the Taniwha Ngake escaped into the Cook Strait, and out to Hataitai, the final resting place of the Taniwha Whāitaitai.

▲ **Figure 231** *Landscape relationship to architecture and the body*

◀ **Figure 229** (Top) *La Tourette in the landscape - "All Saints Day 2008"* • Couvent de la Tourette

◀ **Figure 230** (Bottom) *Le Corbusier, Unité d'Habitation, Marseille, aerial view, 1945–53* • Fondation Le Corbusier

▲ Figure 232 Planting strategy iterative development

i. Public-scale entrance volume

ii. Removing original entrance volume

iii. Projecting awning outwards to complement form

iv. Supporting awning structure

v. Placing wind lobby/entrance

Entry Threshold

This exploration advances along the promenade architecturale, to develop the body's intimate experience of the entry threshold. Following **Figure 234 i-v** the initial plaza, awning and wind lobby attempted to bridge the interior and landscape. However, this system alone failed to invite the body across the threshold. Whyte (1988/2009), concluded that the most successful public spaces support a slower paced experience. Accordingly, **Figure 235** develops a seating strategy, while **Figure 234 vi** develops a ground material condition to distinguish the slow approach to the threshold from the fast experience of a street.

▲ **Figure 235** *Entrance seat detail - Scale 1:10*

◀ **Figure 234** *Entrance threshold iterative development*

i. Raw volumes from formal exploration

ii. Shifting major levels

iii. Shifting sub-levels

iv. Circulation between sub-levels

v. Vertical circulation terminations

vi. Details for inhabitation and plant room

Rooftop Promenade

This exploration advances to the rooftop, as the culmination of the promenade architecturale. Samuel (2010) suggests “it is traditional in architecture ... to progress upwards in search of revelation” (p. 203). The rooftop promenade thereby becomes the denouement of embodied remembrance within the design. Initially, the roof-top promenade’s elements lacked coherency, and its vast, unpopulated spaces would overbear human experience (Whyte, 1988/2009). Hence **Figure 237** subdivides the space into levels exhibiting a shifting relationship to the body. These level shifts composed the position of the skylights, memorial, and plant room. However, as expressive elements of the rooftop promenade, the skylights and memorial remain under-developed.

▲ **Figure 236** *Brion Tomb level shifts* • *Leslie Williamson*

◀ **Figure 237** *Rooftop promenade iterative development*

▲ Figure 239 Skylight form iterative development

Skylights

This exploration develops the skylights which punctuate the rooftop promenade and spaces within the design (Figure 238). Figure 239 iteratively develops the skylights from simple, rectilinear breaks in the floor plane, to more organic forms representative of the plastic capabilities of concrete. The introduction of light and complexity deeper into the building's floor plates reacts against the flat layering and impermeable spaces of the previous public scale design.

◀ Figure 238 Skylight lower edge connection to rooftop promenade detail - Scale 1:10

Memorial Space

This exploration developed the memorial space, as an expressive element of the rooftop promenade, and the termination of the promenade architecturale. Initial iterations (**Figure 240**) acknowledged the memorial's interiority through separating interior skin from the exterior. This followed Jorn Utzon's Bagsvaerd church (**Figure 241-242**), for its sublime separation of interior and exterior experience. However, these initial designs were incoherent with the rest of the building. **Figure 244** iteratively resolves the exterior form, referencing Le Corbusier's church at Firminy (**Figure 243**), for its sculptural use of concrete. This concluded the development of the rooftop promenade but foregrounded the holistic lack of expressive digital elements, responding to the research proposition.

▲ **Figure 240** *Initial Development Sketches*

◀ **Figure 241** (Top) *Jorn Utzon - Bagsvaerd Church Exterior* • Peter Guthrie

◀ **Figure 242** (Bottom) *Jorn Utzon - Bagsvaerd Church Interior* • Seier + Seier

▲ Figure 243 Le Corbusier - *Eglise Saint Pierre, Firminy* • Richard Weil

i. Identification of rooftop space

ii. Tapering

iii. Roof Slant

iv. Rounding Edges

v. Entrance

v. Light Tubes

Facade Conditions 1

This exploration develops the design's façade conditions, to express the digital component of the research proposition. The façade was identified as a rich location to offset the unappealing experience of raw concrete after Illies and Ray (2009). Research returned to La Tourette's rhythmic modulation of the façade (**Figure 245**). In response, a Grasshopper script was written (**Figure 247**) to create a similar undulation of compression and release that invited different tempos of experience. However, John Scott's Futuna Chapel (**Figure 246**) suggested the potential for colour to offset the raw concrete language. Hence the next script adaptation stochastically coloured façade panes. However, the permeability of this façade condition was not suitable for the insular gymnasium closing the courtyard of the architecture.

▲ **Figure 247** *Developed Grasshopper script*

◀ **Figure 245** (Top) *Le Corbusier - Sainte Marie de La Tourette, Refectory Windows* • Ailsa Johnston

◀ **Figure 246** (Bottom) *The Jesus Figure and Windows - Futuna Chapel by John Scott* • Russell Walden

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Facade Conditions 2

This exploration develops a façade condition which responds to the insular form of the gymnasium/pool complex. Two typologically different façade conditions questioned the coherency across the building. The research identified how the organic positioning and sizing of windows in Notre Dame du Haut by Le Corbusier (**Figure 249-250**) stylistically complemented the preceding undulating façades. Following this, a grasshopper script was developed to modulate a grid of apertures based on the stochastic logic from the previous exploration (**Figure 251**). Clusters and rhythms of compression/release emerged in the figuration of the facade (**Figure 252**). Further referring to Notre Dame du Haut, the script was extended to offset and scale the apertures, reducing the façade's pervasive two-dimensionality. These frustum-shaped reliefs diffused incoming light and suggested the depth of the wall. This advanced to the final design.

▲ **Figure 251** *Solid facade Grasshopper script iterations*

◀ **Figure 249** *(Top) Notre Dame du Haut Exterior • Cemal Emden*

◀ **Figure 250** *(Bottom) Notre Dame du Haut Interior • Paul Kozłowski*

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DESIGN REVIEW

The rehabilitation centre, as well as the previously completed care facility/archive, mid-scale house museum and spatial installation, were presented together in a design review format. This review examined the breadth of work undertaken to reach a final design outcome. This framed discussions on the rehabilitation centre, as the outcome of the research process, which directly fed into the resolution of the final drawings, and the findings of the research. **Figure 253** and **Figure 254** present photographs of the review set-up.

▲ **Figure 254** *Final review setup 2*

◀ **Figure 253** *Final review setup 1*

FINAL DESIGN

PREAMBLE

The final design comprises two wards enclosing a central courtyard. The main ward sweeps outward at the ground floor to invite entrance. Beyond the threshold, the ground floor features a kitchen/dining room, practical teaching workshops and an indoor pool. At the first floor, bridges raised above the courtyard span between the library, gymnasium and administration. The communal medical/counselling facilities and private accommodation rooms divide the programme of the second floor. Above the gymnasium, the sports court provides space for organised team activities. The third and fourth floors house banks of private accommodation rooms. Common rooms at the end of each ward provide social spaces. On the fourth floor, the main ward spills out onto the rooftop promenade, which also houses social space, a memorial, and the plant facility.

i	Whāitaitai Rest Stop
ii	Ngake Rest Stop
iii	Pa-harakeke
iv	Māra Kai/Food Garden
v	Pa-kōwhai
vi	Pa-pōhutakawa
vii	Entrance Plaza
viii	Rooftop promenade 1
ix	Rooftop promenade 2
x	Rooftop promenade 3
xi	Plant Room
xii	Memorial
xiii	Front Garden

◀ Figure 255 Location/ site plan - Scale 1:1000

INTIMACY WITH THE BODY

The rehabilitation centre creates a sense of intimacy with the body at several different scales through the tactility and tempo of the architectural experience. The rough stone walking surface slows the body confronting the architecture at the entrance. The varied rhythm of the façades force the body to negotiate kinaesthetically with undulations of compression and release, read in the fenestration pattern, and the light condition it engenders.

The moving body reads spaces through the rough haptic condition of the concrete. The visceral materiality impels the hand to touch and understand the depth of the surface. Smooth handrails and polished surfaces accent the coarse haptic condition to offer a respite for the hand. Seats along circulation spaces give momentary pause to the moving body. In private rooms, the warmth of the timber lining and joinery invites touch. Dark-painted ceilings and wall-mounted lights reduce glare to the eye. The architecture enters a kinaesthetic harmony and dissonance with the body, presenting a mutable continuum of temporal experiences.

THRESHOLDS

The varied threshold conditions reconcile the body and the embodied remembrance of the site's disquieted history. The building's somatic details harmoniously ease the threshold between the haptic/kinetic body and the architecture. However, in another moment the architecture coarsely confronts the body to affect a recognition of the temporal continuum. This intersection at the threshold of body and architecture traces the remembrance of the body's senses.

The variable thresholds between the interior and exterior also convey nuances of embodied remembrance. The entrance threshold sweeps outward and upward to mediate interior/exterior conditions and diffuse the large-scale architecture confronting the human-scale. The integration of the architecture in the landscape extends this relationship. The architecture holistically integrates dedicated green spaces and walking tracks with the rehabilitation programme. The southern-most façade presents a monolithic wall to the landscape, accentuating the fine-grained approach to the building. The northern ward diffuses this threshold as the raised

◀ Figure 256 *Typical room plan* - Scale 1:75

▲ Figure 257 Ground floor plan - Scale 1:500

▲ Figure 258 First floor plan - Scale 1:500

▲ Figure 259 Second floor plan Scale 1:500

▲ Figure 260 Upper-floor plan - Scale 1:500

- i Accommodation Rooms
- ii Room Bathroom
- iii Circulation Promenade
- iv Central Memorial
- v Main Workshop
- vi Library
- vii Library Reception
- viii Counsellor's Office
- ix Medical Office Bathrooms
- x Accommodation Rooms

▲ Figure 261 Transverse section A-A - Scale 1:250

- i Entrance/Lobby
- ii Administration
- iii Central Memorial
- iv Pool Equipment Storage
- v Pool
- vi Gymnasium
- vii Gymnasium office
- viii Sports Courts

▲ Figure 262 Longitudinal section B-B - Scale 1:250

▲ Figure 263 Front facade perspective

▲ Figure 264 Landscape perspective

▲ Figure 265 Entrance exterior perspective

▲ Figure 266 Entrance interior perspective

▲ Figure 267 Circulation promenade perspective

pilotis allow the landscape to pass beneath. The thresholds between the interior and exterior communicate the remembrance embodied in their diverse confrontation and cohesion with the body.

EXPERIENCE

The architectural experience organises along a haptic/somatic reconciliation with the moving body. The long approach and vestibular entry threshold sensitise the body to the interior. Liminal spaces create a denouement to remembrance embodied in the memorial and the experience of the individual, private rooms. The individual body experiences the architecture in moments of quietude in the miasma of the collective. The architectural experience is conceived from the outside, in, as the moving body reads the elements of the journey constituted spatiotemporally exterior to one another.

The body experiences the coalescence of material and light. The organic patterning and coloured play of light offset the coarse hapticity of the raw concrete walls. This convergence of hapticity and light reconciles between the duality of rehabilitation, and the embodied remembrance of the site's unsettled history.

▲ Figure 269 *Common room perspective*

▲ *Figure 270 Rooftop promenade perspective*

CRITICAL REFLECTION

The rehabilitation centre more effectively reconciled the body with the digital. This design inherited and expanded upon the inverted proposition from the first public-scale design, where the digital serviced the ephemeral qualities imparted by the body. However, the previous chapter obscured the body's relationship to the digital. In the rehabilitation centre, the analogue is augmented and filigreed with digital tools. The integration of the digitally-derived façades with the analogue-defined spaces conveys this relationship to explore embodied remembrance through a hybrid architecture.

However, the rehabilitation programme questions the suitability of the brutalist language. After Illies and Ray (2009), those outside of the architectural discipline do not typically recognise raw concrete as an appealing material. Hence, following Le Corbusier, treatments of light, texture, and colour offset a pure concrete language, in a way which is meaningful to both Architects and Non-architects.

The imposed Eurocentric design approach suggests another critique of the design. According to the Department of Corrections (2018b), the New Zealand prison population is approximately 31.3% European, versus 50% Māori. Hence, effort was made to incorporate the mythologies and identities inherent to the Māori experience of space – as in referencing the Wellington Taniwha in the landscape, and John Scott's *Futuna Chapel* in the facade. However, this is less apparent in the final design than the language derived from *La Tourette*. Coming from a mixed Māori and European background, this same internal tension reflects the author finding his own design identity.

CONCLUSION

SUMMARY

This thesis explored how design could facilitate embodied remembrance to mediate the experience of the body and the digital across several scales of design. The theoretical context of embodied remembrance highlighted the intimate embodiment of virtual remembrance. In ‘rubbing’ up against the thresholds of objects and spaces, the mnemonic-body catalyses ever-expanding mnemonic assemblages. Embodied remembrance has been variably defined in the social sciences, but emerged in communal reflections upon mnemonic narratives habituated through bodily performance. The collapse of linguistic meaning in the aesthetics of traumatic remembrance implicated the embodied experience of varied cultural and contextual values in architecture. These discussions highlighted how an intimacy with the body, threshold conditions, and experience conveyed the fundamental conditions of embodied remembrance. The case study chapter elaborated on these categories alongside each of the design chapters. Embodied remembrance emerged in the indeterminacy of diverse temporal, mnemonic, and experiential strata, whose meanings were intertwined, yet utterly irreconcilable.

The design of a spatial installation investigated the relationship between the body and the digital at the human-scale. The flattening of diverse temporal and mnemonic strata accessed by the moving body enacted embodied remembrance. However, embodied remembrance’s ephemerality proved difficult to reconcile with the digital process. The subjective interpretations of the installation by diverse bodies also introduced unpredictability into the experience of the installation.

The medium-scale memorial house-museum addressed the problem of the digital and embodying a specific and clear historical narrative to facilitate embodied remembrance. The body’s experience of the design enacted embodied remembrance, codified and spatialised through narrative. The medium-scale design inverted the research proposition in response to the installation. The digital serviced the ephemerality authored into the design by the body. However, the lack of an authoritative digital process atrophied the digital’s expression in the final

design. Spatialising the narrative's embodied racial tensions also directly questioned the architecture's role as a moral arbiter. The open-ended engagement necessary with these complex issues was outside of the research scope.

The public-scale care facility and prison archive pursued the inverted research proposition applied to a large-scale, complex architecture. The architecture enacted an embodied remembrance of the site's traumatic history through a sensitivity to the haptic, kinetic body. However, the obscurity surrounding 'care' weakened how the design related to the body. The final design's overwhelming scale atrophied the presence of the small-scale, necessitating a scale-shift downwards to advance the resolution of the design.

The rehabilitation centre shifted downwards in scale to consolidate the embodied remembrance of the site's traumatic history enacted in a public-scale architecture. The architecture's controlled harmony and confrontation with the moving body suggested the affect of embodied remembrance. Digital tools augmented and filigreed the analogue to reconcile the two processes and develop a hybrid exploration of embodied remembrance. However, the rehabilitation centre's programme questioned the suitability of a brutalist design language. Following Le Corbusier, manipulations of light, texture, and colour meaningfully offset this for both Architects and Non-architects. However, this imposed Euro-centrism conflicted with a high proportion of Māori occupants. This tension reflected the author's mixed Māori and European background, and the struggle to determine this design identity.

CRITICAL REFLECTION

Several findings have emerged from this research. Significantly, inverting the proposition proved critical to reconciling the digital and the body. Augmenting the analogue with the digital allowed the design to access the ephemeral, temporal meanings imparted by the body. This formed a feedback loop between process and experience in the final design.

Affect is central to the body's experience of embodied remembrance. However, the body interprets this affect through the whole milieu of subjective lived experience, including social, political, philosophical and cultural dimensions. Embodied remembrance is, therefore, a complex issue, which can emerge in the intersection of heterogeneous, irreconcilable strata.

The final design connected the rehabilitation centre and the notion of embodied remembrance, which is typically used to describe memorials. Connerton (1989) emphasised the importance of performativity in embodied remembrance. The rehabilitation centre creates a place for patients to go to reconcile with their remembrance of incarceration actively. Simultaneously, the occupants of the architecture can unconsciously immerse themselves in an experience of the site's embodied mnemonic narratives. The therapeutic and racially inclusive devices incorporated in the landscape reclaim the site from the disquieted histories disturbed by the installation and medium-scale designs. Hence, the rehabilitation centre inverts the typical way of reconciling with monuments to suggest a positivist reconciliation between the body and the site's embodied remembrance.

The method of scaling proved beneficial to exploring embodied remembrance. The Installation's operation at a one-to-one scale facilitated a physical experience of the design which emphasised the digital's uncritical incorporation. The medium-scale and public-scale designs reacted against this. The analogue strategic plots mediated the scale of the body and the architecture. Despite their increasing scale, the interaction with the body in this process was similarly intimate.

However, there were problems applying the method. The medium-scale far exceeded its scope through housing all character's of Baxter's Māori Jesus. This negatively affected the shift up to the public-scale through atrophying the small-scale's ability to inform the large-scale. Hence, there is a discontinuity from the medium-scale, as the first public-scale design yielded to an overcomplicated programme and oversized architecture. The downwards scale-shift proved beneficial in removing these constraints and resolving the public-scale. This does not suggest that a massive architecture cannot effectively evoke embodied remembrance, but a design of this scale proved difficult to resolve within the scope of this thesis.

FUTURE DIRECTIONS

Further scale-shifts could be implemented to extend this research. Returning to the installation-scale could condense the large-scale's findings on embodied remembrance. Scaling-up to the urban or city scale would question how embodied remembrance manifests when vastly removed from the human-scale. Future research could also address diverse programmes to test how embodied remembrance manifests within different inflexions of the museum, or in a genuinely habitable home. This would force a negotiation with the humane at a smaller-scale. There is also a potential to further engage with embodied remembrance through Non-Western narratives, as began in the incorporation of Māori design attributes. For example, since completing design, I have become aware of *SARAH-Fortaleza* by João Filgueiras Lima (**Figure 272**). This reconciles a rehabilitation programme with concrete, as was questioned in the second public-scale design.

▲ **Figure 272** João Filgueiras Lima - *SARAH Fortaleza Neurorehabilitation Center* • *SARAH network*

CONCLUSION

This research developed the theoretical understanding of embodied remembrance to mediate the experience of the body and the digital in architecture. Each design test explored embodied remembrance through their intimacy with the body, threshold conditions and experience. This harmony and confrontation with the body can imbue architecture with mnemonic, temporal meaning. Initiating design through the ephemeral, temporal meanings imparted by the body highlighted the digital as a tool to augment this inquiry. The final hybrid design was then able to access the sensitive, nuanced strata of embodied remembrance. Through understanding the heterogeneous but tacitly irreconcilable natures of these strata, embodied remembrance was able to be tested through design.

END MATTER

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FIGURES LIST

Unless otherwise stated, all figures belong to the author

- Figure 002** Zaha Hadid - Antwerp Port House. Hélène Binet.
Source: <<https://www.dezeen.com/2016/09/27/port-house-antwerp-belgium-zaha-hadid-architects-photography-helene-binet/>> 002
- Figure 005** *In Memory of George Dyer*, 1971 (CR 71-09) . Francis Bacon. © The Estate of Francis Bacon. All rights reserved. DACS/Copyright Agency, 2019.
Source: <<https://www.francis-bacon.com/artworks/paintings/memory-george-dyer>> 014
- Figure 006** *Triptych August 1972*, 1972 (CR 72-07). Francis Bacon.
Source: <<https://www.francis-bacon.com/artworks/paintings/triptych-august-1972>> 018
- Figure 007** *Portrait of George Dyer Staring at Blind-Cord*, 1966 (CR 66-02). Francis Bacon. © The Estate of Francis Bacon. All rights reserved. DACS/Copyright Agency, 2019.
Source: <<https://www.francis-bacon.com/life/family-friends-sitters/george-dyer/dyer-blind-cord>> 020
- Figure 008** Daniel Libeskind - Jewish Museum Berlin. Hufton + Crow.
Source: Supplied. 024
- Figure 009** Peter Eisenman – The Berlin Holocaust Memorial. Luca Onniboni.
Source: <<https://archiobjects.org/wp-content/uploads/2015/01/Berlin-memorial-Eisenman.jpg>> 027
- Figure 010** Carlo Scarpa - *Brion Tomb* Detail. Åke E:son Lindman.
Source: <<http://lindmanphotography.com/?work=tomba-brion-alivole-italy>> 028
- Figure 011** Carlo Scarpa - *Brion Tomb* Corridor. Åke E:son Lindman.

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