THE UNAVOIDABLE METAPHOR OF MEMORIAL ARCHITECTURE:

The Boundaries and Event - Space of

Chernobyl Reactor no.4

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ABSTRACT

In the design of memorial architecture, there is encountered an overuse of literal metaphor in order to translate difficult concepts into the built form. These metaphors are explored in contemporary examples of memorial and hybrid-memorial typologies. Within Chernobyl, there is a set of criteria that enable these metaphorical interpretations to operate on a more complex level, and allow the act of memorialising a truer response. The unique conditions contained within the reactor allow for a reinterpretation of architectural process, which is already realised by the existing Sarcophagus—a reactive memorial itself, designed to entomb the burnt core and its radioactive properties. As such, the reactor and its attached site can no longer be re-used in any functional capacity; the proposed memorial embraces these criteria, exploiting phenomenological thought in order to locate a set of boundary conditions. This creates an event-space—that being the location of inhabitable architecture within the reactor. Event-space exists between the boundaries established, which is a conceptual entity that is able exist in reality, and enable flashes of the past events to surface, which are interpreted by the memorial inhabitants. The memorial uses this event-space, within the sites absence of function, to locate the actual event of the disaster in the past. This fragile undertaking is achieved by placing greater responsibility on architecture to mediate the design of memorial, and remove external influences that halt this process.

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The problem with memorial architecture is found in its attempt to transport people into un-locatable places.

I CHAPTER 1 : INTRODUCTION

The Problem with Memorial Architecture

1.i Overview.

All memorial architecture has historical foundations. These foundations are descriptions of facts bound within events and historically recorded, but that can no longer be experienced. Instead they are ‘understood’ through a process of reflection, within which they can only be catalogued and critically engaged with if filtered through discussions of their proximity to other facts. This is the process of emerging from an event. Without an event, such as a disaster or other record of significance, no memorial architecture can emerge.

1.ii The Aim of Memorial Architecture.

Memorial architecture prompts this process of emerging as a provision for the inhabitants of succeeding generations. It is an opportunity to understand by reversing the chronology of facts provided and trace the lines back to the event. For this to be possible there must be acknowledgement and agreement between the memorial and those who inhabit it; these *event-spaces* (spaces that encapsulate an event) can never be inhabited in real-time; they are merely reflective manifestations. This is the first uncovering of conceptual problematics within memorial architecture.

1.iii Location and Space.

Memorial architecture, in order to begin to deal with the problem of appropriately addressing space, has first to deal with the problem of how to define itself—where to situate and establish itself as a recognisable typology. Because the programme of memorial is to transport the inhabitant to an un-locatable place (*event-space*), the frameworks and requirements that usually condition the traditionally understood typology of architecture are missing. In many cases, a seemingly appropriate enabler-typology is introduced, and an architectural hybrid is substituted instead of confronting this problem of memorialisation head on; the memorial-hospital, the memorial rest-home, the memorial-school. In all these cases, the association of a hybrid-typology with memorial is approximate—these are vague appropriations of possible mental constructs, and are never able to directly transport the inhabitant to a nearness of *event-space*. This substitution involves some folding together of the sheets of history and society to very carefully, but quite arbitrarily, bring concepts and events into alignment. Ultimately, this hybrid relationship is forced to accept its fate as awkward, ambiguous, and more worryingly, seen as necessary for memorial architecture. It is wholly unstable in this relationship, and is easy

pickings under a critical lens. This is abundantly the case within a further hybrid-typology, and one which will be used in this thesis as various case studies: the memorial museum.

Fig.1 – Plan, the existing Chernobyl Nuclear Reactor no.4, with ‘Sarcophagus’ structure, as it is today

Fig.2 – Section of the original RBMK 1000 nuclear reactor

1.iv Museums.

The museum provides for one of memorial's dilemmas: it assumes presence in abundance. A museum can be considered as a holder of artefacts—a perpetually backwards looking historical recorder. Reflective analysis of these artefacts exposes museum typologies to be retroactive archives of war: history is written by the victors. This is how the values that were placed at the feet of history are remembered—each museum is a monument to now latent acts of violence. Each artefact illuminates a small segment of a larger composition that is devoid of an overall picture until history gathers them. This exposes further problems within museum typologies—preserving what is most precious to a culture, even the acts and tools of war—and then solidifying them as edifices within cultural history and understanding. In no other unrestrained public context would this behaviour be acceptable, and is only due to the fact that museum typologies exclusively look backwards into history. This is where museum and memorial architectural typologies meet and depart from one another. The issues inherent in museum as memorial will be expanded using examples of architecture that are conceptually based within phenomenological methodologies.

1.v Phenomenology.

Phenomenology allows a theoretical positioning that is able to identify the ineffable—things that cannot be satisfactorily explained or are challenging to critique—on the grounds that all questions raised can never result in final conclusions. In the context of this thesis, this is the un-locatable *centre* of memorial and *event-space*. Broadly speaking, we know intuitively that something exists, because we feel a certain resonance, which is confirmed by history (museums), cultural understanding (the phenomena of social evolution—migration for example), and reflection (historical/conceptual/theoretical discourse). The task of phenomenology is not to define the unexplainable and/or un-locatable, but to acknowledge it as present. This links directly to dealing with *event-space*, which cannot be placed within a category of 'real things'. *Event-space* exists between what is known (fact) and what is unknown (fabrication), which within architecture can be expressed as a *boundary*.

The act of creating architecture that identifies a *boundary* removes the trivial nature of building without function, which is a common misinterpretation of memorial. The designing of memorial space is often equally about what is not shown, as well as what is. It is for this exact reason that the Chernobyl nuclear reactor site has been chosen. It offers the opportunity to explore the continuing nature of a constantly evolving *boundary* condition (through the facts of its ongoing physical transformations), the opportunities that it creates between the possibilities of inhabitation and non-inhabitation, and the larger questions that it poses with regard to

architecture (including ontological understanding) existing in time. The questions surrounding time are explored through an offering of choices between that which is real and the otherly, which is experienced within the memorial design. (Fig. 3 & 4)

Fig.3 – The Chernobyl memorial Plan

The bridge exists in a tension relationship between the idea of rehabilitation (an archive) and the truth of the events contained within the reactor core. Structural bearing is shouldered through the canopy, not principally through the pipes as seems apparent, but from a complex series of tension and compression elements that arcs above and ultimately behind. The structure is rooted within the existing plant footprint. Realisation of the structure can only be analysed upon entry into the canopy. The pipes ultimately enter the structure of the core, but do not impede or affect it in any way, structurally or psychologically; it is to be viewed in its ‘resting’ state.

Fig.4 – Longitudinal Section, with the ‘bridge’ that extends from the new archive through to the existing destroyed reactor core, access to the ‘canopy’ at the centre. Each ‘pipe’ is 5x5m wide

The inhabitation of the memorial, from the archive to the reactor, is a simple gesture, which is punctuated by the long journey along the pipes into the unknown. Ideas of what the reactor contains are allowed to germinate along this journey—the choices are simplified to those of returning to the archive, pausing within the canopy, or continuing to the core. No views are offered along the pipes. There is no reassurance from the architecture, only the bare facts that something is about to be experienced. The imagination of the occupant is allowed to wander from the information supplied by the archive, and then be altered by the actual experience: the expectation meets reality.

1.vi Case Studies.

Often, the complexities of memorial *boundaries* are interpreted as metaphors because their arbitrary relationship masks the difficult truth of conveying events in *event-space*. In this way most memorials create a disconnection between the reality of the event and the lasting *echo* of its repercussions. It is done because the passive muting that occurs enables the memorial to become manageable; the real impacts of the event cannot be felt, through the way they are filtered by metaphor. In this massaging of the problematic, which allows the architecture breathing space, events are still described but in non-confrontational tones. In this thesis, two principal case studies will be used to interrogate how these various methods of metaphor use influence memorial architecture. Daniel Libeskind's Jewish Museum in Berlin (Fig. 5) is a troubled hybrid-typology, cross programming museum and memorial, which uses metaphor as a method of design exploration and aesthetic. Peter Eisenman's Holocaust Memorial to the Murdered Jews of Europe in Berlin (Fig. 6) is more inundated with layers of complexity; the metaphor is hidden within the interpretation of the inhabitant, rather than favouring literal translations by the architect. In both these examples metaphor is used, but the trappings of literal interpretation are avoided in the case of Eisenman, while Libeskind's sit just below the surface and are easily revealed.

Fig.5 – Daniel Libeskind's Jewish Museum, Berlin. View to the east, from Lindenstraße—the Garden of Exile in foreground

Fig.6 – Peter Eisenman’s Holocaust Memorial to the Murdered Jews of Europe, Berlin—the concrete stelae forest.
View to the south from Behrenstraße

1.vii True Architecture.

Architecture has a responsibility to exist in the real world—there is a line where the intellectual occupation has to turn to a physical one, which is tightly regulated, especially around public interfaces such as memorials of disaster events.¹ Often, the process of constructing architecture has ulterior motives and multiple agendas that distort and dilute the original design intent. Architectural projects are subjected to various processes of negotiation, as a conditional consequence of satisfying multiple interested parties. Negotiations of this kind often culminate in a compromise of integrity, and are relieved by opposing bodies agreeing to less than ideal terms, according to their own individual agendas. These negotiations occur within categories of design, construction, materials, and budget etc, through to the municipalities of bureaucratic regulation, which holds dominion from the initial design conception right through to completion. These are common and ever-present obstacles, and often they are factored into architectural designs as such, operating by way of mitigation—the idea being that sacrificial baubles are offered in some manifestation of collusion, to ensure that the most important aspects of a design are retained. If this is seen as falsifying architecture, then the truth in architecture avoids these external influences and forced negotiation/regulations. This, for the purposes of this thesis, will be called *true architecture*.

¹ In his blog entry *Aestheticizing Violence* (2010), Lebbeus Woods describes the purpose behind architecture that operates within modes of violence as a way of engaging with ineffable events, and the seemingly impossible field of tasks that most architects seem to easily negotiate. The real opportunities, he argues, are constrained to the few architects that are prepared to tackle violence without reducing it back to aesthetic niceties.

*True architecture*² is in direct contradiction with traditional architectural process. This is not to suggest that the architect becomes the fulcrum of revolution, but instead that some level of faith is placed back within the role of architecture as a social construct. The architect remains the beginning, but not the focus of the architecture. In order to come to terms with this new definition, history will eventually concede that architecture outlives the intent of the architect. This is architecture without external negotiation.

² It should be stated here that ‘true architecture’ is not meant to be an absolute definition of infallible architecture—this author would never suggest that such a thing could exist—merely that this research has revealed certain strands within contemporary practice that allow a slightly more direct relationship between conceptual design and real architecture

II CHAPTER 2

Making Memory Real : The Memorial Museum

2.i The Pairing of Memorial with Museum.

Generally speaking, museum typologies are galleries that are viewed purely from a point of interest as cultural collectors and filters. Displays are rotated and stored according to permanent cultural value, and are often added to according to growth and/or change. Extensions of museums are built, on or off site, in order to absorb the overflow of materials, artefacts, scientific specimen, etc. This is their function.

However, for memorial typologies there is a requirement for a suspension of disbelief between space and inhabitant, because they are conceptual grafts between the past and the present. In agreeing to enter a memorial, the inhabitant must concede that there are certain connections to do with reality that must be ignored or passed over, due to the highly conceptual and/or abstracted nature of the material that is trying to be expressed. These agreements are necessary for memorialising, as collusive arrangements to acknowledge, but not to individualise (as would be impossible), are true to our relationship with the past. To individualise means that the scale of the memorial reaches beyond the comprehension of the singular inhabitant—we cannot shoulder the burden of a memorialised event. We need to know that we are part of a larger whole that is under levels of affect—*event-space* encompasses bigger pictures: societies, cultures, movements, disasters, evolution and so on. The need to feel the import of these agreements possibly explains the popularity of the hybrid-typology that pairs memorial with museum, where they are manifold, as the job of memorial is made easier through cross programming.

Memorial stabilises with museum typology because it is able to blur the line between forward and backward timeline trajectories. This is a space/position between the probability of reoccurrence and the infinite set of unseen possibilities anticipated (the impossibility of future prediction). This is the identification of conceptual *void* spaces. The issues inherent in the habitation of such spaces will be expanded using Daniel Libeskind's Jewish Museum in Berlin and Peter Eisenman's Holocaust Memorial to the murdered Jews of Europe.

In attempting to reach *event-space* through the impossibility of physical inhabitation, memorial architecture takes on a task that is fraught with a number of inherent and unavoidable problems. Memorialisation attempts to make present a feeling or sense of absence; an absence which is not merely affecting a community or society in proximity to the event, but one which is created within, and often by a society. The role of memorial architecture is to engage itself specifically with this absence and identify it, and simultaneously propose that the act of

memorialising provides an opportunity of presence (through the remembering of absence). While it may recognise an appreciation for the gains of sacrifice, the architecture also discusses modes of regret for what was sacrificed—speculation on how those that had fallen or failed may have lived and contributed in lieu of the event.

Because these events have changed not only individual lives, but societies as collectives of conscience, and whole cultures as historians of the past, they make *event-spaces* an appropriate, if heavy, task for architectural to challenge. What is appropriate to the ‘task’ of memorial/*event-space*, however, is always a subject of contention. Case studies prove that the design and programming of memorials are just as well considered and roundly debated as any other architectural typology, but there are large question marks over its provisions within architectural function. In the experience of the end-user, memorial architecture assumes a role that provides some means of trace back to an event, but critically often falls short; either not going far enough or for creating confusion. While meditative space, plaques, and various other expected metaphors are sometimes appropriate, they are seldom truly communicative of the *event-spaces* themselves. The inescapable problem of memorial architecture becomes how to populate this elusive process of true reflection, with the substance and form of tangible, meaningful, and effective vectors shot into the past, while simultaneously achieving a description of absence within built form. The event will always be presently un-locatable through the fractures of history, but proximity can be felt by the *event-spaces* of memorial architecture, provided all else is still.

2.ii Deconstructive Theory Applied to Museum Typologies in the Late 20th Century.

Traditionally, we can consider the following historical ‘archive’ typologies:

- a) A memorial: is an artwork, or a fiction, about a fact.
- b) A museum: is a building to house artefacts.
- c) An art gallery: is a museum to house artwork (i.e. fiction).

Over the course of the 20th century, these roles have been asked to enfold each other; with the subsequent role-inclusions and role-inversions producing hybrid-typologies. The introduction of deconstructive theory to museum studies in the 1990s brought about a whole new way of considering the role of museum, and the scope and methods of its curatorship. Ultimately though, all three typologies discuss the inheritance of culture. These historical ‘archive’ typologies became more problematic during the 1980s and 90s, where curators started borrowing and cross programming frameworks from all three. Te Papa Tongarewa museum in Wellington, New Zealand will be used as a brief example of this.

Completed in 1998, the museum was designed to be a connector of culture within New Zealand—where the Tangata Whenua (people here by right of first arrival) and the Tangata Tiriti (people here by right of the treaty) were to meet—and by doing so the museum scratched at political and cultural scabs. The most permanent and central display is the Treaty of Waitangi, where all points, displays, and circulations of the museum finally converge. In terms of architectural conceptual planning, this immediately falls into a narrative category; the literal translations of the architectural elements relate directly to a recognisable symbol of cultural tension.

The Treaty is housed within the ‘wedge’, which is a semi-reflective glass extrusion, elliptical in plan, which is placed between two dolomite stone masses. (Fig. 7) The Southern mass towards the city is organised to externally reflect the cadastral planning and organisation of settlement; strengths and traditions that the Europeans brought with them and integrated into the land. The Northern mass reflects the Marae, or Maori ‘meeting house’, and speaks of their spiritual connection to both land and sea. The task of the ‘wedge’ is to connect these two masses, and is described by Pete Bossley (formerly of JASMAX architects) as ‘cleaving’. (Fig. 8) He explains this as “...expressing the idea ‘to cleave’ which means ‘to split’ and ‘to adhere’.” (Te Papa, 10). It is an important part of the museum design, and is central to the requirements of its brief. The nature of its ambiguous and metaphorical application, however, means that the formal and architectural language used by the designer to describe the wedge has removed the unidentifiable evocative reaction from the inhabitant. The inhabitant is now supplied supposition

to consider the architecture on exclusively literal terms—the physical separation of solid masses via a glass wedge.

Fig.7 – Te Papa east elevation, the glass wedge ‘cleaving’ European and Maori cultures

Fig.8 – Sketch of Te Papa by Bossley, describing the relationship between cultures through architectonics. Note the elliptical wedge at the pressure point

Alternatively, this 'cleaving' could be said to be a constantly evolving event that discusses a relationship that will never reach a conclusion, given that it houses a document of such contention. But it is ultimately interpreted by the public (not constantly reaffirmed by designers), whose knowledge of the treaty's historical resonance may not be fully understood. This is the problematic nature of literal translation within cultural understanding; where the form and space of a concept has moved into the re-contextualisation and interpretation of built form.

Kerry Howe, New Zealand historian and professor at Massey University is critical of this disconnection, "Te Papa's architecture is monumental, serious, formal, which its contents cannot live up to." (13). Here in once sentence he encompasses the problems of the architecture in its design, function, and typology. The deconstructive nature of Te Papa, so open to interpretation by supplying artificial contexts and fabrications, becomes a fully licensed art gallery when the architect and the architecture have taken the mantle of curator.

These problems are further exacerbated by the programme not functioning strictly as museum typology, and is an example of curatorship attempting to view facts, and fictions of facts, as art works that are merely the result of technical work: achievements to suit its own production requirements.

2.iii The Curator-Warden: The Problematics of Enfolding Fact and Fiction Within Memorial.

How does a museum artificially fabricate what it contains? In his 1972 essay on *Cultural Confinement*, Robert Smithson discusses museum programme as a graveyard above ground, edifices that are "...congealed memories of the past that act as a pretext for reality." (Flam 156). He specifically discusses the role of the curator as a warden—manager of neutral rehabilitative space for art. The importance here is placed on the fact that artists believe they have managed this role and understood the concept of placing art within museum space. However, curator-wardens are in the business of fabricating facts, and are not concerned with the complications involved in the application of 'art gallery' over the still present role of memorial. Instead the emphasis is placed on viewing art as a tool to manifest the process of curatorship: muse-ology. This post-modern, perhaps deconstructive reconfiguration occurring in art gallery/museum hybrid-typologies is understood to announce the acts of exhibition and/or collection, and proceed to assemble artists as mere technicians. In summary, the argument is that these typologies are no longer about the artist or the conceptual strains that sit behind their art, but about the assemblage of specifically fabricated art to meet the vision of the curator-warden. The validity and relevance of the art is immediately destabilised.

But the real issue is the fact that, while the artist feels they are free, their art is not. Placing art within that relationship of statement vs. neutrality immediately alters all intention (from the artist) and interpretation (from the voyeur). This is the resultant of the two typologies of museum and art gallery attempting to fold back on each other, with the curator-warden steering the whole operation. Through the mid to late 90s, the vision from this helm has moved the curator from a caretaker of art, to an artist. There is liberty to construct history (to satisfy various components of museum typology) through the curatorship of art: history is only what people are told, and it is told by the victors. This is in strong tension with memorial on the other hand, which is instead a cultural flagpole linked to a specific event, which can only be recognised through a collective, and which can only deal with facts.

This is where the problematics of memorial/museum pairing is so evident. The curator-warden cannot fabricate the events themselves, so the artefacts and art that are being dealt with becomes their main focus instead. As memorial can only deal with facts: so this process of fabrication undermines the importance of the event, and subsequently the memorial. A disruption occurs at this point where the integrity of the *event-space* cannot be drawn from, because it can only be measured against the absolute truths—individual responses are exclusively intuitive, and without the proper set of facts, these responses are dislocated. The *centre of event-spaces*, which are already un-locatable, cannot be felt with the white noise induced by the curator-warden.

2.iv Libeskind's Response.

The concepts underpinning Libeskind's museum are problematic. The memorial museum hybrid-typology he designed doesn't take the atrocities committed by the Nazi party literally—there is no mausoleum within which bodies are kept—it is not an archive of death. Instead, it is an abstract notion of deliberately weaving together two incompatible concepts; the vibrancy of a culture and the soullessness of murder. The human element brings together personal manuscripts, paintings, and artefacts detailing the vastness of Jewish culture alongside the mechanical and systematic acts of mass genocide; the ghettos, concentration camps and the death marches.

The museum acts as a proponent of cultural tissue connectors, fabricating a series of overlappings that attempt to wrestle with highly tensioned elements as simple memorial metaphors. The museum seems to force recognitions upon the inhabitant: people died so that artefacts could be preserved, as opposed to the artefacts being simply factual resultants of events. This is a strained, but not an entirely unfamiliar response. Libeskind presents this type of programming in an edgy way—he creates direct cause and effect dialogue between the walls (*boundaries*), the spaces (*voids* that may or may not hold relics of Jewish history), and the inhabitants. By dismissing the typical parameters of a museum by disrupting the way in which the artefacts are presented and viewed, Libeskind creates an art gallery. By inducing confusion into the individual's orientation within the museum, and linking this to metaphors of what can never be felt in proximity to the atrocities being displayed (the actual events), he is toying with fabrications at too highly an abstracted level. This is troubling for the inhabitant, because they are distracted by the spectacle of the presentation, and not at what is being presented. There is a dishonesty contained within this fabrication that surrounds and outnumbers the facts.

The irony is that the Berlin Jewish Museum tries to make relationships more intimate through these specific fabrications. It attempts to construct a dialogue between the absolute known facts of the Holocaust, and their cultural impacts reverberating through the Jewish and the German people—all of which happened under an international spotlight that critically observed and recorded. The event occurred, reached what is tenderly located as a conclusion, and was then processed on a very public global stage; this museum is an attempt at marking a line in the sand where we can come to grips with these facts and relationships.

However, the fabrication of these facts becomes an issue when there is an attempt to shake the typology of museum, and still retain the truth of the memorial. Because the Jewish Museum deals with such a specific set of criteria for the exhibits, it doesn't extend past this rehabilitative role, and we may be able to view Libeskind as the 'curator-warden' in this same

manner. It is the space that he understands, but not its relationship with the artefacts and installations. This can be seen within his design criteria for the museum.

The museum is offered an existing context (the Berlin city museum), and so Libeskind was presented with an existing genetic strand to extrapolate from. Normally, placing architecture into an existing context/programme forces a self-reflexive reaction: this is easier than designing without context, as creative thought revels in barriers and obstacles that shape and influence design through a natural process. But from Libeskind's list of conceptual drivers, we can see that there is no reference to the existing context for the pre-design (Wolf 63):

- 1) the Star of David as an abstracted iconic design element (Fig. 9)
- 2) the completion of Schonberg's opera, *Moses and Aron*
- 3) the two volumes of Jewish victims, entitled *Gedenkbuch*
- 4) Walter Benjamin's text *One-Way Street*, featuring 60 *Denkbilder*, or 'sketches'

This absence of existing context is confirmed also through Libeskind's design stages, as shown in his concept drawings and final design (Fig. 10). The literal abstraction involved in manipulating such a recognisable symbol leaves little for the curious visitor or the critical designer. It is obvious that these design paradigms have been forced upon the site and programme, in whatever way it might be justified. However, Libeskind's real weaknesses, and his strengths, lie in his manipulations of space.

The remains of the events of the Holocaust are stored as reminders, but diminish the effectiveness of the architecture as a memorial. Smithson asks, "Could it be that certain art exhibitions have become metaphysical junkyards? Categorical miasmas? Intellectual rubbish? Specific intervals of visual desolation?" (156). We could postulate at this point that as an architect Libeskind has succeeded, but as a curator-warden of memorial he has not.

In *The Void That is Subject*, Richard Patterson describes the detachment of the museum before its completion and the installation of its contents, "[t]he general opinion seems to be that the building is at its most sculpturally powerful now, and that it will be lessened by the exhibits." (71). This suggests that in its failure to stabilise itself in the face of its function, it achieves nothing that the 'ordinary' could not—a dislocation previously observed with Te Papa. The 'congealed' remains of one of the most atrocious recorded acts of attempted social reconfiguration and mass genocide are placed within a competitive architectural statement of *void*. Libeskind offers us witness to the incurable convalescence endured by place, and of the space 'lost' artworks and exhibits have regained. Inhabitants are asked, step by step, to

acknowledge and observe a series of tight-lipped metaphors using architecture to [dis]orientate themselves.

Esra Akcan, in his text *Apology and Triumph: Memory Transference, Erasure, and a Rereading of the Berlin Jewish Museum*, proposes a different strategy, where Libeskind may instead have been seen to employ the museum not as a memorial, but as a countermonument. Akcan suggests that contemporary societies monumentalise their “...assumed glories through memorials to unknown soldiers” (154), meaning that there is an element of denial that filters the background of such memorial undertaking. The role of the countermonument then is to remove that element of denial; forced to face the human, as individual, and simultaneously recognise the need to take responsibility for the past. Libeskind’s Jewish Museum is seen to challenge the established typology of monument, not in scale, but in its reduction of cohesive sets of the formal and logical; “...this building can never be conceived as a whole; it does not lend itself to a privileged vantage point.” (159)

Fig.9 – Libeskind’s abstracted sketches of the Star of David in the conceptual understanding of the Jewish Museum

Fig.10 – Plan, Jewish Museum Berlin—the realised form of the abstraction

2.v Curatorship of the Facts of the Event.

In the proposed design for the Chernobyl memorial, the problem is fabrication of fact. This could be through the re-contextualisation of factual evidence by its housing in a museum, or through the manufacturing of ‘evidence’ in the process of a museum/art galleries active curatorship. Either way, it is addressed directly in two places, namely: with the archive (Fig. 11 & 12), and with the ‘viewing gallery’, where the visitor to the memorial can view the Elephants Foot (Fig. 13 & 14).

Fig.11 – Section, archive at Chernobyl memorial, situated on the reactor cooling pond

In direct response to the rehabilitative role required by those affected by the Chernobyl reactor explosion, the archive represents a new collective for two categories; firstly, the communities that were directly impacted and second, visitors and scholars who can exploit this as a database of knowledge. In this way, the archive operates as a literal tissue connector, to embrace its required role as metaphor, in order to set the tension required for memorial enquiry. It is located within the old cooling pond of the reactor, which suggests the volume is a floating, unfixed entity—constantly evolving. It is also literal in that the cooling pond contains the (once) life-blood of the reactor—it was the temperature regulation that ultimately failed.

Fig.12 – Detail Section of archive, describing the relationship between the archive and the ‘bridge’—the *boundary* that must be traversed

The archive functions by allowing the access of information and egress towards the reactor. As with all bodies of knowledge, it is one thing to read and study, and another to experience. This means that the archive, as the access point to the reactor, contains certain levels of propaganda about the half-life of the core, be that factual or otherwise. It sets up an image within the mind of the inhabitant about what to expect, but ultimately is not communicative of the reality—this has to be experienced ontologically, not intellectually.

Fig.13 – Perspective of Elephants Foot 'viewing gallery'

The 'elephants foot' is a solid nuclear fuel and glass mass that was discovered early in the process of investigation immediately following the explosion of reactor no. 4, by drilling through insulated concrete walls and sending through a 'knocked up' camera dolly, rigged to a remote controlled vehicle. It was considered a breakthrough with regard to the mystery of what had happened to the unaccounted for tonnes of nuclear fuel that had disappeared from the reactor during the explosion. The possibility of nuclear fuel and sand fusion was realised—and with much relief considered a safe and stable form for the fuel to take. Discovering the 'elephant's foot' was a significant step in coming to terms with the reality of the disaster situation—from here theories about what had occurred during the internal explosion began to compound, and

reasonable assumption about the activities within the reactor could be postulated. The viewing gallery recreates this space as spectacle, a point that was reached where the disaster could now start to be dealt with and understood—a strategy of action could suddenly be undertaken, with the immediacy of critical danger somewhat abated.

Fig.14 – Axonometric of Elephants Foot ‘viewing gallery’ with detail

The gallery is located along one of the hermetically sealed ‘pipes’ that occupies uninhabitable negative space, enabling proximity to the scientific exploration team’s initial discovery of the elephant’s foot. Conceptually, the gallery allows inhabitation of space that is visually empty, but is conceptually a *void*—space which contains volatile radioactive dust particles, the consequence of minimal unprotected contact with would mean literal death, and so is considered to be negative space. The pipe, by comparison, is not empty, but is still a *void*: it has identified and intercepted the remnants of a destructive process, and has halted it as an unknown—allowing the possibility of inhabitation. Ultimately, this space provokes a confrontation with the reality of the disaster, its consequences, and its potential to reoccur.

III CHAPTER 3

The Spaces of Memorial : Boundary, Bridge and Being

3.i Phenomenology: A Brief History.

In the introduction, phenomenology was discussed as an identifier of *event-space* that can exist within the confines of the ‘real’, which is problematic for architecture. *Boundaries* exist between the facts and the unknowns: it is a reciprocal relationship. These *boundaries* define the separation between the locatable and the un-locatable, but because of the inherent unknown quantities involved in discussing the extents of the ‘un-locatable’, position and depth of an identified *boundary* becomes destabilised. These *boundaries* are where memorial architecture exists—locatable in terms of the facts attached, whilst acknowledging a perpetually shifting dialogue of the effects of these facts. This act of memorialising is what looks back into history and forward into the future—the *boundary* upon which the memorial exists doesn’t stop or become fixed, but continues to assimilate the interpretations of facts and their effects—it is on the edge of a phenomenological entity.³

The importance is placed on the description of both sides of the *boundary*—one side cannot exist without the other—but neither can they be defined without a mediator to facilitate their relationship. In order for a clear identification to occur, a tension must be present. The problem that this tension encounters is that, as already discussed, it is not simply a matter of comparison; it is an interpretation of facts and intuition, past and present, solid and void (in the specific case of architecture). The inhabitation of *event-space* can easily become frustrating and difficult to grasp without proper guidance through this tension relationship. Too far into the unknown, and the space is dismissed as architectural waffle, disconnected from reality, while at the other polar it becomes too much a museum or housing of artefacts: a clinical display of objects.

The fine line of the *boundary* created between the two is one of understanding the relationship of an individual’s inhabitation. This is commonly referred to as ‘ontological bearing’, where an acknowledgement of existence in that space, at that time, is realised and understood. It is why events are understood better through historical reflection—acknowledgement of inhabitation of space is placed in direct comparison with all other facts that surround it. But this is simultaneously limiting too, because words will never sufficiently explain

³ Assuming the opposite would suggest that the facts have been correctly interpreted and the ineffable dissected and verified—an impossibility that could theoretically provide a framework to conclude all questions pertaining to religious debate, ontological understanding, the ‘big questions’ et al.

an experience, merely state that something was experienced. The indescribable nature of inhabitation confirms that a disruption from the facts is present: the requirement for phenomenology within memorial architecture is encountered.

A specifically architectural interpretation of phenomenology emerged in the decades following the Second World War in the writings of Maurice Merleau-Ponty and Gaston Bachelard. These philosophers were building on the ideas of the late 19th century theorist, and founder of phenomenology, Edmund Husserl, and were to do with recognition of *being* within space and theories such as 'ontological hermeneutics' (not discussed in this thesis). They were also very involved in discussing the ideas of Martin Heidegger, one of the few most influential existentialist philosophers at that time.

Existentialism is the most far-reaching philosophy of the first half of the 20th century. It grew from the late 19th century's 'Loss of Faith'; the name given to the final disintegration of centuries-old presumptions of a central and privileged role for man within the universe. This supposition is based in essentialism; it claims to know the 'essence' of the human as master (usually qualities incarnated in myths and religions to assign the human an orderly and dominating role). This decline began with the works of Charles Darwin who identified genetic links in like species, and philosophers such as Frederick Nietzsche, who stated that God is dead. Existentialism rejects any such thing as a human essence, and suggests a concept of *being*, which accepts only a time and place, not a nature for its subject. This is namely *existence*. Ultimately, existentialism states that if humans could come to terms with the fact that they'd left behind the mantle created and demanded by God for all men (within the ideals of essentialism), then the boundaries of human *being* could be limitless.

Existentialism is a school within the fundamental discussions of philosophy, and principally uses ontology as the set of entities presupposed by phenomenology. The theories of *being* that Heidegger discussed occurred during the rise of the Nazi party, and it is unavoidable that he should be linked to it at this point. Fascism exploited the writings of Nietzsche, and his ideas of leaving behind the prescription of essence-doctrine in favour of *being* - uncovering the unlimited potential of the *Übermensch* (super-man). Heidegger required phenomenology to explore and investigate these concepts of *being* and the capacity for this next era of understanding time and space.

3.ii The Implications, in These Historical Relationships of Philosophy, For Libeskind's Choice of Phenomenological Theory.

Libeskind applies phenomenology as his principal theoretical backing, in order to describe the plight, the loss, and the (ongoing) impacts suffered by the Jewish people. He specifically uses *void* as the main building block and axis of his design for the Berlin Jewish Museum, and in doing so opens up the architectural typology, and himself, for critique on that basis.

Phenomenology is one of the major theoretical influences of contemporary architecture, recently with post-modern and deconstructive periods previous, as it favours the seemingly ambiguous levels of abstraction and post justification. In short, creative freedom without responsibility. But in contrast to its ability to argue infinite sets of possibilities without fear of derailment, Libeskind uses it in very specific vectors to attempt to explain the historical locus that sparked the brutality of the Holocaust. He wants to see whether, by walking us back down phenomenological space, he will make us feel the tremor that occurred at the Nazi soul, and locate the *void* where Nazism came into being.

Libeskind recognises that the crystallisation of the Nazi ideology was contemporaneous with the passages of Heidegger, who was famous as a major figure in the history of philosophy, but equally infamous as an advocate of the Nazi party, and an admirer of Hitler. Libeskind engages in a wrestling match with Heidegger, the phenomenologist, intending to allow the wounds of the 'final solution' to surface again; not by aggressively challenging or attempting to resolve any dialectical issues, but instead simply allowing the scars to reopen. The thoughts of the past are intended to become present once more. He recognises that filtering Heidegger's passages as architectural concepts will allow Libeskind to locate and confront the issues of the past with the reconciliation of the present. (Fig. 15, 16 & 17)

This identification aside, it is the inclusion of Heidegger, and the embracing of his theories that are most interesting. We can glean from his influence in the fundamental elements that created Libeskind's Berlin Jewish Museum, that the influence of phenomenology on contemporary architecture is still very present.

Fig.15 – Axis of the Holocaust. “...The Axis of the Holocaust presents personal documents, photographs and keepsakes that have been donated to the museum. They tell of the donors’ murdered parents, relatives and friends.” (inscription on wall)

Fig.16 – Axis of Exile. “...Between 1933 and 1941, some 280,000 German Jews fled the Nazi regime, heading for the United States, Palestine, Great Britain and other parts of the world, including South America, Africa and even Shanghai in China.” (inscription on wall)

Fig.17 – Axis of Continuity, that leads to the upper stories of the museum, which contains further artefacts and displays

3.iii The General Influence of Phenomenology in Contemporary Architecture.

Architecture that is influenced by phenomenology is broadly attempting to construct a journey and have an inhabitant confront it. Because phenomenological architecture deals with highly abstracted and un-locatable design generators, there is often confusion in these works that appears parenthetical to their briefs. There is a particular delight taken by architects in creating these contemporary mental nightmares, and is criticised both outside and within the profession of architecture to be indulgent and egocentric. Libeskind is a proponent of this kind, as discussed in the previous chapter with regard to his conceptual design generators. On the other hand, Peter Eisenman takes the concepts of ontological *being* in the case of his precedent work used in this thesis—the Holocaust Memorial for the Murdered Jews of Europe, Berlin. Ontology here means the progressive occupation of unknown topographical spaces without the ironies of metaphoric narrative constantly tearing at the inhabitant's suspension of disbelief, but still allowing the complex abstraction of inhabited space to occur. (Fig. 18)

Fig.18 – Eisenman's Holocaust Memorial – The concrete stelae begin along the periphery of the memorial edge as 'foundations', but quickly tower within the undulating topography of the site, creating a forest-like environment

Architecture is the division of space; the experience of architecture is the experience of this division. In the inhabitation of space, everything that allows the inhabitant to understand what it means to exist and to *be* is present. All of the manifold levels and conditions of identity are activated only in the experience of the inhabitation of space. This is why architecture has such power to activate the nature of *being*, and the mind's understanding and reflection upon it. This understanding of *being* comes from a direct necessary negotiation of body within this division, at the specific time of inhabitation—it does not depend on any mental preconception, be that in the form of theory, prior knowledge, or intellectual interest. But it is also naïve to suggest that this experience only takes place as a pure interaction between space and inhabitant—this only discusses architecture as seen by the end-user. The process that leads to the design of architecture is so complex—strung with diversions, compromises, conformities, and additional pragmatic considerations—that architecture can never be designed to be a true experience of *being*. Even when every obstacle is cleared and every resource spent in trying to ensure a designer total freedom to construct such a true experience (as in the precedent studies of Libeskind's museum, and Eisenman's memorial), it is the processes that form the brief and accompany the design that contort and distort the process, and therefore the space, and ultimately the inhabitant's understanding and experience of that space.

3.iv The Influence of Phenomenological Theory in Eisenman's Holocaust Memorial for The Murdered Jews of Europe.

Where Libeskind discusses the acts committed against the Jewish people through his use of *void* as structural component, the inhabitant is inundated with feelings of fear and loss. Eisenman avoids these disorientating emotive generators and instead offers the inhabitant a series of choices as they move (or don't) through the memorial. It asks that the inhabitant make up their own mind about the decisions they make through the space; the choices made are direct reflections of a forced manoeuvring, that lies just under the surface of this 'decision making'. Instead of discussion occurring between the decisions and the inhabitant, the inhabitant becomes the resultant of the choices made. This moment of realisation is wholly more penetrating for the individual, as the decision is no longer about what direction to take, but how to get the various acts of the holocaust memorial completed—the inhabitant is navigating the perceptions of choice. There is no talk of the choices made; the instant the individual is released from the memorial, the choices made only exist in reflection – they can only ever be a story of navigating corners. However, individual realisation should not be confused with individual loss; Eisenman does not believe that is an achievable undertaking.

He discusses in his collective *Feints*, that with the advent of mass destruction (that began with Hiroshima), and events like the Holocaust, the act of commemorating individual loss with symbol has become impossible. "Today an individual can no longer be certain to die an individual death, and architecture can no longer remember life as it once did." (Cassarà 152) How monuments and memorials are conceived and occur has been irrevocably changed in this shift, according to Eisenman. "The enormity and horror of the Holocaust are such that any attempt to represent it by traditional means is inevitably inadequate. The memory of the Holocaust can never be a nostalgia." (152)

Eisenman articulates this disruption by way of the some 2,711 concrete stelae, and in doing so calls into question the central concept of his memorial as being sculpture or architecture. What is being implied is that there is a disruption between our conceived notions of order and the chaos that is only several degrees of separation away; these ideas we do not discuss in normal conversation, and are problematic in terms of the way we view finality (and ultimately death) in Western cultures. The gradual descent into the undulating topographies will draw away from the everyday noise and distraction of the banal and trivialities of normal, ordinary life. The concrete blocks are confronting in their multiple singularity—seeming to be rigidly ordered, sharp edged, and clean. There is an understanding between the memorial and inhabitant that they have been removed from 'life' for a reason—it is down to simple choices now. Don't think: just

do. The trials of Nuremberg trials revealed this exact indoctrination in many of Hitler's senior officers.

Panic and disorientation are also present but not overriding, as views to the surrounding streetscapes are continually present down repeating broken corridors, a resultant of the indexed grid (the illusion of choice) that allows the occupants to move in single file (isolation) only. In the midst of these silent stelae the memorial reveals itself to be a confusion of stability and instability. The concrete pillars are expected to be symbols of solid strength, but the vertical planes become inclined. (Fig. 19) The surface of the stelae is asked by the navigator to instruct on ideals of power and permanence—but they were deceptive from the beginning—occupation assumed the stelae were foundations for something. The task of choice so freshly acquired now shivers—the inhabitant remembers again that this is a memorial.

What is being confronted is the realisation that the act of descending into this otherly world of quiet isolation has, even with the views to distant reality, revealed the topography to be a by-product of a dual web woven by Eisenman's stelae. In the stark contrast between the ground plane that ducks and weaves between the flat planes of the concrete pillars, the two become disconnected, and the concrete forest ahead and behind instead frames the view paths, and the depth to which the individual has travelled. The view also reveals the slightly disrupted and raking vertical planes of the stelae. Finally, the tops of these pillars reveal the second level of topography that distorts the inhabitant's vision further: is it the ground that holds the stelae? Is it the stelae that negate the ground plane? Is the sky that frames the second topography in fact the foundation? Max Page, in his article *Memory Field*, understands this relationship as undermining—deliberate intention to lull the inhabitant into compliance from the beginning and then remove that stability in the centre: “The assurance of the grid—of the rational ordered world—is undermined by the tilting, teetering stelae.” (42)

It is the occupation of this space in-between the two topographies that is realised as the intent of the memorial—it is not an oppressive reminder of atrocity, it is instead an experiential “zone of instability” (Davidson 290), one where ideas of stability transform into a registering of formal topography and a recreation of unstable and fabricated topographies, the in-between of which is a rupture, where the heavy concrete stelae float. In an interview with *Architectural Record*'s editor in chief, Robert Ivy, Eisenman describes the dual topography as an ‘index’ (Fig. 20), in which two surfaces were created, “...one on the ground and one in the air—and [I] connected the dots—a minimal presence.” (85)

Fig.19 – The concrete stelae are revealed to be unstable within the confines of their own premise—the inhabitant must shoulder this realisation and apply it to what preconceptions they had of what was to be experienced, and what this means with regard to the ‘choices’ they made to get here

Fig.20 – Eisenman's dual topography creates two skins, his index, within which are the opportunities of inhabitation

3.v The Instability of Chernobyl.

In the same way that expectations shift within Eisenman's memorial, so they are present within Chernobyl. As discussed in chapter 2, entry is located within the archive, which sets up a preconceived understanding of what should be encountered within the reactor core. However, understanding the realities of that 'possibility of occupation' cannot meet the actual conditions about to be experienced: expectation (Fig. 21) vs. reality. (Fig. 22)

Fig.21 – Chernobyl RBMK 1000 reactor interface, as expected to be encountered with preconceived notions of architecture: the assumption that architecture will be occupied. This is the defining characteristic of architecture as being different from sculpture. Occupation suggests some kind of rehabilitation is ongoing

Fig.22 – The reality of the reactor is encountered: reconciliation of the event is not possible, only reflection—for Chernobyl this is unique, because its impossibility occurs physically as well as psychosocially.⁴ The inhabitation that the steel ‘pipes’ allow becomes one of a cold realisation; the journey back through to the archive will take on further poignancy while reflecting on the ephemeral moments within this half-life event that still has a beating heart. The barely contained energy can’t be seen, but it is known by the *boundaries* that are very carefully sealed and then offered

⁴ Although it must be conceded here that the actual internal layout and visual extent of the damage proved to be impossible for this author to locate—this image is a fabrication that highlights the realities for conceptual architectural design.

3.vi The Qualities of Boundary and Being.

Heidegger discusses the concept of *being* in direct relationship to ‘nothing’, the philosophical opposite of existence. Presence and absence are the manifestations of these, as are the concepts of life and death: Heidegger ultimately arrives at his hypothetical *jug* as an identifier for his ideas. The *jug*, physically, is a recognisable pragmatic tool, but the *void* it contains at its core is what Heidegger identifies as phenomenologically relevant. The appreciation of the *jug*, he argues, is ineluctably tied with the conundrum of *being*. (Sharr 28) What is meant by this is that the *jug* can be created, grasped, filled, emptied, smashed, repaired etc, but will inherently always contain a *void*—a personality that allows a description of opposition to *being*: this is a dialogue achieved constantly at all times. It identifies a space that is beyond the scope of a scientific lens, which always contains something, even while ‘empty’⁵. It cannot be seen, but we know it to exist. For architecture, this allows for the possibility of negative space, whilst still adhering to the rules of the built form. However, as with all discussions of architecture, dialogue cannot occur without certain key components; inhabitation being amongst the most prolific in familiarity and identification of *being* and *void*.

In order to properly discuss this, coming to terms with components that form the structure of *void* elements when introduced into architecture is important: these are *boundary* and *centre*. The *centre* denotes the existence of the middle of the *void*—but is an un-locatable entity because of the lack of ontological process involved in that space—meaning that we are never able to inhabit the *centre* and take ownership. We can never come to terms with *void*-space past the knowledge of its existence. Similarly, the *void* cannot exist without *boundaries* to enclose it—and we’re faced with the same problems due to the lack of knowledge about the *centre* of *void*-space. If the *centre* is un-locatable, where do the *boundaries* lie that contain it? The answer is un-resolvable, but at the same time it is contained within the question above: the two are inexplicably linked. The *void* is contained within the *boundaries*, and the knowledge that the *void* has a *centre* means that the *boundaries* must be present. The question is then ‘simplified’ to one of where they are located, and what inhabiting/crossing them means.

Boundaries are commonly misconceived as invisible lines with no depth, which separate one state from another. They occur in all facts of life, thought, and occupation, and are often discussed without regard to how they are crossed. The act of negotiating from one side of a *boundary* to the other is often overlooked as trivial. Within architecture, ‘transition’ more accurately describes the movement between one state and another, and activates the *boundary* as

⁵ Science would argue that the jug is always full—whether that is with solids, liquids or gasses.

a space between spaces. This is necessary in order to distinguish *boundary* from a purely physical form, which simple architecture may describe as an edge (Bloomer & Moore 100), that being more closely tied to the likes of a wall, façade, bay, fold etc. In order for a *boundary* to exist, a certain amount of tension must be present between the one state and the other; otherwise identification and recognition of *boundary* becomes stretched and blurred due to the absence of adequately competing states.

These points of tension are enticing to phenomenological architecture, as it revels in extrapolating abstract descriptions of space—the unknowns that sit in-between. In uncovering and identifying these ‘and’ spaces, architecture occupies a liminal position that influences (as well as is influenced by) apposing states in tension. Robert Bevan, author of *The Destruction of Memory* cites the Berlin wall as a precedent for this ‘tension’ relationship, discussing its position as a *boundary* that was unique;

[i]n that it was the *Mauer* (which in German means ‘barrier’, not simply ‘wall’) itself that had become symbolic, not just of a city divided but of two opposing global ideologies glowering at each other over a stretch of concrete and barbed wire. The process of building the wall and if its own destruction is enormously revealing of the physicality of politics. (133)

This is the recognition of spatial tension in a very formal way – the wall is identified as the significant embodiment of reactive political events, and is being influential of the same in turn. Bevan goes on to describe these kinds of *boundaries* as “[h]istoric sites of impasse, beyond which neither side can impost its claim, their degree of porosity of impermeability [...] governed by feelings of security on one or both sides.” (156) Here he is specifically highlighting a tension between cultures that has served to solidify discussion of *boundaries*, and that they are being engaged in terms of visual and notional identification: here and there, this and that, black and white.

The phenomenon of *boundary*, in the context of this research, is located around the destroyed reactor core (by overheating as a consequence of inadequate design and human error during internal testing procedures), due to it being the locus that satisfies the context surrounding it, and that it in turn has created – the *void*, the *centre*, and its *boundaries*.

The vectors that can be traced from this central point are easy to identify by the impacts they have created chronologically, but difficult to trace back, due to the chain reaction of events that the locus has initialised. It is hoped that through inhabitation of the reactor, in proximity to the *centre*, the impacts will come full circle, and the *boundaries* around the *void* be perforated at

various points. In discussing the conundrum of *boundary* location earlier, it is found here to be very clean cut between one side and the other: moving through the *boundary* of the memorial and into the reactor would mean certain death. The challenge the reactor offers is based on the perceived norms of inhabitation by external means – as ongoing occupation is made impossible due to its nuclear half-life. (Fig. 23)

Fig.23 – Reactor perspective section - the memorial creates a series of *boundaries* around the reactor to be locations in-between life and death. What is known about the impacts of the occurrence is set up in direct contention with the unknowns of the resultants contained within the *centre/loci* of the disaster *event-space*. The *boundaries* contain viewing platforms at various locations which allow a visual intrusion upon the inhabitant. While this is a solid and tangible thing, the movement from one platform to the next is where the memorial has more relevance—the occupant is unsure of still circling the reactor or not, and what they are moving through is contained in the absolute dark half-life of a still-active event. Somewhere in the heart of that reactor nuclear fuel still burns

In his work 'Building Dwelling Thinking', Heidegger presents the *boundaries* of dwelling as extensions beyond our understanding of home (including its more immediate surroundings), to working spaces, malls, supermarkets etc. (Sharr 38-39) Heidegger is discussing *boundaries* that occur on an experiential level – how other spaces are extensions of place—and how they enable us to share a collective society. They achieve this because the spaces that we consider 'extensions' are also considered by others in the same way, and a *centre* point begins to form somewhere for the individual—the *boundaries* of which are created by the knowledge that the extended spaces are public—the other inhabitants are also shooting vectors somewhere near the *centre* and creating other un-locatable *boundaries*. This is how the *centre* of the Chernobyl memorial is created through its use by surrounding communities, scientists, tourists, scholars etc. Its placement and its function make it a part of a collective. Because the spaces Heidegger refers to are public, they are identified as a forum for this collective—a presence or absence of privacy within society. The task of architecture is to locate (approximately) the median between the public forum and the home, and so it is with the Chernobyl memorial. According to Heidegger, it is successful when not disrupted from his ideas of 'nearness' or 'experience of life'. These disruptive agents are clearly identified by him as movements or activities that dislocate the individual from the collective; science, technology, mass media, international travel etc. In this case it is these very things that have brought about this connection, and confronts Heidegger's rejection of outside influences, or 'radical' thinking, which questions the foundations of his philosophical and religious positioning. The dwelling he describes is an accommodation between people and their surroundings, and the language of dwelling as somehow connected to being oneness globally (without the physical act of travelling globally), and suggests that these modes of building and dwelling that had nurtured his ideals have been lost. (Sharr 41)

3.vii The Conversion of Boundary to Bridge, and its Ontological Implications.

Heidegger's writing on his theory of 'fourfold' describes this space metaphorically as a bridge that spans a stream between two landmasses. (Sharr 46) The act of inhabiting this bridge is not only a way of bringing the land masses together, but also the stream that it activates and occupies. This is a *boundary* condition that simultaneously separates and links the land masses and the stream, and orders them into becoming a cohesive collection of singular elements.⁶ In this way, they are forced through each other—the stream is now directed perpendicular to the opposing land masses in this example. That in turn creates another set of banks, and a potentially unlimited amount of possibilities. This relationship could continue indefinitely.

However, this is within Heidegger's theory of the 'fourfold', which is problematic given his roots in existentialism. The main critique of this argument is that religious and spiritual interventions are not necessary in order to discuss phenomenology. His metaphor of 'bridge' is merely an interpretation of our existence against a framework of vernacular society, culture, and collective experience (through a reflective mapping of our own upbringing—experiences that necessitated moral judgements and critique of outcomes and results). Our personal phenomenological inquiry is activated – bridges were not born in philosophy, but in a pragmatic and technical lens: Heidegger's notion of our *being*, and our ideals of it, are merely interpretations.

We can accept the bridge to be real, spatially or otherwise—you can place the bridge here, or you can place it there. It has physical relevance, as it is an accomplishment of engineering—although we could consider a fallen tree to offer the same egress. What the bridge embodies is a resultant of science and technology that disrupts a previously acknowledged and definite *boundary*, and enables travel (again, it is suggested that bridges can occur on a larger, international scale). The exposes further problems in Heidegger's 'fourfold' reasoning for the disruption of 'nearness' and 'experience of life'.

Heidegger discusses the fact that communities, even whole cultures, don't have to travel far to traverse land masses with the use of bridges (Sharr 48); this means getting to places of work, negotiating trade links, nurturing family and/or friendships, blending cultural additives. It cannot be ignored that these facts discussed relate to movement across expanses of water—in the same way that a highway is an extension of home, so an ocean might be an extension of a bridge; it is all merely a question of scale.

⁶ Note how this is achieved very simply and basically without the requirement for narrative or explanation, as discussed with regard to the 'wedge' at Te Papa, Chapter 2.ii

The bridge, according to phenomenology, doesn't have historical relevance and should be engaged on its present *being*. It has intellectual relevance, as it connects landmasses while simultaneously supposing an occupation of negative space above an otherwise uninhabitable rupture, thereby offering a freedom: an inspiration of wanderlust. This ultimately means that the occupant enters a state of limbo—which culminates at the *centre* of the bridge where the dislocation from 'this and that' is at its peak. This is the inhabitation of *boundary*, and it operates outside of time—if the bridge doesn't have historical relevance, according to phenomenology, then it cannot be placed chronologically. In *being* within a *boundary*, an occupant cannot claim to position themselves in a describable space, other than to say they occupied a space. The bridge has no relevance to either side that it connects, other than to say that it connects. Time cannot exist in a space that has no relationship to any other space, because it is unable to be measured against the intersection of spaces that would normally occur. Ultimately, the bridge is a description of space that cannot be measured, and is outside of context and time.

The Chernobyl Bridge (Fig. 24) is a mediating agent in this precise manner. It is dialectic of form that divides positive and negative space, thereby creating a *boundary* that sits somewhere on the edge of an un-locatable unknown. Despite its size, it is a minutiae space, so infinitely small that any attempt to grasp it conceptually in a tangible or logical manner will always result in splitting infinitives.⁷

⁷ In an infinite space, there is no down to come up from, there is no in to come out from.

Fig.24 – The Chernobyl ‘bridge’, which separates the knowns of the archive (not shown) with the unknowns of the reactor core (not shown). Its arrangement appears logical and structurally possible

The act of moving from the archive to the reactor is significant not in terms of metaphor—one being a constructive body of rehabilitation for the areas surrounding Chernobyl (the Ukraine and Russia as a whole), the other the remains of an event-edifice of destruction—but as a removal of preconceived notions of understanding to do with memorial. Upon leaving the archive and engaging the bridge, individuals enter the memorial—their decision making becomes instantly restricted to perceived simple choices.

Views are not offered along the bridge. The filleted edges of the sealed pipes describe an uncomfortable and potentially claustrophobic space, regardless of the scale of access (approx. 5x5m). To pause in the space is simply to stand still—the edges of the interior do not offer available proximity to its vertical edges. (Fig. 25)

Fig.25 – The Chernobyl 'bridge', the internal space offers no anthropomorphic recognitions or considerations as a user interface. Note the filleted edge that denies the inhabitant's use of the vertical edges

3.viii The Memorial Effect of This Conversion.

In Heidegger's bridge there is a rearrangement of what is perpendicular. Two land masses, each with edges, go both ways—the bridge recreates 90degree arrangements infinitely—this is acceptable given that it has been established the bridge operates outside of time. The rearrangement of these forms is a *void* in this infinite set of possibilities, it is outside of time and place—the only thing the inhabitant can grasp is the ontological aspect of ephemeral occupation—but this will only occur upon reflection. The choices of the inhabitants are reduced to simple acts of this direction or that; the occupation of the bridge is the experience of the unknown and freedom from decision making.

Eisenman's memorial achieves this by slowly immersing the inhabitant into these simple choices, and then surprising them with the realisation of what they indicate, as a means of repairing the fascist (forced manoeuvring) doctrine that he avoids directly discussing (for concern of metaphorical association). If this were to occur, it would break the inhabitant's suspension of disbelief, and the house of cards would come crashing down. Libeskind achieves this in precisely the opposite manner, and although there are further problematics not discussed here, he is successful in creating a dislocating architecture through the confusion and frustration of disorientating occupation and movement, though is perhaps not successful in creating a memorial. The importance of this removal of choice, as explored by both designers, is hidden in the inevitability of death, and the unapologetic facts and truths of life that entails. The use of bridge in a phenomenological context is exploited to make the inhabitant understand that eventually a choice will have to be made. In the case of the briefs undertaken by Eisenman and Libeskind, these are to do with the unexplainable sufferings of the Jewish people. The bridge occurs, but is understood to be temporary—the inevitability of reality will creep in. However, that fact of temporality is what makes the occupation valuable; without this knowledge, the bridge would be meaningless, as there could be no reflection.

As memorial architecture, the bridge cannot address the specifics of an event, because the details are hidden in the *centre*, which is un-locatable. Eisenman affirms this by recognising that memorial can never be understood as a nostalgia, and can never address the individual. We only have a reflective understanding of the facts supplied to us about an event. The bridge (memorial) can only ever supply us with the feeling of the event, and an emotional interpretation is the only valuable outcome of remembering that *event-space*.

3.ix The Application of These Boundary/Bridge Conversions in the Chernobyl Memorial.

Eventually at the half way point of the bridge, inhabitants are confronted with their second choice beyond simply turning back. They can either continue to the reactor core (which holds no indication as to what should be expected), or break off to inhabit a series of protected viewing platforms underneath a large overhanging carapace. (Fig. 26)

The realisation of what disembarking the pipe means is not immediately apparent, but the act of inhabiting the platform breaks the build of tension manifested by the blank and viewless interior of the pipes, and their seemingly endless journey. Consider: within the pipes, there is a 2-dimensional journey through a 3-dimsnsional space, where ontological bearing and understanding is controlled in a very specific manner.

Fig.26 – Each ‘pipe’ offers the occupant an opportunity to disembark the journey to the reactor, the results of which mean that a sense of normality returns to their inhabitation, due to the facts of their position in reality once more. Views are offered to the surroundings, masses and forms can be organised and orientated logically

Disconnection from the site and existing sarcophagus is privileged over allowing a distraction from the journey into the heart of the memorial (and the still unclaimed reactor). The journey is the pipes only function, and a realisation dawns on the prospect of it continuing forever; the inhabitant may lose momentum in the unchanging scale and direction. The space becomes the function, and is the identifier of *being* because of its simplicity—it doesn't offer any other means of conveyance or suggest any other possibility of being viewed.

Conversely, leaving the sealed pipes at the halfway point describes a 3-dimensional journey within a 4-dimensional space. They reveal not only concepts of protection in a more conventional, encompassing way, but do it based within a space/time relationship (the 4th dimension which is time, does not occur within *boundaries*). The inhabitant encounters opportunities to orientate themselves within real space, and as such returns to normal cognitive understanding. From the unknowns of the sealed pipes to the known locatable facts of bearing and context, there is a loss of affect realised in a return to the mundane and ordinary. The real world, so observed from the platforms, is constrained by rules and conditions that are understood. The inhabitants are removed from the *boundary* condition. (Fig. 27)

Occupying this space allows an understanding of areas that are uninhabitable because they are seen as uninhabited, overgrown, and dilapidated. The Sarcophagus appears rusted and deteriorating, the unhealed holes of its skin flirt with its inadequacy—conclusions are allowed to accumulate. The pipes below which were recently abandoned are also bound by these conditions, but they are not real, they are fabrications measured against a framework of facts applied by the platform's knowledge and reasoning. From here, the conclusion of the pipes may never be known, further amplified by their disappearance into the Sarcophagus—unless the inhabitant is willing to re-renter the *boundary* by travelling downward and continuing along the bridge to the reactor core once more.

This is also a time for reflection on the journey already undertaken through the pipes. A reversal of bridge-occupation occurs, where knowledge of what re-entering the pipes is understood to mean. Not on a conscious level, but on an experiential one—the unexplainable feelings of what is unknown has yet to be encountered and questioned. Perhaps more attention would be paid should the decision to continue occur? Perhaps it is the pipes that are observing the inhabitant now?

Fig.27 – Chernobyl memorial bridge, traverse section - The viewing platforms are separated from the bridge and allow its inhabitants to view the real world as an orientating device. For them, reality is momentarily restored, but the inevitability of the pipes occupation remains constant

The undertakings of the memorial as an archive, a bridge, and the unknowns of what lies within the sarcophagus start to discuss the memorial as a living entity. This is the real ability of architecture to function as *event-space*. Simply put, when the inhabitant leaves the pipes, there is curiosity inherent in *being*. The realisation of suspension above a *boundary* is important—because the platforms are simultaneously real, but they are also nowhere, and they force the inhabitant to assess this occupation—what is it to exist above a *boundary*? Is the platform still part of the *boundary*? As a metaphor it is unavoidable, but is also understandable—the bridge, the engineering, the hierarchy of the journey from archive to reactor etc. But these metaphors are to do with the inhabitation of the platform spaces, not a mental check list that needs to be rattled off: it is not literal.

These manners of inhabitation within Chernobyl are an attempt to interrogate the ways in which phenomenology is seen as being self referential—it is neo-mystical in the way it allows itself certain assumptions. However, through the established polarities of fact and fabrication offered by the Chernobyl memorial (the unknown quantities that are considered applied phenomenological normalities), they can become realised in solid form because they don't question assumption. The lack of function is the assumption, and is either allowed or not depending on the viewer's perceived choice. Reference to the site is not required unless the inhabitant makes that conscious choice, in which case the suspension of disbelief is broken regardless. Conscious understanding needs to rationalise the unknown, and this destabilises any fabrications assumed. In order to be lied to, we must accept the premise that the lie is based on. Here, of course, the lie is not misrepresentation or deception, but a proposition of an un-locatable *centre*, or in the case of the Chernobyl memorial, the reactor core.

Problems within the Chernobyl memorial are encountered in this way—an awareness of the existence of violence acted upon the power plant, the post-event undertakings (the hasty construction of the sarcophagus), and our relationship to it in the present—yet the moment any attempt to locate what point the memorial is trying to make, it filters through our perception. The truth is that the issues that are being dealt with are beyond understanding when they can only be dealt with in small packets at a time, much like a grieving of sorts. A whole picture of the event and its repercussions can never find a cohesive form within which every detail can be singled out and itemised.

Instead, in order to mediate this frustration, the memorial offers the inhabitant a direction; the bridge is used as a humanising agent, offering apposing directions as choice. These directions occupy basic human lexicons, are tangible and understandable: light and dark, closed and open, known and unknown. Rather than respond to these directions in the past, they're now offered in

the present, the choice presented being the only control available to the inhabitant, and made on intuitive levels.

3.x The Nearing of Fact, Fabrication and Function.

Architecture, within the parameters defined so far for the Chernobyl memorial, has to be an event, in order to address the event. It is required to instigate the same parameters that have created it—it is asked questions about the temporary and the truthful, and abhors literal metaphor and/or narrative. The spaces that are introduced do not enhance or alter the reactor in any way beyond its resting state—to do so would *echo* the problems identified in the case studies used. This is addressing issues of structural integrity; as there is truth in the relationship between the reactor post-event and the sarcophagus as a band-aid solution. (Fig. 28)

Fig.28 – The pipes connect to the existing Sarcophagus – This is a critical junction as it is the meeting of the old with the new. Simply enough, *voids* are cut through the external envelope and the pipes are sealed with an apron flashing. Further attention is not required, given the massive holes the sarcophagus already contains (some as big as 10m.sq)

The relationship between the bridge and the sarcophagus is further explained by a complex tension and compression detail that is hidden within the reactor envelope. (Fig. 29)

Fig.29 – Pipe connection detail – structural ‘halos’ surround the pipes from within the interior of the sarcophagus. The closer of these is the anchor for 5 tension-cable strung clamps, which are seated to the sarcophagus skin and structure with neoprene rubber dampers. The second set of halos act as the tensioners for the cables, and are adjusted along the length of the pipe according to necessity. The detail relies on the pipes being pulled toward the archive by the carapace structure, without which the tension relationship could not occur

The relationship between the bridge and the carapace then, even though viewed externally, can only be understood upon realising the details. The form of the arcing carapace, externally, describes the internal struggle. If the reactor is the ultimate goal, then the carapace is the first provocation of removal from what is known and what is not, and we can view this as a genetic extrapolation. (Fig. 30 & 31 – over page)

Fig.30 – The Carapace section, detailing the foundation layout and triangulation of the ‘truss columns’ to resist the overturning moment of the carapace. Note the ultimate connection back to the bridge (occurring to the far left), which is purely a gravity resistance connection

IV CHAPTER 4

Stretching the Metaphor : The Mentality of Memorial

4.i The Inevitable Use of Metaphor in Memorial.

Daniel Libeskind's Jewish Museum and Peter Eisenman's Holocaust Memorial rely on metaphor in one capacity or another to principally transform events into architecture (*event-space*). Both expose the difficulty that memorial typology has in describing the tension between the history of *event-space* and the present leanings of metaphor within memorial manifestations. Metaphor of this kind cannot be used to describe a mediation of probability and possibility, because it requires a more intimate enquiry into the task of attempting to drag conceptual grafts across the relationship of facts and fabrications (interpretations of the inhabitant). If the metaphors are too literal, then the observer mentally ticks that box and all subsequent thought or feeling is lost. Literal metaphor indicates to the individual that the truth of events is too much to bear and therefore has been masked.

Memorial architecture burdens itself in dealing with the past before it, and the future ahead of it. Essentially, this is memorial architecture's dialogue with its inhabitants: it argues that permanent apparition is a temporary entity, in that it describes the finite nature of occupation as creating the relationship. The permanence of architecture is forever attempting to plead temporality, but it is only the inhabitation (the intellectual presence within the architecture) that activates it as temporary exclusively. This occurs after the actual inhabitation, and is called reflection.

It could be argued that the only way to remove the application of metaphor is to avoid all architectural moves in regard to conceptual drivers and/or briefs—this is a relevant theoretical dialogue. However, in the same way that the problem with memorial architecture is that it is architecture; it must be embraced that movements shall be made. Discussing architecture without metaphor is to engage with it metaphorically—regardless of the extent of our knowledge about architecture (general or specific), in the act of inhabitation we inevitably interpret symbols and associate them with metaphors attached to our own frameworks of personal understanding. To propose that architecture can bypass this complex relationship would not only be impossible, but make a mockery of architecture.⁸ Metaphor is a necessity within the understanding of architecture: there is no solution to this conundrum, so instead metaphor can be employed as a

⁸ This refers to *being* as an experience of symbol interpretation, which is not a part of this thesis

means of translation between theory (unlike the literal metaphor of narration as used by Libeskind), and the representation.

Phenomenologist Gaston Bachelard, in his seminal work *The Poetics of Space* (1994), discusses how this translation is involved in the inhabitation of architecture. In his understanding, it is not limited to the physical performance of occupation (ontological presence), but includes the interpretations of architectural representation. He discusses the use of *poetic imaging* as distinguishing between metaphoric feeling and ontological presence. Bachelard is a proponent in the reduction of metaphor: his concept of *poetic imaging* is a means of spatial understanding. Here, in discussing memorial, *metaphoric feeling* is reduced to a shadowboxing of sorts, where the metaphor is the antagonist (the boxer), and the feeling a resultant (the residual shadow). The *poetic image* then is an interpretation of that process that allows the removal of the boxer, whilst retaining the shadow, or the image of the shadow, or the memory of the shadow. The occupant observes what would be the *echo* (literal metaphor) of the boxer's performance, but instead acknowledges the imagination of the physical facts, without requiring the attentions of the source.

4.ii The Failings of Metaphor in Memorial.

Often, we find memorial architecture fails to live up to the events that it tries to *echo*. Not to say that memorial architecture is inappropriate, but instead that it commonly favours metaphorical representation, without fully understanding what it is trying to achieve. Consider another example of Libeskind's memorial design for The World Trade Centre: Ground Zero.

Entitled *Memory Foundations*, the design incorporates the 'Freedom Tower' (Fig. 32), which at the time of proposition was to be 1776 feet tall, a reference to the year of the signing of the United States Declaration of Independence; and was to be the tallest building in the world. The function of the site included malls, office blocks, eateries and technology centres: all consumer driven programmes. The buildings proposed for the site overwhelmed the Manhattan skyline with a series of rudimentary metaphors—the tower antenna reasserting technological superiority, garden roofs to tick 'sustainability' boxes for example; "[w]hy gardens? Because gardens are a constant affirmation of life." (Libeskind 37) Through the need to reassert these American ideals of dominance so quickly—strength, defiance, hope, consumerism, technology America created a figment out of the Islamic organisations that sat behind the terrorist attacks. A mere 18 months after the event (this winning project announced March 2003), *Memory Foundations* failed to address an appropriate passage of time needed to heal—instead it became an aggressive political act. These metaphors were not for the memorial of an event, but for the anger of the American public. Michael Sorkin, in the closing stages of his introduction to *Starting From Zero*, sums this up:

Writing this at the beginning of March 2003, shortly after the "final" decision about a rebuilding strategy has been announced by the authorities, I cannot help feeling that the process has been corrupted by a meagreness of vision and a vanishing and over-aestheticised sense of loss. There is something nauseating about the celebratory atmosphere that has surrounded this act of "closure", about the haste of it all, and about the wheeling and dealing that lead up to it and continue as various parties vie for control of the site. (12)

Fig.32 – Model of Libeskind's 'Freedom Tower' and WTC memorial, as displayed in the 'New York Daily News'

4.iii The Suspension of Disbelief as Applied to Bachelard.

“Phenomenology liquidates the past, and confronts what is new.” (Bachelard, *Poetics of Space* xxxii) Depending completely on the disposition of the inhabitant (specific to architecture), phenomenology says either of two things:

- 1) Memories conjure images. These images relate your past to your present; or
- 2) In order for you to continue, you need to believe the fabrication in order to understand the fact; or you need to apply a logical framework that will continue indefinitely, and concede that a conclusion is the wrong answer.

Within architecture, if phenomenology is experienced as 1), then the inhabitation is straightforward. As 2), however, then there is a constant negotiation in play, with the likelihood that for the inhabitant, the *centre* of the event is no longer present or can not exist. This is a clashing of mental constructs with phenomenological ideas, and a discussion of conditions of interpretation. Inhabitants within the second category will find the concepts that phenomenology pushes to be difficult, but this results in a truer experience. For this reason the Chernobyl memorial is not for other designers, it is for those who don’t understand. The difficulty involved in these mental negotiations is what makes the outcome more valuable.

Phenomenology requires an overlap of reality and unreality. We need to: firstly, be lied to (unreality), and secondly, accept the lie (reality), as a necessary condition of subconscious function. “...it is impossible to receive the psychic benefit of poetry unless these two functions of the human psyche—the function of the real and the function of the unreal—are made to co-operate.” (Bachelard xxxv) The abstraction of ideas can very easily become confusing to the point of frustration. (Fig. 33)

Fig.33 – The carapace of the Chernobyl memorial as abstracted from its own design – only vague hints of inhabitation are possible in this image: no pipes, no viewing platforms, no sense of scale. The view is impossible, because it would be orientated from inside the reactor

This suspension of disbelief can also be registered in the works of Lebbeus Woods. (Fig 34) As an exponent of architectural experimentation (Myers, Woods & Harries, 2004), Woods uses the absences of function, inhabitation, and natural phenomena to enable his images a disconnection from reality. This is important because the images are reduced back to concerns of architecture being interpreted within its own context—however we are not abandoned entirely as he retains levels of human location in the form of architectonic cues; floor places, viewing platforms, skin & structure, and abstracted recognition of environments, which are exclusively artificial, in various states of decay. These achieve traces of *being* and scale that we can understand as inhabitable through an abstracted lens—yet it is obvious how the application of metaphor is required to understand the image. This metaphor is not literal.

Fig.34 – Lebbeus Woods, Geothermal living lab, from the series *Centricity: The Unified Urban Field* (1987)

The presented form of this metaphor is an *echo*. An *echo* must have a resonating point, or ‘loci’. Within this thesis, this ‘loci’ has been referred to as *centre*. In order for the *echo* to occur, it must have a definable space within which to reach and rebound off; this is how it is registered as an *echo*. Without that return to the ‘loci’, we can only speculate at the possibility of the *echo*, and the time we wait for that return could become indefinite. Within architecture, this indefinite wait never occurs—we can always *echo*—even when not discussing sound. Vision, touch and temperature, for example, all allow us to *echo* our surroundings. However, it has already been discussed how metaphors are seen as an incorrect term with regard to architectural phenomenology.

4.iv How Bachelard Finds Truth in the Poetic Image.

In *The Poetics of Space*, Bachelard states that metaphor is inadequate to describe ontological *being* within space; instead he refers to this as *poetic imaging*, "...the image comes *before* thought" (xx) His argument is that all things should be considered in the present—the act of creating a memorial, having known the past, is adequate and appropriate to create the *poetic image*. This is different than metaphor, which requires thought to create the image; whereas the *poetic image* influences the past, and is not influenced, or *echoed*, by it.

Bachelard identifies the difference between metaphor and *poetic image* with 'like' vs. 'as'. "The word *like* imitates, whereas the word *as* implies that one becomes the person who dreams the daydream." (118) 'Like' becomes the logical, the understood, the scientific, the metaphor. 'As' achieves what the metaphor cannot, and becomes the moment before the leap into the literal. The lack of logical propping enables us to anchor new and unknown facts to reality; these facts are born from intuition. This is where the *poetic image* operates from—it is an embrace of unreality that scoops thought into a fabrication, whilst simultaneously requiring facts to apply a rigour of reality—but one that doesn't have to be reflected on, as the process is already present below the images being produced. All facts can be assumed to have culminated, there has already been a chain of events occur; intuition simply allows the 'new' to be confronted. Without the logic, phenomenology would have nothing to argue against, and we encounter the tension between knowns and unknowns.

Bachelard describes the relationship of house and memory as a sense of poetics. He talks about it in a past tense, as remembered from childhood, but considers it without *echoing* the past—for him it is just an image. Mere descriptions of space and context are not comprehensive enough according to Bachelard; "To describe them would be like showing them to visitors." (13) Instead he discusses how the spaces of a house retains its qualities, how they are preserved by the house, and how we experience its image as if time as stood still. (15) Internally we struggle with this, and might argue that we don't engage these images with the same set of symbolic understandings as we might have in the past. That is not to suggest that the image has not survived with us, but that we have to concede certain facts: the house is older, the door handle is rustier, the carpet on the entrance is worn and faded, the paint has peeled. The house retains the essence of the original image, but there is a disruption that has occurred by the passage of time. This is a mutual agreement between space and inhabitant. The past image has now been *echoed*, so to speak, and through our revisiting of space, we alter its image.

Bachelard describes poetic space within architecture as a purely theoretical exercise, and as such no metaphoric application (such as Heidegger's bridge) is offered by him. Instead he highlights moments that offer insights into the discussion of *poetic*—that which allows a

conveying of phenomenological space without context—a frame that *echoes* rather than is an *echo*. The *poetic image* is not a result of the process that preceded it, but an intuitive marker that becomes the *centre*, or ‘loci’ of its relational context—essentially it becomes its own context. To clarify, creating space that literally *echoes* is too close to metaphor —this is not what Bachelard is offering—he distinctly abhors use of metaphor to express phenomenology. Even though we could argue that a metaphor is applicable in order to suggest a resemblance that is not literal, it still implies that a context is present.

From this ‘flexing’ of the Bachelard’s *poetic image*, we can surmise that it would seem he ignores architecture in regard to its built form—suggesting problematics exist in properly conveying his ideas and meanings of the *poetic image* into architecture. He is discussing architecture alone as a stable entity—not architecture that exists within the context of architectural practice as a profession. ‘Context’ here means the role that architects play with regard to architecture—the many hats they must wear as a consequence of pragmatic requirements. With this in mind, when we deal with architecture in context (as is unavoidable), we immediately fall into danger of post-justification, because the complexities of the decisions we make, in a Bachelardian sense, cannot be put adequately into words.

However, we might make the suggestion that post-justification is resonated in all phenomenologist thought. Bachelardian phenomenology suggests that all thought is pre-programmed, and it is influential on architecture at an intuitive level—it should be free from the rigour of *echoes*. This is hard to deal with when engaging in built architecture. The move away from academic rhetoric to the built form offers a complex array of pathways that threaten to halt the *poetic image*. The easiest way to answer this is to embrace post-justification and allow intuition to run its course. The problems encountered with this lie in the fact that we, as architects, are constant curious inventors—we are inundated with pragmatic requirements. While it’s true that all design will have its critique, that critique should be occurring constantly throughout the whole process of design. Architecture, within phenomenology, should be flexible during the process of design and build to follow intuition. This is explained in the final chapter, as a theory of *true architecture*, which is grounded in the existing site of Chernobyl, as well as the proposed memorial design.

V CHAPTER 5 : CONCLUSION

A Theory of True Architecture

5.i The Problem of Risk Management.

Often, architects fall into the habit of transforming simple design solutions into more complex ones, inserting concepts and frameworks that don't move through *boundaries* of established design processes, but instead focus on complimenting them on superficial levels, and are mostly post-justified under validation. This is a general statement, but the point is that design parameters are initially set up by drivers that are hidden underneath the pragmatics of the projects requirements. Clients (even if the client is the architect), competitions, financial feasibility studies, municipal bodies (local/regional councils etc.), planners (more obvious on larger/public scale developments), for example are all part of this genetic makeup. This thesis recognises these various strands as *risk management*. While this list is highly variable and custom created as appropriate to individual project requirements, the common resultant is that these established parameters become the building blocks of safety for architecture; the relationship of mitigation between the architect, their client, the municipal bodies that mediate/facilitate the relationship, and all parties in-between, from start to finish. The risk for architecture (and the personal liability by all interested parties) is minimised, but the result of the design becomes muted, as it is slowly chipped away through a long chain of non-creative process. The location of *event-space* is fragile enough without the intrusion of *risk management*, where more often than not metaphor is exploited as a means of grappling with these un-wanted changes and relationships. It is not seen how architecture has undergone *risk management* when viewed through a historical lens, because we only intellectually engage the resultant.

The performance of architecture has an important impact on time from the moment of its conception. History views architecture as outlasting its creation in a literal sense—initial concepts that underpin its birth change with time, as they are translated against constantly evolving frameworks of interpretation by subsequent generations. Memorial architecture is created specifically to an event and as such demands the recognition of absolute facts that are unmovable. However, it remains architecture, and this fact reveals fundamental problems within the act of memorialising; this typology attempts to wrestle with very specific, impossibly small (comparatively) events contained within infinite timelines. These problems become fully fledged when architecture attempts to describe the nature of its memorial in relation to time.

The Chernobyl reactor is unique in its ability to include this process of design and time as a memorial. Normally, architecture can be created in a variety of different ways and means, formally with the placement of objects, or with the planning and programming of space, or as a

purely conceptual entity. But the opportunity to readdress the problematic nature of not only memorial typologies, but architectural process too, is accessible through the conditions on the Chernobyl reactor site. It is an unsolvable entity, but one that is embraced on its own terms through necessity, and not reduced back to a series of simple and literal metaphors. It has a dysfunction as opposed to function—an ineffable *boundary* that is required to deftly separate and conjoin, very literally, life and death. In order for memorial architecture to react more truthfully, it should confront the event as Chernobyl has the issues that surround it, and throw the relationship between one state and another into disruption.

Discussing architecture this way solidifies memorial not as a band-aid solution to catastrophic events or disasters, but instead as markers and identifiers in which bodies are able to re-orientate themselves. Body encompasses a range of scales, from macro to micro, the individual and collective inclusive. All concepts pertaining to inhabitation and scale are required to merge into one time and place, so the task of architecture becomes clear in locating the catalyst, and assuming an image of the *event-space*. This allows multiple images of the past to be realised within the present as a physical manifestation. The role of memorial architecture is to remain faithful to the specifics of an event: how the individual interprets this is up to them.

Under the premise of *true architecture*, this thesis has discussed a typology of architecture that doesn't simply design to commemorate events that lead to commission, or provide spaces of reflection/contemplation/mediation, but rather to suggest an expression of architecture that has no client. It is one that informs rather than is informed, is not constricted by bureaucratic process, but is rather an edifice of an event: simply, an architecture that suggests a change. This *event-space* is an architectural description of the truth that lies within the impacts of an event, and is unfiltered and honest. Events, at the time they occur, run parallel with these ideas, insofar as they are provocative and unyielding—reflection doesn't alter facts, only the interpretation of them—and so a re-orientation of normative state (and architectural process) is suggested here. It is memorial architecture's function to be that event because it occupies a middle ground, and is allowed to take the risk; it doesn't have to be safe architecture, it is factual and honest.

Chernobyl reactor no.4 embodies these same principles and facts. It contains highly specific conditions with regard to architecture as inhabited space. Arguably, all memorial sites are highly specific to their origins and interconnected events, but the positioning of this enquiry between the physical and psychological spaces, is interrogating the *boundary* of inhabitation and non-inhabitation of *event-space*.

5.ii The Event of April 1986.

Designing a memorial attempts to deal with the conceptual problems of the Chernobyl reactor no.4 disaster of 1986 as a physical and social phenomenon, and is required to address the technical and scientific concerns as a framework to ensure the design is mentally accessible and believable. We are given a few pragmatic knowns about the Chernobyl reactor:

1. The structure of the Chernobyl reactor was severely damaged in the explosion, and there is a threat it will collapse, causing a massive radioactive dust cloud;
2. The nuclear fuel that leaked from the destroyed reactor fused with sand contained in separation silos on the outer reactor walls, and poured through cracks and pipes, causing the fuel to form highly radioactive glass masses upon cooling (the ‘Elephants Foot’);
3. The sarcophagus built to enclose the reactor is not hermetically sealed, and is also eroding to the point of collapse;
4. Much of the lower floors have not been explored due to the high levels of radioactive dust particles and materials localised in proximity to the fused glass masses;⁹
5. Most of the original missing nuclear fuel remains unaccounted for (refer above), but it is estimated there is 200 tons of uranium, one ton of plutonium and a “[m]ongrel mix of fuel and debris” (Irving 98) inside the reactor;
6. The site has no proposed re-use, other than to house the destroyed internal structure, the remains of the reactor, and contain its nuclear fallout. Construction of a new ‘sarcophagus’ which was proposed to be completed in 2008 (Irving 98) is now rumoured to be completed in 2015 (unconfirmed); and
7. The Burakivka nuclear storage facility, within Chernobyl’s 30km exclusion zone, is dealing with the nuclear fuel removed off site. (Schmieman et al. 18)

⁹ These unexplored areas are unpredictable, and radioactivity can shift to dangerous levels as rounding corners and opening doors.

5.iii The Sarcophagus at Chernobyl Reactor No.4.

We can observe through Chernobyl's disaster-event timeline:

- 26th April 1986—Chernobyl reactor no.4 explodes (power into grid from reactors 1 to 3 continues. Construction of reactors 5 & 6 are halted.) (Dobraszczyk 371) (Fig. 35)
- 27th April 1986—36 hours later, 50,000 people from the nearby 'worker city' of Pripyat were evacuated (Polidori 7)
- May 1986—construction of the sarcophagus began, completed in late November of the same year (Ebel 1) (Fig. 36)
- 23rd July 1991—10 & 30km exclusion zones decreed around the Chernobyl nuclear plant (Schmieman et al. 18) (Fig. 37)
- 2015 (estimate)—Proposed new sarcophagus construction to be completed

Fig.35 – The Chernobyl Nuclear Reactor no.4, photo after the explosions. Fires and release of radioactive dust and gases have ceased

Fig.36 – The Sarcophagus constructed over the destroyed reactor, with onsite crane for maintenance

Fig.37 – The Chernobyl exclusion zone set around the reactor core (red line), including the reactor and storage facility locations

These are the realities of the events of the Chernobyl nuclear disaster. However, these 'real' concerns are merely ephemeral vehicles for remembering the past, and discussing the actual impacts of this catastrophic event that have occurred on physical and social levels. The proposed design of the Chernobyl memorial begins a dialogue with the concerns of inhabitation, acting as a mediator between physical difficulties (and impossibilities) of occupation and the unknowns of scientific enquiries, at the centre of which are questions of ontological *being* within a phenomenological engagement of memorial programming: *event-space*.

5.iv The Relationship Between Edifice and Event.

Earlier in the thesis, it was established that memorial architecture is problematic in discussing the temporary nature of inhabiting *event-space*, and the permanence of itself as architecture. Also discussed was how architecture takes on a reinterpretation within subsequent generations of frameworks and understandings about architecture. For the purpose of this thesis, this ‘constantly evolving’ understanding will refer to architecture as an *edifice*.

If the process of architecture is assumed to be finished at the completion of construction and the *risk management* responsibilities involved in creating architecture, then the *edifice* is the existence of architecture after this point—which is physical and psychological. However, when this *edifice* encounters an event, such as that of the explosion within Chernobyl reactor no.4, it removes the architecture from these underlying processes, because it can no longer be traced backwards through to its beginnings as a wholly conceived physical entity. The *edifice* still exists, because there are physical and psychological traces that remain,¹⁰ but it now has a set of facts from the event that are forced upon it, and are completely unavoidable. The event projects an unknown future ahead of the architecture as *edifice*.

In the case of Chernobyl, this is further exacerbated by the nature of its destruction and what that means in reality. There is an absolute danger and threat that still exists within the *centre* of the reactor core which demands attention—the architecture cannot be left alone. The immediacy of its requirements during the construction of the sarcophagus highlights the removal from processes of *risk management*. Any concerns about the architecture were not present beyond the immediacy of its containment. This was a true design interpretation of event—the sarcophagus is what it is and nothing more, nothing less. It is truthful and unapologetic, even in its current state of dilapidation. The *edifice* remains permanent, while the event was ephemeral, lasting mere nanoseconds: the ongoing architectural implications for Chernobyl stretch out to proportionate infinity, which serves to exaggerate the importance of its self-design.

¹⁰ That is to the nature of the event, specific to Chernobyl

5.v A Theory of True Architecture.

The architecture takes the place of the client through the client's absence—in the case of Chernobyl this is achieved by shifting to disaster containment—the principal's requirements are no longer relevant. The event requires the *edifice* to react, and there are no other considerations by external bodies. It demands a necessity through this manoeuvring; it is self-sustaining in its simplicity, and driven from a pure necessity. There can be no denial about what it is, or the conditions under which it was created. 'Created' in relationship to the Chernobyl reactor is what defines it as *true architecture*—the word implies that there is a force that is responsible for the events of the reactor, and the creation of the sarcophagus is the equal and opposite reaction. It will be explored in the rest of this chapter as a process that exemplifies *true architecture* - a fully fledged, *echoing* Bachelardian *poetic image*—created without considering the past and confronting what is new.

In this state, the architecture will inform rather than be informed. Instead of conforming to traditional architectural process, the sarcophagus has become an edifice of an event that is placed in tension with the set of bureaucratic normalities that should have created it. The Sarcophagus is self-perpetuating, and while it holds certain genetic traits from the reactor it shepherds, it is not related to that process of its origin. It has not gone through a regulatory body that demanded certain boxes be ticked and prescriptions filled, but instead confronts an event through its own problems directly. It suggests that architecture can become something more, through its own removal of municipal control and its careful selection of what to protect, and what to expose. This is where the Sarcophagus, and Chernobyl, becomes significant in the discussion of memorial.

5.vi True Architecture as Memorial.

The significant difference between traditional memorialised events and that of Chernobyl, is that it is ongoing in a real and tangible way. ‘Passive’ memorial describes past events, and is detached by its ‘pillowing’ literal affects, such as those of Libeskind’s Jewish Museum. This is apparent when the metaphors that are applied literally strip away the suspension of disbelief—there can be statements about what occurred in the past, but whether there is feeling in the *being* of that past (the *event-space*) is another matter. Chernobyl engages this directly: its job is made easy because the event literally exists in the past and the present. It proposes that we are encountering an ‘active’ event, and thereby a redefinition of memorial architecture, one that forces the present, and the people existing in that present, to acknowledge the shock of the event that occurred in the past, and allow it to become memorialised in a real and felt way. The event in literal terms is still active, and it is this that allows the memorial to be captured and owned by the inhabitant.

The orientation of the Chernobyl memorial, which includes its permanence, material, elements, and scale, enable the shock of event to exist in reality and for it to be inhabited by the individual and the collective by avoiding negligence or favouring of one over the other. The inhabitation, as is the cross to bear for all architecture, is important because it addresses the ontological aspects of *being* in relationship to space, ownership and negotiation, which occurs in time—a temporary context. It will guide the inhabitant around the infinitesimally small, almost un-locatable *centre of event-space*.

The physical limitations and implications of Chernobyl are already an illusion for us all, and one that metaphor is unable to apply any clarity to, or provide a different perspective of. By allowing the inhabitation of that *event-space* on its own terms (through the careful placement of the bridge and pipes toward and through the reactor), it can be argued that it is avoiding any ‘theme park’ qualities that are often attached to memorial and memorial-hybrid typologies. The undeniable truth is there, and while it can’t be satisfactorily explained, there are moments offered that allow solid vectors to hit close to home. Along the journey, and after experiencing the event from an array of different physical vantage points, some overall picture of a harder concept can be fabricated within the individual—whether they realise it or not. (Fig. 38)

This can be discussed with the original ‘sealing’ of Chernobyl; it was a forced move away from the pragmatics of the reactor to the conceptual; evidence of this can be found in the construction of the Sarcophagus in 1986. It was unplanned and constructed with haste, requiring minimal bureaucratic input due to the high levels of risk in relation to time, and was allowed to fulfil its task and function, which is a design reversal of the principal values upon which the reactor was built—to house nuclear material and output grid-able power as a by-product.

Fig.38 – The Chernobyl memorial plan – a genetic extrapolation of unknown proportions that begins with the reactor (event) and culminates in the archive (reaction). The journey through the bridge is a reversal of this, where the event is approached – not chronologically as is impossible, but through the dislocation of *event-space*

It could be argued here that the Sarcophagus is already a memorial, as it is in contention with the stability of the existing plant in both a physical and psychological manner. The Sarcophagus reveals an absolute intent—it is an undeniable functional architecture that has traversed normal barriers of architectural process. Whether it is successful or not is negligible, as the two states simultaneously exist as the same—the fact that they are different is negated and becomes interconnected by the simple act of revealing a framework that compares them. (Leach 66)

The act of the Sarcophagus traversing architectural process prepares us to understand that this type of *true architecture* has no client. Its functional design was never in question. The aesthetic was driven from structural necessity and speed of construction, its budget was never an over-riding factor in the decision to proceed—although certain limitations did impact the quality of the functional pragmatics.

The reactor and the sarcophagus are built from the same orientation and demand, a ‘we need’, but the variable category is the bureaucratic mediation. Both are achieving a goal—one radiates, the other mitigates—although it could be argued that the useful implications of the reactor have long since expired, and the event has forced a new function of its output as a marker in the sand. Chernobyl is then possibly a case study of how the power-plays of bureaucracy and technology are distributed, and the dangers inherent in that process. The reactor and the sarcophagus are dealing with different planning designs—one is a municipal requirement for an infrastructure, the other is a knee-jerk reaction safety device. The underlying point here is that often memorial architecture functions in an after-the-fact capacity—again, not in terms of chronology, but in that they are spires of congregation that mark events, losses, and the arresting nature of these resonating impacts. Memorial proposes to change the way that we view an event, through theoretical and conceptual mediums.

The solid nature of architecture is always unmoving for theoretical discourse, in the same way that theory cannot be changed when published—only modified by addendum. However, as discussed Chernobyl has no proposed re-use (this chapter ii). The site has become redundant and out-looking through the event; the modification of such a unique situation becomes impossible through its physical limitations. Instead of fulfilling a function, it has had all responsibility removed through the consequence of the events of the 26th of April, 1986, and an entirely new set, completely separate from the original intent, applied.

The architecture and the site no longer have or require any function. The radioactive nature of the surrounding area make the task of permanent re-inhabitation impossible, while functional architecture cannot survive without a site. This allows the architecture of Chernobyl the possibility of existing without site; a state of limbo; a bridge, a *boundary*, an *event-space*. It also allows for an opportunity to be critiqued without traditional functional prejudice—a solid state cannot be referenced against an uninhabitable site—as the argument becomes bunk immediately upon engagement.

5.vii The Success of Memorial.

Normally, when discussion of function occurs, we are forced to deal with architectural ‘baggage’ that has a series of preloaded conditions—these operate in historical and theoretical modes. They inform architecture of exactly what its function entails, and have a framework of their own against which they can be critiqued against. These attitudes are impregnated through architecture as a profession, be that in practice or academia, and not one is safe from the critics. The problem for phenomenology is that due to its neo-mysticism, critiquing *poetic imaging* becomes impossible; all architectural moves made after applying function become tied back to historical and theoretical markers in the sand, and can/will/are always interpreted in metaphorical canons, or at least critiques that work on unpicking literal ideas and representations. An argument is nearly impossible to deny when based in phenomenology, because the immediate response is that the critique has simply not understood—how can an argument be made against individual interpretation?

The success of the memorial is realised in that there is something very real and tangible at stake—we are confronted, quite unapologetically, by the potential of our own mortality. That is not to say ‘death’, but suggests that we place ourselves within the context of the infinite possibilities of life (edifice), against a singularity of death (the event), that still exists, and is still ongoing and ever present—it persists even when removed from the memorial.

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- Fig. 3 - Design by author. Std. 2mm Pencil on 80gsm detail paper.
- Fig. 4 - Design by author. Std. 2mm Pencil on 80gsm detail paper.
- Fig. 5 – Photo by author. Taken on 27/01/12 on iPhone 4.
- Fig. 6 - Photo by author. Taken on 26/01/12 on iPhone 4. Photo-merged in Adobe Photoshop.
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- Fig. 30 – Design by author. Std. 2mm Pencil on 80gsm detail paper.
- Fig. 31 – Design by author. Std. 2mm Pencil on 80gsm detail paper.
- Fig. 32 – *Model of Daniel Libeskind's 'Freedom Tower' design for the World Trade Centre Memorial, as displayed in the 'New York Daily News'.*
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- Fig. 35 – *The destroyed Chernobyl reactor before construction of the Sarcophagus*.
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- Fig. 36 – *The completed Chernobyl Sarcophagus*.
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- Fig. 37 – *Map of the 30km exclusion zone around the Chernobyl reactor*.
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APPENDICES

Fig.1 – Existing Chernobyl Reactor no.4 with Sarcophagus - Plan	A.
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PBWK. PEACOCK SECTION 1:500

REAR
FLOOR

100
PS

34.50

8 tracks -

8 tracks = 9 risers

9 x 10 = 180

11.5m

15-6
E5-1
647
44
54

2, 8, 14, 21, 25, 32, 40
5, 8, 12, 17, 23, 30, 36
3 4 5 6 7 8 9
2 4 5 6 7 8
4, 8, 12, 17, 23, 30, 36

6m ABOVE (BOTTOM)
CAM ABOVE (TOP)

47,000 = 130
3.5

1m = 4mm
C 1:150

TENSION TO COMPRESSION
BACK TO BRIDGE EXTERNAL
STRUCTURES & BRACING.

PIN

OVER-TURNING
MOMENT.

RESISTANCE BY
TRI-ANGULATION.

22° (from vertical)

92,000 (7:200)