Delirious New Zealand

^ figure 1. *Delirious New Zealand - An Introduction*

Delirious New Zealand

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120 - point thesis

Submitted to the Victoria University of Wellington
in partial fulfilment of the requirements for the degree of
Master of Architecture (Professional)

Victoria University Wellington

2018

^ figure 2. *Sharing Architectural Boundaries*

Acknowledgements

This publication would not exist without the support of:

v

Louise.

My apologies for making you endure another architecture thesis. You supported me endlessly and at times even took a back seat to Rem. I only hope you are proud.

Jan.

Your patience is admirable. Each moment of calmness and clarity you provided this year is evident in the final outcome. I appreciate all the help and support you continually provide.

Henry.

Each 'chat' has no doubt led to this process being far more drawn out. You helped push this research to uncomfortable limits and for that I am grateful, may the collaboration continue.

This thesis is better because of the involvement of these three, but also owes a debt of gratitude to many individuals that offered encouragement and/or council at differing stages and in varying degrees.

Thank you all.

^ figure 3. *Political Boundaries of New Zealand*

Abstract

Delirious New Zealand proposes an alternative parliament, one that uses walls and boundaries to navigate authority and architecture.

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Walls are complex, they can range from a simple form of protection against elemental conditions, through to the reinforcement of borders between two countries with emphasis and polarising effect. Whilst variable, each instance is committed to division, and both are boundaries facilitated by architecture in the form of walls. Through design led research, three phases of investigation are developed across successive scales. Presented as 'Installing Boundaries', 'Housing Politics' and 'Political Infrastructure', each design outcome forms a larger body of work referred to as *the design*. Shape, Threshold, and Montage are the architectural principles that determine a given walls significance investigated at each scale. These three speculative propositions are not final outcomes for what an alternative parliament should be. Instead, Delirious New Zealand explores architectural boundaries as the material interface between those who govern and those governed.

Koolhaas's observations of the Berlin Wall – pre-demise – and his publication 'Delirious New York' highlight the significance of the authority of an architect, and habitational authority in the realisation and reality of architecture. The significance of a given boundary wall must then consider two things. One, the architectural elements that make up the wall itself. Two, the context within which a wall operates - be that social, political, economic etc. This thesis not only examines

^ figure 4. *Inhabitation of Delirious New Zealand*

the design outcomes as being 'about architecture' in the form of *the design*, but also uses this as a platform to discuss 'concepts of architecture' more broadly considered. Accordingly, the concept of authority and architecture is discussed throughout the production and presentation of the three scales of investigation. A final critique in the form of a design discussion concludes this thesis, at which point the final act of installing boundaries is undertaken.

'Delirious New Zealand' considers parliament as a programmatic and contextual provocation for the design of architectural boundaries. In doing so, the segregated inhabitants are defined as the politicians and the people. Although political in programme, this thesis is not politically motivated nor intent on acting politically.

^ figure 5. *The Contents of Delirious*

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Chapter # 1

Introduction

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- 1.3 Methodology
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^ figure 6. Koolhaas' Architectural Boundaries

1.1 Introduction

Architecture is always political in that it always governs, exerting a determining influence in or over the actions or conducts of those that inhabit. Inhabitation is applicable not only of built architecture, but also of architectural theory and speculation. Whilst manifest in differing mediums, each aspect of the discipline – be that theoretical or practice – is subject to constraint. Architecture is therefore always complicit in the creation of boundaries and constraint, and boundaries and constraint are always complicit in the creation of architecture. This thesis was conceived at the intersection of these two observations, asking how architectural boundaries can be explored as enabling constraints.

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Presented in three parts as ‘Installing Boundaries’, ‘Housing Politics’, and ‘Political Infrastructure’, *Delirious New Zealand* is design-led research. This research methodology facilitates the development of interrelated design outcomes at each successive scale, forming a larger body of work referred to as *the design*, structured by specific design methods. These methods fluctuate between analogue and digital mediums across each investigation, motivated by a theoretical understanding of enabling constraints and architecture. The work of Rem Koolhaas and his approach to architectural boundaries influences this research heavily. Koolhaas’s observations of the Berlin Wall highlight the importance of perception and position – both societal and locational – when considering the implications of architectural boundaries. His publication ‘*Delirious New York*’ glorifies the constraint of the Manhattan grid, prompting the testing

^ figure 7. *A Montage of Shape and Thresholds*

of Shape, Threshold, and Montage as significant architectural principles that determine the divisional significance of a given boundary wall. The wide array of architectural production for which Koolhaas is responsible, highlights the role an author plays in both the realisation and reality of architecture, and how the differentiation between what is intended and what eventuates are rarely the same (Betsky, 2003, p. 28).

Architectural boundaries play an important role in defining the material interface between two segregated parties, but of equal importance is the condition of the parties on either side of a given divide. The significance of an architectural boundary must then consider two things; one, the tangible architecture making up the wall itself; two, the contextual condition within which a wall operates. Accordingly, this thesis explores not only design outcomes that are 'about architecture' in the form of *the design*, but also uses this as a platform to contemplate the 'concepts of architecture' more broadly (Lim, 2013, p. 107). The authority of the architect is explored through the production and presentation of *the design*. Using parliament as both programme and context, the segregated inhabitants of this design-led research investigation are established as being those who govern and those governed. The authority of these inhabitants is considered throughout this design led research as the catalyst for the making of architectural boundaries. These boundaries are then inhabited by those that experience Delirious New Zealand as presented in this research portfolio and throughout

^ figure 8. *Speculating for New Zealand*

each design critique. Both of these forms of habitational authority are considered in the production and presentation of each design iteration and outcome.

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The intention of this thesis is not to solve a defined problem, but to instead speculate upon the opportunities for architectural boundaries, specifically the boundary wall. Delirious New Zealand seeks not to influence political views through architectural design, nor does it endeavour to promote a new political architecture typology. This research investigates authority and architecture by exploring architectural boundaries as enabling constraints.

^ figure 9. *The Objectives of Delirious*

1.2 Research Objectives

Exploring architectural boundaries as enabling constraints with the following objectives:

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1.
Generate three scale-specific design investigations to help develop an understanding of my role in the production and presentation of architecture, and the experiential authority of an architectural boundary.
2.
Consider how I might negotiate the differentiation between architectural intent and its reality tested through two-dimensional drawing and three-dimensional modelling, with the limitations of these design methods to further the understanding of enabling constraints.
3.
To maintain a speculative approach when designing an alternative parliament for New Zealand allowing the significance of academic limitations to be explored, and then consider how I navigate the testing of such constraints.

Whilst introspective, the application of knowledge developed through the consideration of these objectives throughout the exploration of architectural boundaries as enabling constraints, is applicable to the wider discipline of architecture.

^ figure 10. *The Iteration Process*

1.3 Methodology

Design-led research into how architectural boundaries can be explored as enabling constraints is undertaken as an iterative design process where three design outcomes are proposed. Analogue and digital mediums inform the production, presentation, and experience of each design outcome. Viewed as a composed whole, these outcomes construct a body of work referred to here as *the design*, which is the foundation for critical discussion. *The design*, established through an iterative process across successive scales, is not a final project solution. Instead it is considered a platform that enables critical discourse. As Jane Rendell states, “instead of posing research questions and then finding answers, in much design research the process operates through generative modes, producing works at the outset that may then be reflected upon later” (2013, p. 117). *The design* is undertaken as a project ‘about architecture’ that allows the ‘concepts of architecture’ explored in this thesis to be considered in the form of critique and discussion (Lim, 2013, p. 107). This critical discussion assesses the applicability and effectiveness of a design outcome, identifying the strengths and weaknesses that develop into ‘existing knowledge’ (Downton, 2003, p. 6). This existing knowledge informs the direction of successive design investigations and subsequent research.

Two primary methods of exploration and one form of representation frame the iterative design process. Firstly, the use of scale. Supporting the speculative nature of this thesis, each design phase increases in scale and architectural complexity, from installation through

^ figure 11. *Making Delirious*

to infrastructure. This linear progression of scale at each design phase is then supplemented with the use of 'scaling up' and 'scaling down' within a given phase. As Albena Yaneva states, "In the scaling venture, two alternative states of the building are simultaneously achieved and maintained: a state of being 'less known', abstract and comprehensive; and a state of being 'more known', concrete and detailed" (2005, p. 867). Secondly, two-dimensional drawing and three-dimensional modelling constrain the modes of producing and representing design outcomes to an analogue medium. Thirdly, each design outcome is documented as an experience of *the design*. Jonathan Hill insists "the creative user should be the central concern of architectural design" (1998, p. 1). Presenting *the design* as an image to be inhabited by the reader of this thesis enables the authority of the creative user to be considered. Due to the requirement for this thesis to be published in book form, photography is used as a means of representing the experience of Delirious New Zealand in this publication.

^ figure 12. *A Precedent Political Threshold*

1.4 Scope

Specific limitations have been put on the scope of research and are important in understanding this thesis. Design outcomes and critical discussions are limited to the scope applicable to a Master of Architecture (professional) thesis; weighted 75% design and 25% writing. The constraints and assumptions of this research are outlined below.

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The practicalities of governance are not considered. The parliamentary programme defines an assumed social, cultural and political context for the research, prescribing the condition for each side of a boundary as being those who govern, and those governed.

Research of architectural boundaries that have, and/or do, facilitate division in a politically motivated context positions this thesis within a wider disciplinary discourse. This refines the extent of boundaries to be considered and aligns the theoretical understanding with the parliamentary programme and context.

It is assumed that the two parties divided – those who govern and those governed – do not have an adversarial relationship and a level of acceptable interaction is aligned more to that of friend instead of foe.

Parliamentary program defines the contextual scope allowing site considerations to be reserved to those of physical constraint, freeing the design investigation from social, legal, or economic obligations.

^ figure 13. *Potential Political Thresholds*

Walls are the primary architectural boundary considered. Limiting the investigation to walls helped narrow the breadth of architectural elements being addressed, concentrating the research on one element. This allows for a refined design-led investigation of Shape, Threshold, and Montage.

With no intention of being realised, *Delirious New Zealand* is a speculative endeavour and as such, is presented in a manner that reflects this ambiguity. By not presenting a representation of an architectural intervention, the design is put forth as an experience, negotiating my own authority in the production and presentation of architectural boundaries whilst accommodating the consideration of the authority those that inhabit each design outcome also have.

It is assumed that this somewhat introspective endeavour may have implications that extend beyond one's own interest, much like the majority of Kooolhaas' works, be they theoretical speculations or the practical applications in the built environment.

^ figure 14. Structure Observed in this Research Portfolio

1.5 Thesis Structure

Constructing a body of work through design-led research, this thesis is assembled into seven chapters, the composition and content of which is outlined below.

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1.

Establishes the thesis scope, outlines research objectives, and describes the design methodology to structure an investigation into architectural boundaries as enabling constraints.

2.

Positions this thesis with a broader disciplinary body of knowledge. The 'concepts of architecture' more broadly considered in this research are defined and discussed.

3.

Four design case studies that exemplify the utilisation of Shape, Threshold, and Montage are subject to critique and discussion. Apparent authority is also considered and discussed.

4.

Design Scale A explores installing boundaries. Focused on an individual's experience, this design test initiates enabling constraints through the act of installing boundaries at a 1:1 scale.

^ figure 15. Chronological Structure of this Research Investigation

5.

Considering boundaries at the domestic scale, Scale B proposes a new parliamentary office. This test explores architectural boundaries as both habitable and themselves inhabitants.

6.

The final design test is undertaken in Scale C. Political Infrastructure explores the implications of multiple architectural boundaries beyond a single site or building.

7.

A critical discussion considers the three proposed outcomes against the research objectives addressed at each scale. This discussion concludes Delirious New Zealand.

It is important to note that the thesis structure as presented in this research portfolio (refer to *figure 14*) differs to the thesis structure this research chronologically observed (refer to *figure 15*).

Chapter # 2

Theoretical Context

- 2.1 Architecture + Boundaries: *An Introduction*
- 2.2 Architecture of the Berlin Wall
- 2.3 Delirious Walls
- 2.4 Voluntary Imprisonment
- 2.5 Enabling Constraints: *In Conclusion*

^ figure 16. *A Boundary Experience*

2.1 **Architecture + Boundaries** : *An Introduction*

Chapter two addresses the literary background for this design led research, through which a theoretical understanding of architectural boundaries as enabling constraints is established. Focussed on *the wall* and its divisional function, three discussions are presented.

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‘The Architecture of The Berlin Wall’ contemplates the influence that walls have had on Rem Koolhaas. This recognition is extended through the examination of Koolhaas’s theoretical consideration of constraints and architecture, and in particular his discourse regarding walls. Derived from this Koolhaasian understanding are two discussions critical to this thesis. One, ‘Delirious Walls’ forms an understanding of the architectural design principles that inform the project ‘about architecture’ undertaken as *the design* (Lim, 2013, p. 107). Here, the theoretical significance of a boundary walls Shape, its Thresholds, and the Montage of multiple walls into a compositional whole is considered. ‘Voluntary Imprisonment’ develops an understanding of authority and architecture as the ‘concept’ considered alongside *the design* throughout Delirious New Zealand (Lim, 2013, p. 107).

Due to the brevity of this thesis, select authors are referenced alongside Koolhaas. Ingrid Bock and Aaron Betsky help rationalise Rem’s theoretical productions. Hans Teerds and Peter Zumthor further an understanding of the three design principles, where the significance of thresholds is notably highlighted. Throughout, Peter Marcuse refines a broader understanding of walls, with the boundary wall and its significance as the interface between two segregated parties continually promoted.

^ figure 17. Political Boundaries of Berlin

2.2 The Architecture of The Berlin Wall

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Until its demise, The Berlin Wall stood in support of political division between east and west Germany for twenty eight years (Noack, 2014). Between the years of 1961-1989, architecture was a pictorial tool complicit in the physical and ideological division of a city, a nation, a world. Upon a first hand experience, Koolhaas regards the wall as “the go to reference for all modern political partitions” (Walls, 2014, p. 15). In 1972, his journalistic interest drove Koolhaas to travel to Berlin to study and document the wall. Koolhaas wrote ‘the Berlin Wall as Architecture’, a study of an existing architecture undertaken as both the fulfilment of his academic obligations as a student, and for his own interest (S,M,L,XL, 1995, p. 48).

In recognising that the democratic west was the imprisoned population and that the communist east was in fact ‘free’, Koolhaas established an understanding of the reality of architecture. The wall was not a “simple, majestic north south divide” as he had imagined, but instead the Berlin Wall was an encircling constraint that “paradoxically freed the west from the east” (Bock, 2015, p. 43). This initial observation was accompanied by Koolhaas’s reverse epiphanies regarding the wall. Here Koolhaas asks “were not division, enclosure (or imprisonment), and exclusion the essential stratagems of any architecture?” (Field Trip, 1972, p. 229). What manifest from this field trip was Exodus, or the Voluntary Prisoner of London, his 1972 thesis project.

^ figure 18. Koolhaas's *Manhattan Delirium*

Not only did this 'field trip' prompt Koolhaas's design response in the form of Exodus but it also motivated the architectural theories he introduces in *Delirious New York*. In observing the "mountain range of evidence" presented in the form of "architectural mutations, utopian fragments, and irrational phenomenon", Koolhaas proposes his theory of Manhattanism (1994, p. 54). This theory puts the 'culture of congestion' at the forefront of the densely populated islands historical architectural development (1994). This culture is matched only by the Manhattan grid in terms of having definitive influence over the architecture that inhabits each archipelago of the city.

Throughout *Delirious New York*, Koolhaas glorifies the Skyscraper. Considered a 'new typology', Koolhaas and many others believed it could liberate the 'metropolitan condition' from the horizontal constraints of the grid, giving way to a three-dimensional freedom of the vertical axis (Parr, 2014, p. 12). From these observations of the Skyscraper typology, Koolhaas goes on to present his own theory of 'Bigness' in his publication *S,M,L,XL*. Here, Koolhaas introduces 'Bigness or the problem of Large'. The idea of 'Bigness' is put forth as having an innate appeal and Koolhaas presents this theoretical concept through five theorems (1995, p. 496). One key point identified amongst these theorems is when a building grows to a size where it can no longer be controlled by a single architectural gesture.

^ figure 19. *Architectural Mutations of Manhattan*

Koolhaas questions whether a big building can be controlled by a combination of architectural gestures either. He explains that this “impossibility triggers the autonomy of its parts, but this is not the same as fragmentation: the parts remain committed to the whole” (1995, p. 496). A second key point raised, and critical to this thesis, is the change that occurs when a building becomes so big that the façade no longer reveals what happens inside due to the distance increasing between core and envelope. The inner program and workings are no longer a certainty, an element of mystery results (Koolhaas, 1995, p. 497).

Koolhaas extends these considerations of architectural boundaries when, as the curator of the 2014 Venice Architecture Biennale, he published one of fifteen books titled ‘Walls’. In ‘Walls’, Koolhaas explains that there are two types of walls “ones that provide shelter and ones that divide space” (2014, p. 14). He explains that ‘the wall’ is segregated into two definitive categories; the “bearing wall that is necessary, and the contingent wall, more commonly referred to as the partition” (2014, p. 14). Both these walls – no matter the Koolhaasian category – are forms of architectural boundaries, whether they are “as stable as the human need for shelter” or as “changeable as our forms of sociability” (2014, p. 14).

^ figure 20. *Delirious Divides*

2.3 Delirious Walls

Throughout his theoretical production, Koolhaas outlines the ambiguity of architectural boundaries beyond a certain size. Given the varied positions he puts forth, it is concluded that Koolhaas theory of 'Bigness' might also be applicable to architecture that is within the scope of what he terms 'critical mass' (Koolhaas, 1995, p. 496). Whilst Koolhaas does not give an objective quantity to this critical point, Peter Marcuse suggests that whilst "not all boundaries are walls...all walls are boundaries" (1997, p. 101). This suggests that no matter their size, all walls are divisive. As this thesis explores architectural boundaries across variable scales, the Shape of these divisive elements in defining the relationship of segregated parties is considered as important as their size. The ambiguity of these architectural elements can also define the relationship of these segregated parties. Given the consideration of walls put forth by both Koolhaas and Marcuse, a wall can be either an individual intervention, or the Montage of multiple boundaries into a composed whole that defines an experience two divided parties.

^ figure 21. *A Model Threshold*

Whilst the notion of Shape Montage is central to Koolhaas's writing, a related term that is critical to this developing conversation around walls, is thresholds. Koolhaas promotes the boundary wall as the tangible interface between two habitable environments, yet the transition between these environments is of equal importance. Thresholds are promoted by Hans Teerds, who describes the experience of a threshold as the moment of transition from one side of an architectural boundary to another, akin to passing through a doorway. Of this experience he notes "if it is the wall that receives and unites within itself the tension between the private and the public, between the indoors and outdoors, this only really becomes visible in the window and felt in the door" (2014, p. 115). Drawing from both Koolhaas and Teerds, this definition of threshold requires physical penetration of the boundary. From a phenomenological perspective, Peter Zumthor describes thresholds as the 'tension between interior and exterior', where

"crossing, the tiny loop-hole door, the almost imperceptible transition between the inside and the outside, an incredible sense of place, an unbelievable feeling of concentration when we suddenly become aware of being enclosed, of something enveloping us, keeping us together, holding us - whether we be many or single" (2006, p. 47).

Whether considered the 'tension between interior and exterior' or the moment of transition between one environment and another, thresholds in Delirious New Zealand shall be those deemed permeable, be that physical or visual.

^ figure 22. Koolhaas's *Boundaries* post Berlin Field Trip

Alongside thresholds, another important term from Koolhaas in understanding the wall is voluntary imprisonment. Voluntary imprisonment contemplates the two sides of a wall and the significance of habitual authority and the authority of Architecture in an experiential capacity, expanding this research investigation beyond a formal mass and/or material study. From the understanding of tangible architecture divides presented previously, it is understood that the physical attributes of an architectural divide only in part contribute to the significance of its segregative reality. Walls are understood as being a paradoxical architectural element: they simultaneously support freedom and imprisonment, inclusion and exclusion (Koolhaas, 1972). This freedom and imprisonment is defined by the condition of a given side as much as by the architecture of the divide itself. Peter Marcuse narrows this understanding to the consideration of the boundary wall specifically. "Walls that act as boundaries can suggest a particular set of relationships between those on the opposite side of the boundary" (1997, p. 103). Taking the Berlin Wall for example, it is not simply the physical architecture that must be considered when contemplating its divisive existence. The political and cultural conditions that form either side of the two segregated parties, be it the communist east or the democratic west, are as important as the wall between. The boundary wall may manifest a physical segregation, but the authority of each inhabitant determines the differentiation between the experience of either side of the divide.

^ figure 23. *The Beauty of the Berlin Wall*

2.4 Voluntary Imprisonment

The Authors and architects in this chapter contribute to a theoretical grounding in how architectural boundaries can be explored as enabling constraints. This terminology draws from Kathryn Halyes, who argues enabling constraints “create interlocking feedback loops that greatly speed the processes” of design (2001, p.145). Following Hayles, this is because [c]onstraints enable by restricting the space of possibilities so that only the most viable self-organizing systems or models will emerge. (2001, p.145). Applying these theoretical positions to the production and presentation of boundary walls in *Delirious New Zealand*, approaches the research question with a strict scope that establishes design outcomes that are ‘about architecture’. Each iteration and outcome forms a platform to discuss the ‘concepts of architecture’ more broadly considered (Lim, 2013).

As Koolhaas concludes, The Berlin Wall was “clearly about communication, semantic maybe, but its meaning changed almost daily” (1972, p. 512). The Berlin Wall was affected more by events and decisions thousands of miles away than by its physical manifestation. Its significance as a ‘wall’ (as an object) was marginal, but its impact was utterly dependent on its appearance (Koolhaas, 1972). Like the Berlin Wall, the architectural boundaries to be explored as enabling constraints, will be just that, physical manifestations. Their significance as material boundaries between one environment and another will be defined and redefined through habitational authority. This significance is subjective, but my authority in the production and presentation of each boundary wall can be considered.

^ figure 24. *Inhabitation of Enabling Constraints*

Delirious New York was at once a manifesto for Manhattan, whilst simultaneously an introspective endeavour that developed a manifesto for Koolhaas's architectural future as both a theorist and practitioner. Throughout his theoretical endeavours, Koolhaas highlights the need to consider architecture beyond its tangible autonomy. From the perspective of this research investigation, the consideration for the 'culture of congestion' through the glorification of the skyscraper is the fundamental outtake from Delirious New York. Throughout, Koolhaas establishes that it is precisely "human desires, fantasies and obsessions" that have shaped the 'culture of congestion' and therefore the architecture that accommodates this condition (Parr, 2014, p. 21). The authority of human desire in defining the reality of architecture must therefore be understood as being of equal importance to the physical constraints of the tangible architecture itself. This Koolhaasian understanding promotes the need to consider both the tangible constraints of a given wall and the significance of those that inhabit this wall in continually defining - and redefining - an experience of an architectural boundary.

^ figure 25. *Forms of Architectural Boundaries*

Koolhaas also insists, “There is an enormous, deliberate – and I think – healthy discrepancy between what I write and what I do” (1996). The following chapter explores design case studies that implement strategies that address the theories outlined here and develops an understanding of what Koolhaas has done alongside what he has said.

Chapter # 3

Design Case Studies

- 3.1 Introduction
- 3.2 Scale A : Installation
Untitled (Two Part Construction)
Fred Sandback
- 3.3 Scale B : Domestic
Exodus, or the voluntary prisoners of architecture.
Rem Koolhaas, Madelon Vriesendorp,
Elia Zenghelis, and Zoe Zenghelis
- 3.4 Scale C : Infrastructure
The City of the Captive Globe
Rem Koolhaas and Madelon Vriesendorp
- +
- The New York Highline*
James Corner Field Operations,
Diller Scofidio + Renfro, and Piet Oudol
- 3.5 Conclusion

1.

Fred Sandback

2.

Rem Koolhaas with
Madelon Vreisendorp,
Elia Zenghelis,
Zoe Zenghelis

3.

Rem Koolhaas with
Madelon Vreisendorp

+

James Corner Field
with Diller Scofidio +
Renfro

3.1 Introduction

This chapter frames a critical investigation into four distinct architectural design case studies. Each example has been selected and subjected to critique based on the objectives of this thesis and their relevance to the three scaled design phases; 'Installing Boundaries', 'Housing Politics', and 'Political Infrastructure'. Each case study considers how Shape, Threshold, and Montage are used as definitive architectural principles in the creation of architectural boundaries. The authority of both the architect and inhabitation is discussed. Together, each precedent exemplifies how the research in this thesis can approach the exploration of architectural boundaries as enabling constraints and aids in the direction of the subsequent design investigations. The modes of representation employed in each precedent are additionally informative.

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The selected case studies are:

1. Untitled (Two Part Construction)
 Fred Sandback
2. Exodus, or the voluntary prisoners of architecture.
 Rem Koolhaas with Madelon Vreisendorp, Elia Zenghelis,
 and Zoe Zenghelis
3. The City of the Captive Globe
 Rem Koolhaas and Madelon Vriesendorp
4. Further consideration given to: The New York Highline
 James Corner Field Operations with Diller Scofidio +
 Renfro

^ figure 28. *Experiencing Vertical Boundaries*

3.2 Scale A : Installation

Description :

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Fred Sandback divides three-dimensional gallery space in such a way that frames existing architectural environments, creating alternative perceptions of volume and division when 'pedestrian space' is experienced. As evident in *figure 28*, Sandback uses taut planes and linear interventions that imply, rather than physically delineate division (Fred Sandback. Untitled.1967 | MoMA, 2013). This precedent installation was selected for the way it redefines the creation and perceptions of boundaries at a one to one human scale and defines an alternative experience for the inhabitant of this environment.

Shape, Threshold, and Montage :

Sandback's work uses shape in a two-dimensional way to create perceptions of three-dimensional volumes. The individual lines used to form these volumes do not create tangible planes or surfaces yet still define the divide between spaces using a permeable interface, a threshold.

Authority

Sandback's authority only extends as far as the manifestation of his intent, the reality of each design outcome is defined and redefined by each inhabitant. Ultimately the person viewing the installation inhabits the work, meaning their approach and perception has

^ figure 29. Hello

authority on defining the experience. Both forms of authorial inhabitation dictate a boundary's divisional significance. As observed in *figures 29 and 30*, the inhabitant defines and redefines the significance of the boundary depending on their position, the time, and circumstance in relation to the installation (Marcuse, 1997).

Findings :

Sandback's work is an example of how the delineation of space can be created using thresholds as architectural boundaries. As the exhibition catalogue describes, Sandback's approach to boundaries sees them also inhabiting "pedestrian space'...reveal[ing] themselves over time from different vantages, and according to different perspectives" (1986, p. 14). The catalogue continues to describe the way his work "involves a process of bodily based viewing, a phenomenological experiencing of each piece in situ" (1986, p. 14).

^ figure 30. *Hello, from the Other Side*

End Note :

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In the same way Sandback sees the inhabitants of his installed boundaries interpreting his work from a unique vantage point at a select time, architecture can similarly be viewed from a unique point at a select time. The importance of such specificity is exemplified when considering the differentiation in *figures 29 and 30*. Here, the significance of the divide created by Sandback's installation is defined by the side on which occupation occurs. The perceivable condition of each side is defined by the act of inhabitation but also by the identity of the inhabitant. This initial definition is then redefined by the act of inhabiting the other side, seen in *figure 30*. This promotes the need to consider what Jonathan Hill describes as the "creative user" when undertaking architectural design (2003, p. 71).

^ figure 31. *Exodus Inhabiting London*

3.3 Scale B : Domestic

Description :

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'Exodus, or the voluntary prisoners of architecture' is Rem Koolhaas's 1972 Architectural association thesis project, completed with Madelon Vreisendorp, Elia Zenghelis, and Zoe Zenghelis. It is the materialisation and testing of his observations of the Berlin Wall. In his project, like in West Berlin at the time, "the wall becomes here a condition of freedom by self-imprisonment" (Lucarelli, 2011). Koolhaas puts forward an alternative reality for the boundary wall. Instead of seeing it as a form of protection, he promotes it as a voluntary segregation where "people find shelter within the walls of a prison of metropolitan scale" (Lucarelli, 2011). As presented in *figure 31*, he proposes a walled city in a long strip, with tall barriers cutting through central London. It is "an intervention designed to create a new urban culture" (Rem Koolhaas | MoMA, 2007). Koolhaas proclaims that all the negative aspects of a wall, such as division, segregation, inequality and/or isolation, could be "ingredients of a new phenomenon: architectural warfare against undesirable conditions, in this case the city's urban fabric" (Bock, 2015, p. 33-34).

Shape, Threshold, and Montage :

Koolhaas uses scale, materiality, proportion and the wall's linear shape to accentuate the negative aspects associated with a wall, creating a larger-than-life boundary that conveys total physical segregation. The wall is paused by nothing amid the established urban fabric

^ figure 32. *An Entrance to Exodus*

of London. Only one threshold exists. This rectangular opening demarcates the boundary between in and out; new and old; privilege and poverty. The ‘voluntary prisoners of architecture’ who enter can dwell in “ten programmatically diverse square blocks” (Bock, 2015, p. 35). The montage of these square blocks are described by Koolhaas as diverse social spaces (S,M,L,XL, 1995). Each block is equal in shape scale and proportion, creating a homogenous distribution of architectural authority throughout this proposed inhabitant of London city.

Authority :

To convey the intended experiential qualities of his proposal, Koolhaas and his collaborators use mixed media and montage to create vivid perspectives and scenes that reflect a life within these “visionary urban confines” (Rem Koolhaas | MoMA, 2007). Koolhaas articulates his intentions through actions and words. Each voluntary prisoner may enter on their own accord, but once within Exodus, their experience is predetermined and dictated. *Figure 32* represents the authored relationship between those who are established within the confines of Koolhaas’s proposal and those seeking its refuge. In *figure 33*, the newfound liberal existence each new ‘voluntary prisoner’ is party to upon settling is presented. Using provocative imagery, Koolhaas imparts his authority upon the experience of his design.

^ figure 33. *A Voluntary Experience*

Findings :

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The provocative nature used in each image to describe the proposed inhabitation of Exodus establishes a prescribed experience of the environment. In doing this, Koolhaas defines the scope against which his design can be critiqued. The authority of Koolhaas is therefore paradoxical, all defining and prescriptive whilst simultaneously subject to external influence. The form of representation used communicates Koolhaas's intention with strict command, but whether this suggested experience eventuates in the manner described is dependant upon the inhabitant of these speculations presented. This presents an example of the potential differentiation between architectural intent and its reality. The use of material boundaries versus threshold is again explored. The way Koolhaas composed the threshold within a large physical boundary highlights the significance of physical and visual permeability. The proportion of solid architectural elements to those that allow passage is an important consideration when contemplating the significance of a given architectural boundary as a divide. Thresholds here become the possibility of nothing, in that thresholds may be additive and subtractive. As Koolhaas writes in *Imagining Nothingness*, "where there is nothing, everything is possible. Where there is architecture, nothing (else) is possible" (S,M,L,XL, 1995, p. 199).

Appendix: A Fictional Conclusion

The Metropolis strives to reach a mythical point where the world is completely fabricated by man, so that it absolutely coincides with his desires.

The Metropolis is an addictive machine, from which there is no escape, unless it offers that, too. Through this pervasiveness, its existence has become like the Nature it has replaced: taken for granted, almost invisible, certainly indescribable.

This book was written to show that Manhattan had generated its own metropolitan Urbanism—a Culture of Congestion.

More obliquely, it contains a hidden second argument: that the Metropolis needs/deserves its own specialized architecture, one that can vindicate the original promise of the metropolitan condition and develop the fresh traditions of the Culture of Congestion further.

Manhattan's architects performed their miracles luxuriating in a self-imposed unconsciousness; it is the arduous task of the final part of this century to deal with the extravagant and megalomaniac claims, ambitions and possibilities of the Metropolis openly.

After the chronicle in POSTMORTEM of the shriveling of Manhattanism—as if it had been too suddenly exposed to daylight—the Appendix should be regarded as a *fictional conclusion*, an interpretation of the same material, not through words, but in a series of architectural projects.

These proposals are the provi-

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3.4 Scale C : Infrastructure

Description :

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The City of the Captive Globe was published as part of the 'fictional conclusion' in *Delirious New York*. It speculates upon an alternative world within the constraints of an existing city such as New York. This essay is proposed as "an incubator of the new world in timeless pregnancy implanted into the strictly identical sites of the Manhattan grid" (Bock, 2015, p. 27). Here Koolhaas approaches his theory of "Manhattanism" resulting from the "culture of congestion" (1994, p. 283). He proposes new buildings that disobey the homogenous architecture that exists as a result of the relentless rectilinear grid structure, accommodating heterogeneity over typical conformity (Rem Koolhaas | MoMA, 2007). Illustrated in *figure 34*, each building reads and responds to its boundaries in a manner that is totally unique to all neighbouring buildings. In this way, although faced with the same constraints, each component of this proposition explores a multitude of architectural boundaries whilst remaining observant of the initial constraint of the city block.

Shape, Threshold, and Montage :

On each block of the grid stands a plinth like base "to facilitate and provoke speculative activity," and in doing so "these bases – [as] ideological laboratories - are equipped to suspend unwelcome laws, undeniable truths, to create non-existent, physical conditions." (Koolhaas, 1994, p. 294). In the same manner that a threshold

^ figure 35. *Architectural Inhabitants in Manhattan*

demarcates the point of entry and exit in Exodus, each plinth indicates the threshold between the vertical tower and the ground plane accommodating the everyday existence of the city. This forms the material interface between inside and out, accommodating division and dictating the movement between one environment and another. As in his observations of the skyscraper established in the previous theory chapter, each proposal in the City of the Captive Globe does not indicate its internal on goings externally. Koolhaas states, “by separating exterior and interior architecture and developing the latter in small autonomous instalments – such structures can devote their exteriors only to formalism and their interiors only to functionalism.” (1994, p. 296). The shape of a building can therefore be independent to its internal program. The Montage of these speculations is defined by the constraints of the Manhattan Grid, but all are orientated around the Captive Globe, suspended in the middle of the city with its role of demonstrating that all ideologies contribute to the construction of the world, and nurture it (Lucarelli, 2014). The use of montage establishes a new city skyline made up of various architectural inhabitants. These architectural inhabitants have authority in defining an experience of a given environment similar to human inhabitation. Koolhaas presents his architecture as being both habitable and the inhabitant.

^ figure 36. *The Highline Inhabiting an Archipelago*

Authority :

Koolhaas and his fellow contributors again utilize a very particular form of communicating their design intentions, ensuring that – as in Exodus – the experience of inhabiting this speculative work is predetermined and dictatorial. Instead of the inhabitant being the voluntary prisoner, Koolhaas suggests that each component forming the City of the Captive Globe are themselves inhabitants. They enact their own authority through inhabiting the Manhattan skyline. Koolhaas suggests that each of these inhabitants are forever changeable, continually defining and then redefining this skyline, announcing that the “changes in this ideological skyline will be rapid and continuous: a rich spectacle of ethical joy, moral fever or intellectual masturbation” (1994, p. 294). In this particular precedent, Koolhaas uses his written articulation to suggest the provocative inhabitation of each architectural proposal without the prescriptive imagery. This empowers my own authority in defining and redefining the experience of each environment he describes.

Findings :

Each block in the City of the Captive Globe contains a ‘city-within-a-city’, described by Koolhaas in *Delirious New York* when contemplating the realities of the Manhattan grid (Parr, 2014). Koolhaas approaches the constraint of each block with differing intent to enable alternative responses that are unique in shape atop

^ figure 37. *Inhabiting the Highline and Manhattan*

a consistent initial constraint. As presented in *figure 35*, these bases are consistent in shape whilst each contains variable thresholds. This exemplifies the need to consider thresholds as more than simple openings in architectural boundaries, highlighting that thresholds are applicable to the vertical axis as well as the horizontal plane. Each plinth and threshold afford each proposal a certain autonomy, distinguishing each 'city-within-a-city' as segregated.

Conversely, the New York Highline connects multiple architectural archipelagos in Manhattan, establishing an inhabitable infrastructure to experience New York. The Highline, is a converted 1930's train line converted into a city park and pedestrian transport route. It stretches through the city from Gansevoort Street near the Whitney Museum of American Art, through Chelsea, to terminate at West 30th Street and 11th Avenue. As an elevated 24km linear park land, this intervention breaks down the existing boundaries of the Manhattan Grid – and the architecture that inhabits this – whilst setting up new experiential boundaries to enhance function and the user experience. Although lifted above the Manhattan grid, referential qualities can be seen, its scale and path are forced to adhere to surroundings, and adjustments are required to ensure it functions within its city context. As *figure 36 and 37* portray, this redefines the experience of the architecture that inhabits Manhattan and begins to liberate the division Koolhaas maintained between architecture and the street, and those that inhabit either environment. The Highline is an example of architecture that is infrastructure and not simply architecture at an infrastructure scale. The City of the Captive Globe exemplifies how this research can approach multiple interventions that are autonomous yet formed through consistent initial constraints.

^ figure 38. *The Realities of the Manhattan Grid*

3.5 Conclusion

Where Sandback's installation in the first design case study broke my preconceptions about tangible material boundaries and the potential for thresholds to demarcate and sustain division, Koolhaas's projects are at the other end of the spectrum. Having observed the Berlin Wall as architecture, he goes on to reinforce the segregating qualities of walls as architectural boundaries. In the City of the Captive Globe, as in Exodus, he confirms division through the design of clear boundaries. The base plinths, atop which each 'city within a city' is situated, are the architectural elements that define the point between the external street and the internal habitable environment of architecture. The two imposing linear walls of Exodus determine that - and those - which is inside and/or out. The shape and materiality of these three precedents is variable, yet each is consistent in dividing and emphasising the significance of thresholds as being of equal importance to a boundary's shape. *Figure 38* highlights the existing architecture of New York City. Heterogeneity implanted into the identically constrained sites of the Manhattan grid. Practice is not afforded the similar freedoms witnessed in the design of the City of the Captive Globe, but the applicability of each architectural intervention to inhabit - and therefore define - the city skyline highlights the importance of Montage. Moving the consideration of architecture beyond a single autonomous intervention, the New York Highline exemplified the capacity of architecture to accommodate the connection of the multiple archipelagos of Manhattan. The potential for each individual architectural intervention, confined to the boundaries of the city block it inhabits, to form an architectural

^ figure 39. *A Non-Fictional Skyline Defined*

infrastructure is observed. These connected interventions become habitable without having to be entered. They are defined, and redefined, through human inhabitation whilst simultaneously being inhabitants themselves.

These precedents, ranging from installation to infrastructure, inform an understanding of how architectural boundaries have been explored as enabling constraints by the discipline, and highlight the importance of communication when considering authority and architecture. The authority of the architect in the design and communication of architecture has been observed as being of equal importance to the shape of a given architectural boundary. Human inhabitation has been identified as a significant factor when considering the experience of an architectural boundary, defining the experience of a boundary wall with the same significance as a given walls thresholds. The design investigation that follows responds to the learning developed through these four design case studies.

Scale A : Installation

- 4.1 Introduction
- 4.2 Design Test 01 : Drawing Segregation
- 4.3 Design Test 02 : Modelling Division
- 4.4 Installing Boundaries
- 4.5 Design Discussion

^ figure 40. *The Existing Constraints That Enable Political Debate*

4.1 Introduction

After observing the Debating Chamber in Parliament House, the significance of an architectural element – the benches – in defining the experience of an existing architectural environment prompted my interest and the initial design investigation of this research.

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The benches, presented in *figure 40*, are considered architecture in that they are built and inhabitable. As the platform for debate within New Zealand's democratic political system, and within the defined boundaries of a given room, each bench is consistent in shape, proportion, and materiality. Despite such consistency, not all are equal. Benches to the right of the Speaker are inhabited by those who form the Government whilst those to the Speaker's left form the Opposition. With the Prime Minister and the Leader of the Opposition sitting opposite one another across the Table, these identical benches hold varied authority due to their orientation and programmatic prescription within the House (House Seating Plan, 2017). The inhabitant of a given bench imparts his or her authority along with their popularity, or their political clout, influencing the significance of their bench compared to another. The significance of a bench is completely redefined through a change in government, with the Prime Minister's bench becoming a platform for change and inspiration whilst the Opposition Leader's bench might become a symbol of defeat, or vice versa. Independent of one's political leaning is the fact that the architecture does not change yet change occurs. Given this realisation, the role of architecture in defining an experience in an existing environment is explored through design.

^ figure 41. *Three Forms of Inhabitational Authority*

Design tests one and two both utilise a consistent constraint to create divisive boundaries that segregate an existing environment. These boundaries are distributed to create multiple interfaces for inhabitation, testing the montage of individual boundaries within a systematic environment. The knowledge developed through each iteration informs the construction of a 1:1 installation. 'Installing Boundaries' is an initial exploration of the enabling capacity of architectural constraints.

^ figure 42. *Debating the Constraints of The 'Bench'*

4.2 Design Test 01 : Drawing Segregation

Test 01 is an exploration of shape. Through the manipulation of a consistent constraint, proportionately similar to the surface of the parliamentary benches (as in *figure 40*), variable outcomes are developed despite each boundary remains bound by the limitations of the initial constraint. With the intention of creating architectural boundaries that form an ordered intervention within a single room – like the benches within the Debating Chamber – this design iteration begins with drawing shape.

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This initial development of shape is presented in *figure 42*. The flat horizontal shape is a direct representation of my observations of the parliamentary benches. This shape functions as a point of departure for the design of an architectural boundary. Accordingly, this horizontal surface is rotated, erected, and folded a multitude of times until an alternative outcome is produced. As Fred Sandback did in his installation, this iteration defines shape by clearly demarcating the margins of a given boundary. By experimenting with the proportionate constraints of a surface, an architectural boundary is developed. This individual boundary is both physically and visually permeable, yet the observable thresholds that demarcate the transition point from one side to another are clear at the margins of this surface and not simply through the penetrable centre.

#1

Individual
Boundary

#2

Sparse
Distribution

#3

Immediately
Distributed

^ figure 43. *Distributing the Boundary*

From this initial drawing of shape came the individual boundary, developed through the design iteration portrayed in *figure 42*. Montage was then tested. Prompted by Koolhaas, the consideration of the compositional whole as formed by the distribution of many individual boundaries was explored (S,M,L,XL, 1995). Presented in *figure 43*, this iteration tested the proximity between individual elements and the influence of an ordering device, such as the gridded paper, this prompted understanding of how individual parts inform the composed whole - and visa verse - to be developed.

The *Individual Boundary* is a homogenous element, distributed throughout the ordering device of the axonometric grid. Although the tangible difference between the exemplary Manhattan Grid and this A4 paper is substantial, each one functions as an enabling constraint in the design of boundary walls. Observed in *figure 43*, each homogenous boundary stands alone, resolute in its own individualism, whilst also redefining the existing environment of the gridded page. Where each boundary has been subject to *Sparse Distribution*, the individualism of each boundary endures and exhibits greater authority in the division of the environment. Where the proximity of the distributed boundaries is near,, the thresholds between are intimate and the individual boundary is less defined as an autonomous element. These *Immediately Distributed* boundaries redefine an experience of this existing environment completely and appear to be more permanent inhabitants after installation.

^ figure 44. *A Final Installation of Drawn Boundaries*

Presented in *figure 44* is the final drawing in this initial iterative series. It is a conclusive representation of my thought process at the outset of Design Test 01 and the knowledge developed by undertaking this drawn experimentation. The final drawing is considered an installation in that it is habitable. As observed in *figure 44*, the distribution of architectural boundaries redefines an existing environment whilst the original constraint of the grid remains definitive. As in the second iteration of Drawing Segregation, this final installation took an established shape and distributed multiple homogenous boundaries within an existing ordering system. Here, each boundary is identifiable as both an individual element and a significant influence that defines an experience of the environment.

Given the infinite nature of these iterations the continued rotating, erecting, and folding of an initial constraint could lead to alternative architectural boundaries that differ in shape to the design outcome presented. These alternate outcomes could also be distributed with varying proximity to that which was undertaken in Design Test 01, and the alternative outcome would become indistinguishable to those presented and experienced here.

^ figure 45. *Distributing Modelled Boundaries Intermittently*

4.3 Design Test 02 : Modelling Division

In response to Drawing Segregation, Modelling Division investigates the same design principles through three-dimensional modelling. Modelling is conducted using thin folded card, creating an architectural boundary that establishes a surface condition for the shape of the drawn boundaries established in Design Test 01. Multiple modelled boundaries were made and then distributed, again with strict adherence to the existing ordering device.

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As in *figures 45-52*, three-dimensional modelling adds a layer of depth, materiality, and scale to the boundaries that are installed into an existing environment. Although Modelling Division portrays architectural boundaries that have surface and materiality, this is not an investigation of surface treatment or architectural materiality.

Interestingly, what began as a simple exercise of modelling my interpretation of the drawn iterations, developed into an iteration that manifest a new understanding of Shape and Threshold. For example, where the proximity between one architectural boundary and another established intimate Threshold in the drawn iteration, the opposite is observed when the same architectural boundaries are modelled (see *figure 45*).

^ figure 46. *Testing Proximity*

Where *figure 45* displayed the Montage of the individual boundaries with a condensed proximity to one another, these same homogenous boundaries were distributed with a greater distance between. The orientation of each boundary has been rotated by 90 degrees, and these have been distributed at variable distances along each horizontal axis. This was conducted in an orderly manner, aligning with what was observed in the debating chamber of parliament house and the adherence to the constraints of the ordering device as in the previous iterations.

Like the outcome of the sparsely distributed boundaries in the drawn iterations, each folded card model retains its individual identity whilst simultaneously defining an experience of the composed whole. This iteration is interpreted as being less ordered compared to previous modelled experiment but retains reference to the original ordering system of the grid. The grid, as the background reference to which all distribution adheres, appears more authoritative in this iteration compared to the last. Where the design outcome portrayed in *figure 45* inhabits the gridded paper as a condensed composition, each boundary presented in *figure 46* inhabits the existing environment individually.

^ figure 47. *An Unordered Montage*

This final iteration tests the significance of Montage but reconsiders the ordered manner of distributing each homogenous boundary with regular proximity and orientation. The ordering device of the grid is maintained but adherence to its systematic ordering is less obvious. Moving away from the uniform layout as in previous iterations to a more experimental composition developed an understanding of Montage further. Here, the existing environment of the gridded base is redefined considerably compared to the previous iterations. Subsequently, each homogenous boundary develops its own individuality, due to its unique orientation and proximity to other architectural boundaries within the compositional whole. These boundaries are of identical construction, yet a certain variability is apparent. The proximity between one architectural boundary and another introduces the principle of Threshold, especially where the space between two individual boundaries is no longer uniform. The immediate or sparse nature of this proximity defines this Threshold.

As observed in *figure 47*, the Threshold between any two given boundaries and the significance of this variability to the experience of the existing environment is defined by what vantage point each boundary is experienced from. The significance of this variability in the montage of the homogenous boundary prompts the question, what if the shape of the architectural boundary was also itself variable?

^ figure 48. *A Taxonomy of Material Boundaries*

An exploration of shape was again undertaken, but tested the folding, erection, and rotation of a surface through modelling instead of drawing. This iterative process tested the limitations of the same initial constraint used to create the homogenous architectural boundaries distributed in the previous three iterations. Again, the single plane - proportionately 2:1 - that was derived from my observations of the parliamentary bench is the fundamental limitation. Presented in *figure 48*, these alternative boundaries do not clearly reference the original constraint, yet a sense of consistency is maintained with each boundary developed.

Intent on avoiding the homogenous boundary as distributed in previous iterations, the use of varying materiality was also introduced. Again, this does not consider architectural materiality, but tests the visual threshold of architectural boundaries. Variable opacity tests whether the demarcation of division is influenced by a given boundary being either solid or opaque, bringing back the consideration of visual permeability as in the drawn iterations. By introducing the mounting pole, the orientation and proximity of the distributed boundaries is also tested on the vertical axis as well as the horizontal distribution undertaken previously.

^ figure 49. *Variable Distribution of Variable Boundaries*

Having experimented with the Shape of each modelled boundary, the Montage of individual boundaries into a compositional whole is again tested. These tests look at how the proximity and orientation of each boundary might differ, whilst adhering to the ordering device of the grid.

To critique this iteration, the design outcome evident in *figure 49* must be considered against the previous outcome, as presented in *figure 47*. What varies is the Shape and material surface of the boundary, and the introduction of the mounting pole which allows for the distribution of boundaries throughout the vertical axis instead of simply the horizontal axis. The visual Threshold between one side of a boundary and another, created by the variation in surface opacity, challenges the need for clear division as created by the solid surface of the folded card. The variance in shape creates a greater recognition of the individuality of each boundary, even though the initial constraints of each boundary remains the same. The distribution through the vertical axis increases the number of Thresholds between a given boundary and another, furthering an understanding of the significance of Shape, Threshold, and Montage as architectural design principles.

^ figure 50. *An Experience of the Installed Boundaries*

The significance of a given Shape compared to another was difficult to determine through plan view only. Accordingly, as Sandback did in his installations, each boundary has been installed within an existing environment without an authored inhabitation. *Figure 50* presents an experience of the installed boundaries, affording the inhabitant of this installation the opportunity to interpret the design outcomes from their own unique vantage point as the reader of this thesis, at the point in time that this thesis is read.

In this installation, the Shape of each boundary demarcates the divide between on one side of a boundary and the other. The visual Threshold, established using a transparent surface, renegotiates the boundary as a clear delineation of segregation to a more ambiguous divide that remains visually permeable. The Threshold between one boundary and another establishes a liminal zone between. Where the presentation of each design outcome in plan view promoted the compositional whole, this perspective explores the experience of the relationship between one boundary and another. This significance of this relationship remains important, even with a reduction to the number of boundaries distributed compared to previous iteration.

^ figure 51. *Installing Boundaries Inhabiting Wellington City*

4.4 Installed Boundaries

Reverting to plan view, *figure 51* presents a single architectural boundary installed within Wellington City. The reduction in the number of boundaries responds to the prolonged focus on the distribution of architectural boundaries throughout this iterative process, without a critical discussion regarding the tangible boundary itself. The understanding of proximity and orientation developed previously is applied now to the montage of multiple surface planes, informing the Shape of this individual boundary.

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This Shape delineates the division between one side and another, yet an experience of this segregation is difficult to determine in plan view. Accordingly, the introduction of inhabitation allows the significance of this boundary wall as the interface between segregated parties to be experienced. This architectural boundary is a definitive inhabitant of the existing environment, defining its experience through the habitation authority of the installation itself.

^ figure 52. *An Experience of Installed Boundaries*

4.4 Installed Boundaries

The use of solid surfaces re-established the key findings from the initial drawn iterations. Here, the margins establish the Threshold between one side and another. These Thresholds are carefully considered aspects in the design, and therefore experience, of the boundary itself. The Shape of this boundary, which is folded and rotated to form a concave interface, is bound by the same initial design constraint as each iteration in Scale A.

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Like Sandback's installation, *Installed Boundaries* portrays the individual boundary as the inhabitant of "pedestrian space", with the potential to continuously "...reveal itself over time from different vantages, and according to different perspectives" (1986, p. 14). The final installation is presented in first person perspective, but the intended inhabitation of the installed boundary is authored.

^ figure 53. *The Constraints of Design*

4.5 Design Discussion

The development of this installation functioned as a vehicle to test my initial presumptions for how architectural boundaries can be explored as enabling constraints. An understanding of Shape was developed through the design of each individual boundary throughout Scale A. With a proportionate surface area of 2:1, the parliamentary bench – as the platform for political debate – seemed an appropriate constraint to initiate the iterative design process. Each modelled iteration furthered an understanding of the principles of shape, threshold, and montage from the knowledge developed in the drawn iterations.

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Considering Montage, the importance of both proximity and orientation when installing boundaries into an existing environment was tested. The Shape of a boundary has been explored through vast experimentation and manipulation of a consistent constraint, but the significance of these Shapes is difficult to determine. Thresholds have been considered as both visually and physically permeable architectural elements, with the space between distributed boundaries also being explored. In the debating chamber, the significance of a given bench is defined by the inhabitant's identity as much as the architectural intervention. The role of architecture in defining an experience of an existing environment has been explored, with the significance of these outcomes to be defined by the inhabitant of each image presented.

Scale B : Domestic

- 5.1 Introduction
- 5.2 Design Test 01 : Making Architecture
- 5.3 Design Test 02 : Elevating Drawing
- 5.4 Design Test 03 : Model Offices
- 5.5 Site Finding
- 5.6 Domestic Politics
 - : *Te Kuiti*
 - : *Timaru*
 - : *Auckland*
- 5.7 Design Discussion

^ figure 54. *An Attempt at Making Architecture*

5.1 Introduction

At the domestic scale, the constraints of a single room are expanded to the boundaries of an individual lot. The design of individual architectural boundaries broadens to experiment with the boundary wall of an individual building. Where the investigation in Scale A was initiated by my observations of the debating benches in Parliament House, the investigations in Scale B respond to the knowledge developed through the critique of each iteration and outcome in Scale A. 'Domestic Politics' proposes a parliamentary office to house each elected member of Parliament, distributed throughout the 71 electorates around New Zealand (Members of Parliament, 2017). The boundary wall as the interface between those who govern and those governed is tested. These proposed offices then inhabit diverse contexts throughout New Zealand, ranging from rural Te Kuiti to metropolitan Ponsonby in Auckland City.

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Figure 54 presents the first test. An assortment of potential offices generated through the composition of architectural boundaries into a habitable architecture at the scale of a house, inspired by the installed boundaries developed in Scale A. Although habitable, these design outcomes are somewhat arbitrary, and the authority of an individual boundary in the definition of the compositional whole is again the primary design principle considered. Without developing a critical understanding of the individual boundary itself, this test simply appropriates the Shape developed in Scale A instead of furthering the design knowledge established.

Instead of appropriating the shape of each design outcome from Scale A (see *figure 54*), the iterative design investigation in Scale B focuses on the Shape and Thresholds of a given boundary wall itself. Where Thresholds were considered the space between two architectural boundaries in Scale A, their significance in demarcating the liminal zone between environments on one side of a boundary wall and another is now examined. Shape is explored through experiments with scale, proportionality, and materiality (in terms of transparency and opacity).

Presented in *figure 55*, testing of these two design principles is again derived from a consistent original constraint. The parliamentary offices are variable, yet coherent, with the primary differentiation being the Shape of each boundary wall. This initial thinking prompts the making of boundary walls that follows.

^ figure 56. Making Parliamentary Offices Through Elevation

5.2 Design Test 01 : Making Architecture

Taking the concept drawings for the parliamentary offices observed in *figure 55* as a point of departure, I began modelling boundary walls. Each iteration presented in *figure 56* is developed from the proportions of these preliminary drawings, where the solid black materiality and the angled margins of each wall are informed by the conceptual exploration.

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Avoiding the internal function of these proposed offices through programmatic planning is intentional and allows focus to be placed on designing the vertical interface between the segregated parties. Each iteration is photographed from all four elevations, portraying the variable experiences of a single boundary wall from the vantage point and perspective of the street. Here, each row of elevations portrays how the proposed politician's office will inhabit an existing street scape, progressing an understanding of architectural boundaries and boundary walls as being both habitable and the inhabiting architecture.

Experimentation is undertaken by pushing and pulling elements forward and back, organizing elements with variable proximity, and elevating the boundary from the ground plane. Each design outcome confronts the inhabitant varying authority. Each boundary wall dictates the approachability of a given parliamentary office to a differing degree. Of interest is the implications of elevating the solidity of a boundary wall, which implies a Threshold on the ground level that promotes a certain permeability between the street and the office.

^ figure 57. Experiencing Proposed Offices Beyond Elevation

Having isolated the experience of each design outcome to review and critique from elevation view only (*see figure 56*), these same design outcomes are presented in elevated perspective. From this literal change, came a figurative change in perspective too; where it became apparent that my authority in presenting the design outcomes is more significant than originally assumed. The implications of this authority are clear when an experience of each design outcome presented in *figure 56*, is altered considerably compared to those presented in *figure 57*.

The gridded addition to the bottom four design iterations introduces a broader intervention – to later be designed as political infrastructure – of which each parliamentary office will be a formative part. At this point of the research, this simply removed focus from the consideration of Shape, Threshold, and Montage. The autonomous design outcomes in iterations 1-3 portray the significance of these three design principles, where the knowledge each outcome presents is akin to that discussed in the previous iteration.

^ figure 58. *Inhabiting Iteration 3*

Figure 58 presents an experience of the distributed boundary walls from the perspective of those that inhabit the external environment of the parliamentary offices.

As Koolhaas achieved in *Exodus*, the use of scale, materiality, and proportion determine the limitations and opportunities of an experience as facilitated by architecture. The presented experience of iteration 3 can be defined and redefined by those that read this thesis, but the vantage point of their experience is governed by my authority, the way I present it. In *Exodus*, Koolhaas designed a single intervention with two dominate boundary walls that are paused by nothing when installed into the urban fabric of London. Due to the wide array of contexts that each parliamentary office is to be distributed within, this design iteration shifts the exploration of boundary walls from a single element, to multiple boundary walls that are derived from the same initial constraint. Variability in Shape results. Where the single rectangular opening in *Exodus* denotes the transitional zone between in and out; new and old; privilege and poverty, the offices in *Delirious New Zealand* utilise a wide variety of Thresholds to negotiate the relationship between one side and another.

^ figure 59. Elevational Thinking for Domestic Politics

5.3 Design Test 02 : Elevating Drawing

With a focus on developing a greater understanding of boundaries and their authority as inhabitants in an existing environment, two-dimensional drawing was again employed to extend my thinking. The outcome is presented in *figure 56*. Here, the variability between each proposed parliamentary office is seen as being clearly defined. Each office maintains its individuality and simultaneously defines the compositional whole.

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Taking the design knowledge developed through each modelled iteration in Scale B, boundary walls are next explored as individual autonomous inhabitants of a broader intervention, distributed throughout the electorates of New Zealand. The two-dimensional drawings presented in *figure 59* display a Montage of parliamentary offices that vary vastly in Shape, utilise a multitude of Thresholds, all whilst maintaining a consistent appearance like the design outcomes observed in *figures 56-58*. This consistency resembles the continuous boundary condition Koolhaas created in Exodus. Here, consistency begins to develop a regular condition when the boundary wall acts as the interface between those who govern and those governed throughout New Zealand.

Drawing boundary walls without an established surface condition or materiality affords the design of the parliamentary office the opportunity to be explored in a wide array, free from being a black box atop a structural platform as in the previously drawn and modelled iterations.

As Fred Sandback did in his installation, the Shape of the boundary walls presented in *figure 60* is formed by clearly defining the margins of a boundary, not through specifying the tactile condition of its surface. As in Scale A, this drawn iteration focuses on the periphery by testing the proportionality and scale of a given boundary walls Shape.

The offices developed in this drawing are the catalyst for the Model Offices in the following design test, where the intent, and potential, of each design outcome in this two-dimensional investigation is tested further through engaging the reality of a three-dimensional model.

^ figure 61. Elevating an Experience of Potential Parliamentary Offices

5.4 Design Test 03 : Model Offices

The drawn investigation developed the potential Shape for the boundary walls of each parliamentary office, but the need for three-dimensional modelling became apparent. Whilst each drawing was axonometric and represented a three-dimensional quality, the two-dimensional reality of the previous iteration presented in *figure 60* made it difficult to critique each office as an inhabitant of an existing environment.

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This modelling process developed individual buildings that are elevated, variable in Shape, and with clearly demarcated Thresholds. There is again consistency between each parliamentary office, but the experience of these differ considerably as vantage point of each design outcome is continuously reoriented through rotation. Each boundary wall is rectilinear in shape and the variation between one iteration and another is defined by the size, Shape, and orientation of the solid surfaces, and the Thresholds that exist in contrast to these.

The parliamentary offices presented in *figure 61* have been designed to a detailed level not previously achieved. Each appears habitable, raising the question of how each parliamentary office may be inhabited by an electoral member. Although the function of governance is beyond the scope of research, the parliamentary programme does subject each boundary wall to be considered a division between those who govern and those govern. At this stage of the research investigation, expanding the scope to consider the function of each office and its ability to accommodate a parliamentary programme as considered detrimental to the exploration of architectural boundaries as enabling constraints.

^ figure 62. An Array of Offices For New Zealand Politicians

Each iteration in Scale B has, to this point of the research, attempted to explore the authority of a boundary wall as an inhabitant of an existing street scape. The boundary wall has been explored as the interface between those who govern and those governed, yet, the focus of architecture as the inhabitant has privileged the external experience over that of an offices interior. As Koolhaas observed in *Delirious New York* “by separating exterior and interior architecture and developing the latter in small autonomous instalments – such structures can devote their exteriors only to formalism and their interiors only to functionalism.” (1994, p. 296). The parliamentary offices presented in *figure 62* approach boundary walls as Koolhaas might. The City of the Captive Globe puts forward autonomous architectural inhabitants that are derived from the consistent restraint of the Manhattan Grid, without considering the internal function of each intervention he proposed. Each office presented in *figures 61 and 62* can be compared to the design outcomes in *The City of the Captive Globe* in that they are individual autonomous inhabitants derived from a consistent initial constraint.

This raised the question, does the specificity of a given site’s constraints have authority in the design of architecture that then inhabits its archipelago like the Utopian Fragments in Manhattan?

figure 63. *Distributing Parliamentary Offices throughout New Zealand*

5.5 Site Finding

The distribution of parliamentary offices throughout New Zealand was prefaced by a brief experiment that tested the redesign of electorate boundaries to be consistent in size and shape instead of being based on population. This experiment, presented in *figure 63*, was interesting to contemplate but quickly developed into a political conversation that I realised architecture was only able to entertain in a shallow capacity. Upon reflection, suggesting that the introduction of an architectural element into an existing environment – with a political program – would establish a consistent interface between those who govern and those governed was a naïve design move. Reducing the proximity between the population of an electorate and their elected representation promotes a political discussion more than the exploration of architectural boundaries as enabling constraints.

#1

Te Kuiti .

#2

Mount Maunganui .

#3

Ponsonby .

^ figure 64. Situating Domestic Politics

Reconsidering the boundaries of the 71 electorates was beyond the scope of this research. Accordingly, each electorate boundary remains. I relied partly on my own experience to select sites I was familiar with, and partly what I identified as offering diverse contexts for consideration. Site selections were otherwise arbitrary with no political motivations influencing the final three choices.

The three selected sites are :

- #1 Rural Te Kuiti
General Electorate: Taranaki-King Country
Māori Electorate: Te Tai Hauāuru
- # 2 Suburban Mount Maunganui
General Electorate: Tauranga
Māori Electorate: Waiariki
- # 3 Metropolitan Ponsonby
General Electorate: Auckland Central
Māori Electorate: Tāmaki Makaurau

^ figure 65. *An Architectural Intervention in Te Kuiti*

5.6 Domestic Politics : *Te Kuiti*

The small rural town of Te Kuiti in the Taranaki-King Country and Te Tai Hauāuru electorates was the first site selected for a proposed parliamentary office.

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The drawn proposal observed in *figures 65* presents an articulation of the learning developed throughout the iterative process to date. The primary boundary wall is elevated, maintaining the permeability at ground level as in the model offices. Multiple Thresholds are introduced. These are within the rectilinear Shape of the boundary wall and exist on their own. The framing of potential Thresholds develops a sense of another environment beyond, but this remains suggestive. Stairs invite elevated inhabitation for the street dweller. Variable architectural elements are subject to Montage, establishing an intervention that defines an experience of the street.

^ figure 66. An elevation of an Office in Mount Maunganui

5.8 Domestic Politics : *Mount Maunganui*

The second site selected is located on Maunganui Road, Mount Maunganui in the Bay of Plenty and Waiariki electorate.

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Designed to inhabit the main street of this beachside settlement, fewer boundary walls and thresholds confront the local voter. The street level is permeable, offers glimpses of inhabitation and movement, and is sympathetic to the scale of neighbours. Unlike the staircase entrance designed for the Te Kuiti office, the Mount Maunganui office is accessed via a veiled stairwell that is not obvious at first. The proposed building touches the ground lightly, speaking to the transient nature of the seasonal township.

^ figure 67. *An Alternative Experience of Ponsonby Road, Auckland*

5.8 Domestic Politics : *Auckland*

The third site selected and most metropolitan is located in Ponsonby, in the Auckland central and Tāmaki Makaurau electorate.

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Designed to make more of a statement and provoke opinions, this design is more playful to suit this dynamic neighbourhood. The Ponsonby office, proposes materials that filter the visual permeability, allowing locals to see through the building skin to the habitable geometric structural design, and the layers of tangible boundaries and thresholds, beyond. Like Exodus, one transition point allows entry at street level, and from this threshold the experience for the inhabitant is one of exploration.

^ figure 68. Anecdotal Evidence of an Academic Reviewer's Experience

architecture project...

investigation...

“I’m bored”

^ figure 69. *An Experience of Delirious New Zealand in August 2017*

5.5 Critical Discussion

The iterative process and design outcomes of this research investigation into how architectural boundaries can be explored as enabling constraints were presented for review on August 2017. *Figures 68 and 69* exhibit the culmination of my thinking, drawing, and modelling up to this point of the design-led research. The critique and debate enjoyed throughout this presentation was a critical point. Feedback and discussion at this design review, along with my own reflection and contemplation following, helped shape and redirect Delirious New Zealand.

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The key considerations regarding the research objectives set forth in Delirious New Zealand where highlighted as follows. My authority in the production and presentation of architecture has been considered a good deal to date. The deliberate and variable presentation tools and formats used for exploring design iterations and outcomes dictate the experience of those who inhabit Delirious New Zealand, yet this only critically engages with my design intention, and not the reality of architecture. The authority of a human inhabitant, referred to as the illegal architect by Jonathan Hill can – and will – define their experience independent of my suggestion (1998). Established throughout the proceeding iterative process is an understanding of architecture as being both habitable and itself being an inhabitant. Shifting the consideration of habitational authority away from human occupancy sharpens the scope and approach to authority and architecture. Architectural inhabitants can be tested and presented, and the significance of their habitational authority can be observed and not simply presumed.

^ figure 70. *Elevation Studies of an Office in the Main Street*

5.9 Shape Thresholds Montage

Up to this point of this thesis, I have not approached the research question with enough critical engagement. Each iteration tests Shape, Threshold, and Montage but the significance of these architectural design principles in the exploration of architectural boundaries as enabling constraints is reserved. Each iteration tentatively proposes design outcomes that do not commit to resolving the intentions established as the outset of each scale. A 1:1 installation has not been installed into an existing environment. The boundary wall of a parliamentary office has not been interrogated as the interface between those who govern and those governed.

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Shape, Threshold, and Montage are used as a framework for critique and discussion. Derived from research into Rem Koolhaas' theory and practice, these three principles add a layer of rigour in the research moving forward. By returning to disciplinary discourse concerning authority and architecture, and architectural boundaries as enabling constraints, another layer of knowledge and insight is introduced into Delirious New Zealand. The most appropriate conclusion to draw at this point in the research investigation is that, despite the methodical process in the early stages and my commitment to follow the design path, my work was described by a reviewer as boring. As a research project it lacked intrigue and excitement – and I agree.

^ figure 71. *Drawing an Inhabitant Architecture*

Design allows freedom to speculate about alternative experiences of, approaches to, and solutions for a given scenario of problem. Peter Downton states, “design is a way of inquiring, a way of producing knowing and knowledge; this means it is a way of researching” (2003, p. 2). As a tool for provocation, design advocates production, which can in turn be critiqued and developed further, design outcomes can be discussed and measured. As a research methodology – as in *Delirious New Zealand* – design is important because it allows a certain freedom for the exploration of architectural boundaries and the consideration of their potential as enabling constraints within a refined scope. This freedom has, to this point, developed an understanding of the enabling capacity of constraints and my authority in the production and presentation of architecture. Following this presentation review, a step sideways repositions the direction of this thesis. As a fresh starting point, the research question and objectives are re-approached by firstly asking, what would Rem do?

Scale C : Infrastructure

- 6.1 Introduction
- 6.2 Tauranga City
- 6.3 Design Test 01 : Planning Tauranga
- 6.4 Design Test 02 : Drawing Infrastructure
- 6.5 Linking Political Infrastructure
- 6.6 Political Infrastructure : An Experience
- 6.7 Political Infrastructure : In Conclusion

^ figure 72. The Taxonomy of Boundary Walls

6.1 Introduction

The new direction developed following the August review, and the critical discussions had, prompted the research question to be approached from a Koolhaasian perspective.

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Step one was to undertake a rigorous drawing series stemming from the most basic understanding and perception of what a boundary wall is or could be as understood as. This process functioned as a formative exercise grounding the research investigation moving forward. Having undertaken a drawing experiment that developed a taxonomy of boundary walls, three key factors became apparent.

1. There is an inevitable difference between a line drawn on a page and the reality of this line manifest as an architectural boundary. The difference between what is drawn, and that same design intent modelled (or experienced three dimensionally as in *figure 72*), is of primary interest when considering authority and architecture.
2. To date the utilisation of two-dimensional modelling materials assembled to create three-dimensional models has constrained the production of design outcomes. This constraint enabled a controlled and objective approach to Montage. Components making up an architectural boundary are as important as this boundary within a larger compositional whole. This further contributes to the understanding of my authority in suggesting the intention of a design that is then continually defined and redefined when habitation occurs.

^ figure 73. *A Taxonomy of Modelled Thresholds*

3. The ambiguity of design outcomes presented as architecture was a point of discussion that led to an extended period of contemplation after the August review. Each drawing and model had been presented in a deliberate manner throughout. For example, predominantly designing in plan or elevation view only was constraining the investigations too far. Upon further engagement with Koolhaas's theoretical and speculative works, a decision to maintain an ambiguous approach to the research question through design was decided upon.

Each design iteration and outcome that follows is undertaken with adherence to a newly refined and narrowed design direction, focussing on approaching architectural boundaries as enabling constraints in a manner influenced by what I believe Rem would do.

^ figure 74. Site at a City Scale

6.2 Tauranga City

The constraints of site had been neglected until this point, Tauranga City was then selected as the location for a 'Political Infrastructure'. The considerations informing site selection are not driven by social, economic, political influences. Site selection was made based on my familiarity and access to an appropriate city fabric. The existing boundary conditions present in downtown Tauranga, both naturally occurring, and man made, are seen as appropriate for the testing of boundary walls on a given site. These include but are not limited to:

1. The Harbour edge
2. Roading infrastructure
3. Existing building footprints
4. Site boundary lines.

Located in the centre of the city grid, Political Infrastructure is designed to enable a continuous connection between the harbours edge on either side of the peninsula. Despite differing from the Manhattan city grid in size, shape, and populace, the Tauranga City grid still allows for the creation of individual autonomous archipelagos upon which architecture can inhabit.

^ figure 75. *Identified Enabling Constraints of Site*

The existing constraints of the Tauranga City site were modelled with a multitude of boundary layers identified. The four that inform the design response in Delirious New Zealand are:

- The contoured landscape atop which the city resides.
- The existing building footprints.
- The vehicular thoroughfares that take priority as the primary means of transport in the city.
- The two coastal edges to the east and west of the selected site.

These existing constraints are extracted, layered and explored in the following design test where they are adopted or abandoned throughout.

^ figure 76. Identifying Existing Archipelagos

6.3 Design Test 01 : Planning Tauranga

Following the exercise of identifying and engaging with the existing site constraints, the next step was to identify the existing archipelagos upon which the Architectural Infrastructure dwell.

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Pockets of vacant land existing on each city block were physically modelled as a platform and interpreted as an archipelago. Each archipelago is variable in shape, size and orientation. Unlike the design iteration and outcomes developed in Scales A and B, Political infrastructure is developed from conceptual constraints that are variable, not identical. The existing environment is also abstracted from a real location and not an ambiguous interpretation of gridded paper as done previously.

As an initial design test, presented in *figure 76*, a connection was created between the variable archipelagos. I recognized that the joining together of these physical platforms into a linear strip would be similar to the stitching together of Manhattan as achieved by the New York Highline. Precedent research and further testing through three-dimensional model making, suggested a continuity between the overall experience of the city and the journey between platforms or nodes offered new design opportunities in Scale C.

#1

#2

#3

^ figure 77. An Iterative Planning Process

With an aim of developing a connected infrastructure that allows for continuous habitation, planning was tested from a macro scale perspective at the outset of Scale C. This initial testing is presented in *figure 77*.

Iteration one explores each form of architectural inhabitation as a restrained intervention, set within the limitations of the vacant land. Complete site coverage generates imposing series of boundaries throughout the city centre of Tauranga.

Iteration two neglects the site constraints and instead experiments with a more Koolhaasian approach. A linear intervention with clearly defined internal compartments is developed. The resemblance to Exodus is similar, however this experiment developed learning on how to execute and install a habitable boundary wall as Koolhaas might. The likeness to Exodus was hard to then move away from and therefore limited the venturing down this replica line to this single iteration.

Iteration three tests the authority of the drawn line in plan view. This figurative slice through the existing fabric allows a freedom from conformity to the existing constraints. This experiment developed an understanding of how to plan an architectural intervention on a macro scale and achieve a compositional whole across a large expanse using many individual parts.

^ figure 78. Existing Knowledge Inhabiting Site

^ figure 79. *Designing Infrastructure – an Early Concept*

6.4 Design Test 02 : Drawing Infrastructure

Presented in *figure 78* is a composition of the design knowledge gained in the drawn experiment for planning Tauranga. Here respect to the existing site boundaries can be observed whilst simultaneously exploring continuity, permeability, compartmentalisation and individually.

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Design Test 02: Drawing Infrastructure moves from the macro scale at site/city planning level, and experiments with the Shape, Threshold, and Montage. *Figure 79* presents an initial sketch. This drawing helped extend the design development throughout Scale A and B experimentation whilst enabling the intuitive development from plan to elevational drawing to be expressed.

Designing infrastructure is achieved through three specific explorations. One, elevational thinking shifts back to the perspective of the existing street scape. Linking political infrastructure experiments with the architectural connections that coexist alongside the autonomous boundary wall. This helps negotiate the relationship between one side of a given boundary and another by testing the intention of the walls drawn in plan view, from an experiential perspective in elevation.

^ figure 80. *Elevational Experimentation of Infrastructure*

Figure 80 present multiple iterative experiments of similar shaped architectural boundaries distributed throughout the horizontal elevation of the selected site in central Tauranga City. This test was undertaken using line drawings in pen and pencil, then layered on semi-transparent paper to build up to concept design level. The decision making and thought process throughout this iteration was free from intentionally addressing the research question or objective. Influencing factors throughout was the aim of these boundary walls to engage with the ground plane lightly whilst attempting to respect the scale and context of the sites urban surroundings.

Presented on the following page is the culmination of this elevational exploration. *Figure 81* is the Montage of all design knowledge developed throughout Delirious New Zealand to date. In this drawing, line work, repetition, shadow and light can be seen combined with solid and/or permeable elements. Together these components convey a habitable environment aligned with Koolhaas's revelations regarding 'Bigness'. As he notes of buildings beyond a critical mass, "the autonomy of its parts" are triggered as the building can no longer be controlled by a single architectural gesture (1995, p. 496). He continues, this autonomy of parts is "not the same as fragmentation: the parts remain committed to the whole" (1995, p. 496). As a compositional whole, the infrastructure proposed is seen as a Montage of architectural inhabitants that define the experience of human occupancy throughout Tauranga.

^ figure 81. *Architectural Inhabitants of the Elevation*

^ figure 82. *Political Paths*

6.5 Linking Political Infrastructure

Linking 'Political Infrastructure' with movement paths refines the design considerations to the connections between architectural boundaries. As *figure 82* illustrates, boundaries have been removed to enable a clear path of access through the site. A move away from drawing to physical modelling allows for two considerations to be undertaken simultaneously. The connections observed in the drawn iterations can now be experienced from a habitation perspective and the constraints of these connections can also be understood as they will be experienced. The paths not only have to navigate the constraints along the horizontal axis, but the sloping ground contours of the land also introduce the need to negotiate the vertical constraints that confront this project. Unlike in Exodus, Delirious New Zealand looks to establish an architectural interface between those who govern and those governed instead of imposing one's own design will upon an existing environment through architectural boundary that shall be halt by nothing (Bock, 2015). In doing so, these political paths govern one's movement through the boundaries that exist between the habitable archipelagos identified in Design Test 01: Planning Taurange. Each path be seen to break through an existing boundary, but at the same time introduces its own boundaries, and its own set of constraints. They are both enabling and restrictive architectural elements.

^ figure 83. A Planned Experience

The design of political paths has led to a reconsideration of the need to plan for movement through, and within, 'Political Infrastructure'. Sections of paths, presented in *figure 83*, become nodes for activities. Where one path's boundaries collide, merge or marry into another, a point of interest results. To this point, the design of 'Political Infrastructure' looked at the constraints of the site as an enabling mechanism, yet through the undertaking of this path design process, the opportunity for architecture to be derived from the within its own iterations presented itself. This is not dissimilar to the initial intention of utilising site constraints, nor is it dissimilar to the opportunities harnessed by the New York Highline, in that an existing infrastructure governs the architectural response, and in turn has created potential design opportunities of interest. The difference perhaps is that the political paths are derived from the design process and are not existing conditions in this case. This presented the potential for constraints that enable the design of architectural boundaries to be considered as being both situational and manufactured.

#1

A Hive for Activity

#2

A Chamber for Debate

#3

A Political Departure and
Arrival Point

^ figure 84. A Plan For Parliament

The design for this parliamentary infrastructure has been established by two sets of constraints. Firstly, the existing site conditions of the central Tauranga City location, and second, the political paths derived through the iterative testing undertaken in Scale C (see *figures 82 & 83*). The nodes identified in the previous iterations have then been tested through two-dimensional plan drawing. Focused on developing three specific architectural mechanisms to accommodate an alternative parliament for New Zealand, this drawing test established the following parliamentary programmes.

1. A *Hive for Activity* is an environment that supports the day to day tasks of elected members and other associated employees. It is also a place that supports and enhances the daily goings on of public life, allowing for them to mix physically and visually with governmental staff and activities.
2. A *Chamber for Debate* reconsiders the need to have a seclusive centralised chamber for political debate. Sparked by my original observations of the existing parliamentary chamber in earlier experiments (chapter 4), the architecture may not change, but its authority, significance, and exclusivity may be continually redefined through inhibition.
3. A *Political Departure and Arrival Point* creates a transport node that removes the requirement for the central city's reliance on the car, whilst also signalling a point of departure and arrival, a formal transition from one side to another.

^ figure 85. *Experience A*

6.6 Political Infrastructure : An Experience

Developed from these drawings that present a plan for parliament comes 'Political Infrastructure', a three-dimensionally modelled version of the design intent portrayed in each of the two-dimensional outcomes. Presented in *figures 85-103* is an experience of 'Political Infrastructure'. As the final design outcome presented in *Delirious New Zealand*, each boundary wall is presented as an inhabitant of an existing environment to be defined and redefined by the inhabitant of this thesis. However, it is important that the following three points be taken into consideration prior to the exploration of these architectural boundaries presented as enabling constraints.

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1. Site was considered for its existing boundary constraints. 'Political Infrastructure' depicted as Tauranga Cities latest architectural inhabitant.
2. The variable Shape, Thresholds and Montage of the multitude of boundary walls is intentional. The determination of inside and out, the side for those that govern and that for those governed is not specified and subject to the vantage point of those that inhabit.
3. This experience is dictated by my authority as architect in the production and presentation of each architectural boundary.

A final conclusion is presented at the end of this experience.

^ figure 86. *Experience B*

^ figure 87. Experience C

^ figure 88. *Experience D*

^ figure 89. Experience E

^ figure 90. *Experience F*

^ figure 91. Experience G

^ figure 92. *Experience H*

^ figure 93. *Experience I*

^ figure 94. *Experience J*

^ figure 95. *Experience K*

^ figure 96. *Experience L*

^ figure 97. *Experience M*

^ figure 98. Experience N

^ figure 99. *Experience O*

^ figure 100. *Experience P*

^ figure 101. Experience Q

^ figure 102. *Experience R*

6.7 Political Infrastructure : In Conclusion

Upon envisioning parliament decentralised in New Zealand, 'Political Infrastructure' proposed architectural boundaries that have been explored as enabling constraints to accommodate this alternative governance. As Teerds noted of Thresholds, the tension between one side of a boundary wall and another "only really becomes visible in the window and felt in the door" (2014, p. 115). The design outcomes of Scale C present multiple threshold conditions, where the physical permeability is limited to those thresholds interpreted as doors, whilst the remaining thresholds allow only a visual transition. Accordingly, the understanding of architectural boundaries as enabling constraints developed throughout the iterative research in Delirious New Zealand are concluded here as the tangible interface that governs the transition between one environment and another, and the relationship between those that inhabit either side of these architectural divides.

The transition – or potential for transition – between one side and another is influenced by two factors simultaneously. The architecture of the wall and the condition of the populations that inhabit either side. Human occupancy is programmed as being those who govern on one side, and those governed on the other. The significance of Shape, Thresholds, and the Montage of boundary walls is defined, and redefined, by those that then inhabit the experience of these enabling constraints as the reader of this publication. Presenting an experience of these architectural boundaries allows authority and architecture to be considered and experienced. The architectural

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^ figure 103. *Experience S*

authority of each boundary as a definitive inhabitant of an existing environment can be considered alongside the authority of human inhabitation, whilst my authority in the production, presentation of these boundary walls continually defines their experience.

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Accompanying the design discussion in the following chapter is the presentation of the final act of installing boundaries. Here, the design inhabits the individual archipelagos of the final installation as presented for review in November. This forms a habitable installation where Delirious New Zealand can be experienced as a compositional whole representing the design led-research undertaken in its entirety.

Design Discussion

- 7.1 The Final Installation
- 7.2 Conclusion

^ figure 104. Boards of Design Outcomes for Installation

7.1 The Final Installation

Delirious New Zealand set out to investigate how architectural boundaries can be explored as enabling constraints. In doing so, a theoretical position was developed through the consideration of Rem Koolhaas, and in particular his theoretical productions regarding boundary walls, positioning this thesis within a broader body of knowledge that exists within the discipline of architecture. Also developed was the theoretical understanding for the project being 'about architecture' undertaken in the form of the design in this research investigation whilst the comprehension of authority and architecture as the 'concept' considered throughout this research was also established (Lim, 2013, p. 107). Four design case studies that exemplified the utilisation of Shape, Threshold, and Montage where then subject to critique and discussed, where apparent authority was also considered. These literary and precedent studies formed a foundation of knowledge that provoked an approach to the research question and objectives in this thesis, and established a platform against which each design iteration and outcome could be considered.

Design Scale A explored the installation of architectural boundaries within existing habitable environments. With a focus on an individual's experience, this design test initiated the exploration of enabling constraints through the act of installing boundaries at a 1:1 scale. The consideration of architectural boundaries at the domestic scale proposed a new parliamentary office that tested boundary walls as both habitable and themselves inhabitants. The final design test was undertaken in Scale C. Political Infrastructure explored the implications of multiple architectural boundaries beyond a single site or building. In August 2017, Delirious New Zealand was presented for review. This was a critical moment in this thesis and led to a refinement to the scope of research post review. Here, whilst the research question and objectives set forth at the outset of this thesis, these where then approached from a Koolhaasian perspective by simply asking the question of what Rem might do. Given this, a final act of Installing Boundaries, presented in figures 104 – 110, was put forth for examination in November 2017.

^ figure 105. *The final act of Installing Delirious*

This significance of the design research conducted in *Delirious New Zealand* in relation to the discipline of architecture was difficult to determine prior to the design review in August 2017. An introspective approach meant the testing of the three design principles (Shape, Threshold, and Montage) was ambiguous, and at times arbitrary when considering the exploration of enabling constraints. Habitational authority was focussed on that of human occupancy, a point promoted by Rem Koolhaas and Peter Marcuse in varying forms throughout the theoretical discussion positioning this thesis. Referred to in 'the Illegal Architect' by Jonathan Hill, the ability for the human inhabitant to define and redefine an existing environment became a primary focus (1998, p. 14). To this point, the design in Scales A and B attempted to consider an experience of each iteration and outcome from this perspective of 'the Illegal Architect' (1998, p. 14). The implications of architectural boundaries as enabling constraints became a subjective endeavor that only speculated on the significance of a wall's Shape, its Thresholds, or the Montage of multiple boundaries into a compositional whole.

From this critical moment in August, a refined scope was established, functioning as the framework to ensure the design related to the research objectives set forth in *Delirious New Zealand*. Political Infrastructure took the existing knowledge learned through Scales A and B and applied these to the design of architectural boundaries that accommodate the function of a decentralised parliament in New Zealand. This tested multiple boundary walls on a city block scale. The social, cultural, and/or economic conditions of those that inhabit either side of a boundary wall were established as being those that govern and those that are governed. This political programme defined the conditions that Marcuse promoted as definitive factors in the consideration of a wall's divisional function (1997).

^ figure 106. *Delirious Compressed to the Critique Constraint*

Feedback for this final act of Installing Boundaries described the testing and experimentation undertaken as being a 'fantastic range' of 'iterative production' (VUW Selected Markers, 2017). The examination panel suggests the 'beautiful drawings and models' allowed the authority of human occupancy to be considered – as opposed to presumed – with Delirious New Zealand presented in [an] 'installation setting' (VUW Selected Markers, 2017).

The 'avoidance of architecture' is considered as being 'both a strength and weakness of the project'. This is due to the difficulty had in comprehending the 'architectural articulation' (VUW Selected Markers, 2017). An example of this is the consideration of site. Site was only defined and analysed for what it offered the design in terms of boundary conditions, therefore, an 'engagement with site and context' can be perceived as somewhat 'tentative' (VUW Selected Markers, 2017). This productive criticism points to the limitations of this thesis. This speculative endeavour did avoid architectural convention at times in an attempt to broaden an understanding of authority and architecture, and the implications of my personal involvement in the production and presentation of architectural boundaries.

^ figure 107. *Delirious Redefining the Critique Environment*

This introspective nature makes the significance of a given boundary walls Shape and Thresholds difficult to comprehend beyond a personal interpretation and the assumption of how others might experience each outcome as presented. To this point, given the resemblance of the design to the reality of architecture as observed in the Debating Chamber at the outset of Scale A (refer to pages 77-79), the learning from this thesis is seen as a platform for debate. This research investigation was neither politically motivated nor intent on acting political, yet, like 'the benches' each design iteration and outcome across all three scales has enabled continued discussion and opportunities for learning beyond a self-indulgent endeavour. Although this exploration of architectural boundaries has been heavily influence by an introspective approach, the outcomes can be inhabited and this experience can provoke further consideration of the boundary walls in Delirious New Zealand beyond that of my own. Here, the design is a platform for discussing my own authority and architecture, and simultaneously this can be continually redefined through the authority of human inhabitation. Like 'the benches', independent of one's design intent is the fact that the architecture will not change; yet change will continually occur.

^ figure 108. *Design Outcomes Inhabit each Archipelago of the Installation*

7.2 Conclusion

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As Koolhaas states “A building has at least two lives – the one imagined by its maker and the life it lives afterwards – and they are never the same” (Fraiola, 2012). In concluding *Delirious New Zealand*, these two ‘lives’ described by Koolhaas are fundamental to understanding the outcomes of this research. The design led investigation developed what Jane Rendell terms ‘design works’. The design, as being ‘about architecture’, has been presented across three successive scales and these design outcomes became a platform for critical discussion regarding the ‘concepts of architecture’ more broadly considered. Accordingly, the following conclusions summarise *Delirious New Zealand*

1. Architectural boundaries are understood as composed inhabitants of an existing environment, and as such, continuously define and redefine an experience of such environments through their own habitation authority. After the design review in August, and a further investigation of Koolhaas’s approach to constraints and architecture, Thresholds became the focus in this design research. As Teerds notes of the Threshold “not only is the boundary penetrated there, but it also becomes accessible” (2014, p. 116). When the boundary wall is considered a Threshold between one environment and another – and in this case, between those who govern and those governed – the divisional significance of architecture can be recognized. When a multitude of Thresholds are experienced, as in *Political Infrastructure*, the enabling capacity of these architectural boundaries is magnified as the potential for physical or visual transition is introduced.

2. The significance of my authority in the production and presentation of architecture was considered simultaneously to the design of boundary walls throughout the exploration of architectural boundaries. *Installing Boundaries* is presented in the form of a photographed experience of *Delirious New Zealand*, and my authority dictates its experience as figures 107-110 exemplify. Here, the opportunity to progress this design led research investigation beyond the limitations outline above are portrayed.

^ figure 109. *The Final Installations Inhabited in November*

To conclude, it must be noted that architecture is always political, in that it governs the relationship between segregated parties. By avoiding being politically motivated or intent on acting politically, this research investigation ultimately eluded commitment to solving a definitive design problem or establishing a critical position at its outset. This lack of a design protagonist at the beginning of *Delirious New Zealand* led to a more introspective exploration of architectural boundaries as enabling constraints. Accordingly, this research has two distinct perceivable potentials for future direction.

Firstly, as a platform for debate, the design can provoke an alternative exploration of architectural boundaries as enabling constraints that will inevitably manifest varying outcomes due to the authority of the author in the production and presentation of these alternative endeavours. This would further an understanding of my own authority, as the differentiation between outcomes would highlight the strengths and weaknesses of my own research when considered beyond my own somewhat introspective perspective. As a platform for debate, *Delirious New Zealand* may also provoke an alternative approach to the same research question and objectives as well. The methods utilized throughout my investigation could vary. From a disciplinary standpoint, this thesis has looked beyond itself and found value in considering Rem Koolhaas, and in particular his theoretical production regarding boundary walls and architecture, and the potential these put forth for the discipline. Yet, in the end, not too dissimilar to Koolhaas, this thesis can be concluded as being a somewhat cynical endeavour that may in fact prompt an unforeseeable research undertaken in the future, just as Koolhaas's publications have here.

^ figure 110. *Delirious dividing the end of year Exhibition at VUW*

As Koolhaas declares in his introduction to *Delirious New York*, “the fatal weakness of manifestos is there inherent lack of evidence” (1994, p. 9). Like his observations of Manhattan, this thesis developed a ‘mountain range of evidence’ without a manifesto. In conclusion, similar to Koolhaas’s own ‘*Delirious*’ publication, not only is *Delirious New Zealand* and manifesto for the mountain range of evidence regarding architectural boundaries as enabling constraints, it is considered a manifesto for ones self.

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List of Figures

^ figure 111. Archipelago A - Domestic Politics Installed

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Source: Seldon, S. A. (2017, April 2). *GOV.UK*. Retrieved from 10 Downing Street: <https://www.gov.uk/government/history/10-downing-street#emergence-of-downing-street>

Figure 17. Political Boundaries of Berlin

Source: NBC Universal News Group. (2009, November 7). *The Rise and Fall of the Berlin Wall*. Retrieved July 4, 2017, from NBC News: www.nbcnews.com/slideshow/rise-fall-berlin-wall-33587033.

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Source: Koolhaas, R. (1994). *Delirious New York*. New York: The Monacelli Press.

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Source: Koolhaas, R. (1994). *Delirious New York*. New York: The Monacelli Press.

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Source: Koolhaas, R. (1995). *S,M,L,XL*. New York: The Monacelli Press.

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Source: Koolhaas, R. (1995). *S,M,L,XL*. New York: The Monacelli Press.

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Source: Koolhaas, R. (1995). *S,M,L,XL*. New York: The Monacelli Press.

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Source: Koolhaas, R. (1994). *Delirious New York*. New York: The Monacelli Press.

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Source: Lucarelli, F. (2011, March 19). *Exodus, or the voluntary prisoners of architecture*. - SOCKS. Retrieved November 12, 2017, from Socks Studio: <http://socks-studio.com/2011/03/19/>

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Source: Koolhaas, R. (1995). *S,M,L,XL*. New York: The Monacelli Press.

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Source: Lucarelli, F. (2014, December 5). *Rem Koolhaas and the Bourgeois Myth of New York* (Gabriele Mastrifgli - 2013) - SOCKS. Retrieved December 11, 2017, from Socks Studio: <http://socks-studio.com/2014/12/05/>
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Source: Koolhaas, R. (1995). *S,M,L,XL*. New York: The Monacelli Press.

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Source: Koolhaas, R. (1994). *Delirious New York*. New York: The Monacelli Press.

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Source: New Zealand Parliament. (2017, October 19). *New Zealand Parliament*. Retrieved November 25, 2017, from Parliamentary Privilege in New Zealand: <https://www.parliament.nz/en/visit-and-learn/how-parliament-works/parliamentary-privilege-in-new-zealand/>