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ABSTRACT

This thesis developed a speculative design process that sits between two streams of contemporary discourse. On one side lies ‘projective’ architecture—characterised by the elevation of performance and rejection of criticality—which draws from Somol & Whiting’s divisive paper “The Doppler Effect and Other Moods of Modernism” (Somol & Whiting, 2002). This model can be used to describe the contemporary work produced by international firms such as OMA and BIG (Spencer, 2016). On the other side are contemporary critiques of this model: broad denunciations that the rejection of critical engagement has failed to deliver on its promises of providing architecture an increased sphere of influence. Douglas Spencer argues that architecture has been made complicit in the perpetuation of existing power structures, saying the projective project has been “worked over until it can be put to work for new-liberalism” (2016). This thesis investigated sampling as a method of design that could confound the market logic that Spencer sees at the core of the projective project, whilst still leaning upon several core tenets that were originally proposed in Somol & Whiting’s 2002 paper, namely: A shift from the index to diagram, and a belief that a projective architecture is capable of generating alternative social/spatial relationships. To engage with this topic a design as research method will be employed. Murray Fraser describes design research as a method of inquiry where a series of architectural projects are placed in partnership with more general research activities (2013, p. 1). This thesis was structured around projects at three scales: installation, domestic, and urban. These inquiries formed the backbone of the thesis, each stage informing the next. The installation investigated the diagram as the generator of form, whilst the domestic scale focussed on the manipulation of urban form into new structures. Finally, at the public scale, the diagrammatic techniques of scaling and superposition (Eisenman, 1999) were used to tease form and program from a rigorous site analysis. In conclusion my design research investigated the technique of sampling and positioned it in relation to contemporary architectural discourse. Through a series of scaled inquiries, the sample was used as a tool to engage with site, program, and the design process. These inquiries demonstrated the potential of sampling as a method of disrupting the smoothness of the projective, via the injection of outside data into the architectural project.
DEDICATION

For my mother.
ACKNOWLEDGEMENTS

To my supervisors Jan Smitheram and Simon Twose, thank you for your support throughout the year.

To Holly, Kim, Nic, Joe, and all the others that I’ve been able to share a love of music with.
My interest in sampling was developed during my time spent Djing with a group of likeminded friends. Following the trends of the underground with them has exposed me to the lightning fast mutations of sampling as a tool of musical expression. The work of Total Freedom, Elysia Crampton, Why Be, NON International, Fade to Mind, Beer on the Rug, and countless others has served as inspiration for this research.
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INTRODUCTION

Sampling is a term typically associated with music production, however, Eduardo Navas argues that it can be understood as a cultural activity that is not exclusive to this medium: “Sampling as an act is basically what takes place in any form of mechanical recording—whether one copies, by taking a photograph, or cuts, by taking part of an object or subject” (Navas, 2012, pp. 11-12). Using this definition sampling can be understood as an umbrella term to describe a range of architectural activities that encompasses spoliation, modular templates, collage, and digital technique.

Exhuming this history of sampling allows us to consider its position in relation to the dominant modes of contemporary architectural production—understood here as post-critical or projective—modes defined by the elevation of performativity, and instrumentality and the rejection of the criticality that characterised the discourse of late 20th century. This thesis argues that the projective project constrains it’s projection of possibilities within a tight neo-liberal framework (Spencer, 2016) (Till, 2017), and that sampling has the potential to allow this model of production to develop alternative spatial / social relationships outside of this paradigm.
SCOPE

This thesis uses a design as research approach, as opposed to research for design, testing my research proposition through a series of three design inquiries. As this proposal is based upon investigation into a design technique, the scope and focus of this thesis is limited to the development of processes that use sampling to generate alternative social/spatial relationships. With this in mind the architectural solutions presented are developed to a level of detail that is sufficient to enable reflection on the success of my process. Therefore some areas of design could not be fully addressed. For example: detailed structural considerations, materiality, and design of ancillary spaces were not fully resolved as they would provide little benefit to a discussion that centres on the social operations of space. General research activities such as reading and writing were performed in parallel with my design inquiries. For the sake of clarity though, they have been positioned at the start of this document.

The design processes presented in this thesis do not always follow a traditional pathway of concept development, and instead wind their way through a variety of sampling techniques. For the sake of brevity and comprehension, these processes have been presented in a linear manner. However, the reader should keep in mind that the design process did not always operate in a movement from low resolution to high resolution, instead favouring a slow convergence of various techniques which both added and removed information from the project.

It is also important to note that even though sampling has occurred for most of architecture’s history, it is uncommon for literature to attach the term sampling to it. Therefore, this thesis had to develop a definition of sampling that was used to demarcate what sampling is, and what is not. This means that some projects and techniques that are colloquially regarded as sampling (such as post-modernism), will be excluded from this thesis as they do not meet the highly specific definition of sampling that has been developed.
RESEARCH PROPOSITION

This thesis explores social / spatial potential of sampling in architecture through a series of three design inquiries. Each project increases in scale and scope, moving from and installation, to a mid-scale private development, to a large scale public intervention. These inquiries investigate how sample-based design processes can be used to develop alternative social / spatial relationships in the city.

These alternative social / spatial practices are best defined by what they are not. They characterise the bubbling discontent with the market based pragmatism that embodies the projective project (Spencer, 2016). Roomer Van Toorn argues that this “addiction to reality” (Van Toorn, 2004, p. 30) comes at the detriment of the social operations of architecture, stating, “Instead of taking responsibility for the design, instead of having the courage to steer flows … the ethical and political consequences arising from the design decisions are left to market realism, and the architect retreats into the givens of [their] discipline” (Van Toorn, 2004, p. 29). This thesis aims to present social / spatial arrangements that are characterised by a rejection of pure pragmatics, and which engage with both the realities of the architectural project, and the fictional alternatives proposed by the sample.
METHODOLOGY

*Design as Research*

Peter Downton understands design as “a way of inquiring, a way of producing knowledge … a way of researching” (Downton, 2003, p. 2). Thus it is understandable that Fraser can see it as a comfortable partner of more general research activities such as “thinking, writing, testing, verifying, debating, disseminating, performing, validating and so on” (Doucet, 2015).

However, it is important to note the ways in which design as research differs from traditional modes of inquiry. Jane Rendell suggests that “Instead of posing research questions and the finding answers, in much design research the process operates through generative modes, producing works at the outset that may then be reflected on later” (Rendell, 2013, p. 117). Because of this inverted line of inquiry I expect the scope and direction of my work to change as I produce work and reflect upon it. Each new design project will unfold new information that will work to steer my research.

*Shifting Scales*

Rendell’s understanding of design research blends with the scaled framework of this thesis (Rendell, 2013, p. 117). As my work shifted through the three scales inquiry I was able to stop and reflect on my findings allowing the design work produced to inform my general research and vice-versa. This progression through a series of projects was critical to the development of my research as it allowed me to engage a topic that is currently underserved by architectural discourse from several angles, before selecting the one that I found the most productive.
THESIS STRUCTURE

1.0 Introduction

This thesis is structured around seven chapters. The introduction provides the reader with an expectation of what content this thesis contains, and outlines the approach that it takes to investigate the technique of sampling.

2.0 Theoretical Context

This chapter is split into two sections. The first sets out a definition of sampling, drawing on the work of Eduardo Navas. Then this definition is then used to develop a historical overview of the use of sampling in architectural practice, tracing a lineage of sampling from the Roman Empire, through the Renaissance, and into the modern age. This linear presentation of samplings belies the complexity of its history (For example, spoliation is not a technique that is exclusive to the Roman and Early Medieval periods). It is sufficient though, to provide the reader with an understanding of sampling as a technique which has an important architectural history, and has been used to engage with a wide variety of spatial questions.

The second section uses this exhumation of the sample to frame contemporary debates on the social role of architecture. Here, sampling is positioned as a possible bridge between the performative demands of the projective, and the social conscience of its discontents.

3.0 Case Studies

Here, examples of sampling developed in the previous chapter are examined in greater detail, investigating each project in relation to the theoretical positioning that has been established. The rhizomatic processes developed by Peter Eisenman and James Corner are discussed as potential methods of incorporating sampling into the diagrammatic processes that are elevated by the projective (Somol & Whiting, 2002). In addition to this ARM Architecture’s National Museum of Australia, and Jeremy Till’s 2006 British Pavilion are explored.
4.0 Installation

The installation tests sampling as a method of investigating site, drawing upon the work of Corner and Eisenman to develop a diagrammatic representation of Left Bank Arcade.

5.0 Mid-Scale

The Mid-Scale uses some of the techniques developed at the installation scale to develop a housing block. This scale focusses on sampling as a method of manipulating form and its embodied meaning, disregarding the rhizomatic mapping of the previous stage. As a result, this stage is largely reflective and is used to help steer my research in a direction that is more aligned with my research objectives.

6.0 Large-Scale

The Large-Scale uses the techniques of superposition and scaling to develop a feedback loop between the existing agencies of site, and the alternative occupations proposed via sampling. An architectural proposal is then developed via a negotiation between these two bodies.

7.0 Conclusion

The conclusion discusses the developed speculative design process and its outcomes in relation to my research proposal, and proposes future directions for this topic.
2.0 THEORETICAL CONTEXT
INTRODUCTION

This chapter provides a theoretical context for the use of sampling in architecture, engaging with this topic from two fronts. Firstly, defining sampling and providing a select history of its architectural use. And, secondly, investigating the role that sampling can play in subverting the neo-liberal tendencies of projective architecture, and in the development of new spatial / social relationships. Whilst sampling is a technique that has been at play since antiquity, it is rare for literature within the field to attach the term sampling to it. Therefore, the historical analysis of sampling presented here draws from a diverse range of sources, shifting from accounts of roman / early medieval spoliation, and the neo-classical templates developed by Sebastiano Serlio and Jean-Nicolas-Louis Durand, towards the 20th century and the proliferation of sampling that occurred thanks to rapid advancements in technology. Due to word count restrictions, and for the sake of brevity, this chapter only discusses key figures from each era. The second section ‘Sampling and the Projective’ draws upon the history of sampling presented in this chapter to consider the techniques role in relation to contemporary discourse. Somol and Whiting’s seminal essay ‘The Doppler Effect and Other Moods of Modernism’ is analysed, and critiques of the projective (or post-critical) architecture that spawned from it are discussed. Sampling is presented as a potential amendment to the projective project, a method of subverting the neo-liberal framework with which the projective has become enmeshed.
DEFINING THE SAMPLE IN ARCHITECTURE

Sampling, is a technique that has been at play for most of architecture’s history, however, it is uncommon for literature within the field to attach the term sampling to it. Therefore, it is important that we establish a concrete definition of sampling before discussing its history.

In the book “Remix Theory: The Aesthetics of Sampling” Eduardo Navas describes sampling as a process of mechanically cutting or copying (2012, p. 11). Navas argues “Sampling as an act is basically what takes place in any form of mechanical recording – whether one copies, by taking a photograph, or cuts, by taking a part of an object or subject, such as cutting part of a leaf to study under a microscope” (Navas, 2012, pp. 11-12). This definition makes an important differentiation: sampling as mechanical recording, separate from the act of imitating or mimicking. It is this distinction that separates the stylistic pastiche of the post-modern movement (Fletcher, 2017, p. 51) from the literal cutting and copying described by Navas.

TRACING THE SAMPLE

Tracing the Sample – Antiquity

Using Navas’ definition, one of the earliest recorded architectural examples of sampling can be traced back to the use of spolia to embellish the Arch of Constantine in 4th century Rome: “high imperial sculpture and architectural members [were] reused by fourth century builders to decorate the Roman arch celebrating Constantine’s triumph over his rival Maxentius” (Alchermes, 1994, p. 167). While this arch was not unique in its use of spolia, it was a watershed for the re-use of architectural elements in the ancient world. Jas Elsner describes the arch’s impact, observing that “[Constantine’s Arch] was the beginning of a veritable flood of spoliation in Constantine’s own reign, which was to create fundamentally new patterns in late antique and early medieval art” (2000, p. 154). It is important to note that this reuse of decorative elements was not performed solely for economic reasons. During the Roman Empire and early Middle Ages spolia were used to construct and convey visual and aesthetic messages
(Elsner, 2000, p. 154). For example, decorative elements from a religious structure could be reused to transfer spiritual power from one location to another (Bandmann, 2005, p. 146 & 288). This method of sampling can be aligned with Navas’ description of “cutting” (Navas, 2012, p. 12), where a fragment of a building is being removed from its origin to be reused elsewhere. Cutting would remain the dominant mode of sampling the built environment up until technological advancements during the renaissance allowed the act of copying to begin effecting the way in which architectural practices operated.

**Tracing the Sample – Renaissance and Neo-Classicism**

The invention of the printing press in the 15th century allowed the dominant mode of sampling to move from cutting to copying. For Carpo, imitation “was at the very heart of Renaissance architectural theory” (2001, p. 45). While the concept of imitation may sound contradictory to the definition of sampling that has been established above, the work of Sebastiano Serlio elevated this practice of imitation to one of copying. A century after the invention of the printing press Serlio published The Five Books of Architecture (Serlio, 1982). Serlio’s book is renowned for describing the five orders of architecture (Ionic, Doric, Corinthian, Tuscan, and Composite) (Hart, 1998, p. 75) and for outlining a series of “standardized and repeatable architectural components that functioned as semantic signs” (Carpo, 2001, p. 49). Prior to its publication, the rules of renaissance architecture were transmitted orally through guilds, but The Five Books of Architecture allowed this language be formalised (Frommel, 2003, p. 349). Architects could use the designs outlined by them to assemble a whole building, and it was Serlio’s intent that the final product would exactly match the designs outlined in his treatise (Carpo, 2001, p. 49). The system developed by Serlio was taken to a pragmatic extreme by Jean-Nicolas-Louis Durand. Durand diminished the semantic component of Serlio’s work and created a series of modular elements based upon the principles of functionalism and economy (Hernandez, 1969, p. 154.). These were published in his 1799 book Compendium and Parallel of Buildings of all Kinds, and were drawn to a strict grid in a single scale (Vilder, 1992, p. 436). Durand derided architecture that was based upon aesthetic primacy, declaring that “the functionality of a building becomes an aesthetic pleasure” (Hernandez, 1969, p. 154), a sentiment that would be echoed by the modernist movement over two hundred years later.

This shift from oral tradition to printed documentation spurred by both Serlio and
Durand allowed copying to become the primary method of sampling in architecture. The literal cutting of antiquity was no longer necessary, as designs could be copied directly from plans (Frommel, 2003, p. 349). These processes concerned themselves with the development of formal languages, whereas later developments in technology would allow sampling to be used as a method of creative inquiry.

**Tracing the Sample – Formalism to Creative Inquiry**

The capacity of architectural forms to hold cultural information is a common thread that runs through the history of sampling. This phenomenon is discussed by Sam Jacob in his article ‘Put the Needle on the Record’ (2015). Jacob considers architectural form and documentation as records of the social, economic, and political context that they were designed within:

> *Architecture is a form of materialized memory, acting as both witness to and evidence of societal experience. A house for example, is both a house and a record of an era’s ideas about domesticity and familial structure. (Jacob, 2015, p. 74)*

Whilst the use of sampling as a method of accessing and editing cultural information remains consistent through its history, the motive behind the act of sampling has changed over time as advancements in technology have allowed architects to deploy sampling in new ways (Victoria Ellis, 2015, p. 1). This can be charted as a shift from a preoccupation with using architectural form as a vehicle for meaning – the literal cutting of spolia in Antiquity, and Renaissance’s development of a formal architectural language based upon the imitation of classical models (Carpo, 2001, p. 44) – towards the use of sampling as a method of design inquiry (Shields, 2014, p. 3).

**Tracing the Sample – Early - Mid 20th Century**

The 20th century heralded the development of commercial copiers, printers, and personal photography (Hemmungs Wirtén, 2004, p. 61), enabled by these technologies collage emerged as a uniquely modern art form (Shields, 2014, p. 2). This technique would touch on both the cutting and copying described by Navas (Navas, 2012, pp. 11-12), through the re-appropriation of found material and later the duplication of material using the photocopier. One of the earliest architects to adopt this technique
was Le Corbusier, who worked as both an artist and architect. Shields describes his practice thus: “Whilst documentation primarily points to Le Corbusier’s use of collage in the design process for two dimensional media, the formal content of this collages has clear ties to architectural work” (Shields, 2014, p. 30). For Le Corbusier, collage (and, by extension, sampling) was not a method of assembling a building (as it was for Serlio and Durand), but rather a tool of analysis (Shields, 2014, p. 33).

In the mid-century the Situationist International movement used collage to critique traditional maps of the city, “exposing inequities, and contesting dominant power relationships” (Dovey & Ristic, 2017, p. 15). By playfully drifting through urban space the Situationists developed maps composed of fragments extracted from official plans, which were juxtaposed against each other to investigate possible connections and open marginalized spaces (Dovey & Ristic, 2017, p. 16). This concern with the role of architecture in the construction of a social order was taken up by groups such as Archigram and Superstudio, who used collage to imagine alternative social narratives (Shields, 2014, p. 97). For instance, Shields argues that “The ephemeral nature of human activity in the city was, for Archigram, more important than the architecture framing it, a concept that was taken up by Superstudio in Italy” (2014, p. 100). Superstudio was particularly notable for its refusal to participate in architectural design (Elfline, 2016, p. 55). Instead, their work critiqued consumer culture and considered modern architecture complicit in its perpetuation (Shields, 2014, p. 100). For Superstudio, collage was a method of design that removed their work from the cannon that they were explicitly critiquing.

**Tracing the Sample – Late 20th Century**

During the late 20th century the amount of information available to sample increased dramatically in tandem with the methods with which one could extract that information (Navas, 2012, p. 17). My descriptions of work from this period will focus on the output of two notable architects who contributed to this shift in architectural practice: James Corner and Peter Eisenman. Both Corner and Eisenman concern themselves with using diagramming/mapping to represent sampled information in a non-hierarchical structure. These drawings operate as a form of rhizomic mapping, drawing connections between disparate objects in order to illuminate the complex assemblages that form the built environment (Dovey & Ristic, 2017, p. 17 ; Parr, 2010, p. 19). Parr describes the potential of this rhizomatic process, arguing that:
Architecture tends to focus on the material and formal aspect of buildings, however buildings are spatial, functional, and social environments ... the rhizome is a vital concept for shifting the emphasis of architecture to the complex networks of movement, social connections, and communications that buildings and urban environments encompass. (Parr, 2010, p. 236)

Eisenman’s Romeo and Juliet project uses a rhizomatic process to investigate the themes of the Shakespearian tragedy that is its namesake (Whiteman, 1986, p. 12). He uses the techniques of scaling and superposition to investigate the real city of Verona in relation to the fictional tragedy:

The first superposition reveals the idea of division found in the three texts. When the walls of the castle of Romeo are superposed on the walls of the old city of Verona, the three elements of the site of Montecchio (at the same scale as the city of Verona) fall in a divided relation to the walls of the real castle of Juliet; a simulated castle of Juliet falls inside the real castle of Juliet, a simulated church falls within the wall of the real castle, and a simulated castle of Romeo falls outside of the walls of the real castle of Juliet, hence the idea of division. (Whiteman, 1986, p. 81)

Eisenman’s technique of scaling is described as a “method by which certain properties of an object (its plan structure say) are selected or isolated for the context and transposed to a different location and represented at a different scale” (Whiteman, 1986, p. 78). Superposition is a way of describing the relationships between properties that have undergone scaling. Eisenman describes this relationship as “a coextensive, horizontal layering where there is no stable ground or origin, where ground and figure fluctuate between one another” (Eisenman, 1999, pp. 29-30). These processes can be understood as a form of sampling by copying (Navas, 2012, pp. 11-12).

Corner’s work uses sampling to develop maps that act with “a creative agency that produces understandings of the various hidden forces that underlie the workings of a given place” (Dovey & Ristic, 2017, p. 17). This is evident in his book Taking Measures across the American Landscape, which combines aerial photography with surveys and abstract site information to develop maps that slip between spatial knowledge and art/design (Dovey & Ristic, 2017, p. 17).

Eisenman’s and Corner’s rhizomatic maps/diagrams use the sample as a method of
breaking down the hierarchies of traditional inquiry (Whiteman, 1986, p. 78; Dovey & Ristic, 2017, p. 16) via the mapping of relationships between disparate bodies (landscapes, surveys, cities, forms, narratives, interiority / exteriority) (Dovey & Ristic, 2017, p. 17; Parr, 2010, p. 236). These techniques were developed in order to create architectures that embodied critical architectural practice, that were reflective, representational, and narrative (Somol & Whiting, 2002, p. 77).

**Tracing the Sample – Conclusion**

The use of sampling has continually evolved as technological advancement allowed the world to be cut or copied from in new ways. Initially, sampling’s primary purpose was to imbue buildings with meaning. The spolia used during the Roman Empire and early Middle Ages transported cultural information from one site to another, and the classical templates developed during the renaissance allowed this information to be formalised and re-produced en masse. However, technological shifts that occurred during the 20th century allowed sampling to become a tool of design inquiry, a method of questioning and probing. The work of Peter Eisenman and James Corner in the 90’s developed a modern toolkit for engaging with sampled material, using rhizomatic mapping/diagramming to explore the complex assemblages that form the built environment. Their body of work forms my framework for examining the sample in relation to Projective Architecture and its discontents.
SAMPLING AND THE PROJECTIVE

The sample based processes developed by Peter Eisenman and James Corner in the 1990s represent a strain of critical architectural practice that is often the subject of contemporary polemics (Somol & Whiting, 2002, p. 73) (Weller, 2001, p. 9). The turn of the 20th century found architectural theory attempting to unwind itself from the spectre of criticality, purging the discipline of “discourse for the sake of discourse” (Awan, Schneider, & Till, 2011, p. 32), and exploring new methods of producing and thinking about buildings. “Criticality,” writes Baird “is under attack, seen by its critics as obsolete, as irrelevant, and/or as inhibiting design creativity” (Baird, 2004, p. 1). The dialectical positioning of the post-60s avant-garde, their negativity, and their concern with articulating a position of resistance got in the way of work, inhibiting the ability of architects to produce buildings and thus diminishing their ability to exert influence (Spencer, 2016, p. 50 ; Speaks, 2002).

However, the development of these new strains of post-critical theory is not without contention. The calls for a “projective” architecture (Somol & Whiting, 2002) that characterised the debate of the early 2000’s were divisive (Baird, 2004), marked by some as a capitulation to the market logic of the neo-liberal economy (Spencer, 2016 ; Till, 2017). Douglas Spencer argues that “theory has been worked over until it can be put to work for and within new-liberalism” (2016), and Jeremy Till echoes this sentiment describing Somol and Whiting’s projective manifesto as the beginning of a drift towards a “market-immersed” (Till, 2017) theory.

Spatial Agency (Awan, Schneider, & Till, 2011), outlines a framework for how architecture can move beyond the market instincts of the projective and develop a method of practice that is deeply concerned with the social impacts of its production. Spatial Agency describes a practice which has many parallels to that proposed by Somol & Whiting. However, rather than rejecting criticality wholesale it describes a notion of agency—derived from the work of Anthony Giddens (Giddens, 1984)—that allows a mixing of discursive and mutual knowledge. These knowledges are described as constituting “the discursive realm [that] allows the development of knowledge away from the immediate demands of the everyday; mutual knowledge is about practical deployment of knowledge within the everyday” (Awan, Schneider, & Till, 2011, p. 32). An example of this mixing of knowledge is Lab Pro Fab’s Multi Program Ship in Caracas, Venuzela. This project uses community initiatives and bottom up governmental
initiatives—practical engagement—, alongside a ‘microsurgical’ (Haiek, 2015, p. 9) framework for urban intervention—discursive engagement. Giddens describes the line between these figures of knowledge as “fluctuating and permeable” (Giddens, 1984, p. 4). This model of agency allows the hotness (Somol & Whiting, 2002, p. 76) of criticality to be tempered by the practicality of mutual knowledge (and vice-versa), describing a compatibility that Somol & Whiting explicitly discount (Somol & Whiting, 2002, p. 74).

This forms a theoretical link between the performativity and instrumentality of the projective and the critical, sample-based processes developed by Eisenman and Corner. While the projective project frames criticality as an inhibitor of social productivity, Spatial Agency understands discursive and mutual knowledges as intertwined, with each informing and empowering the other (Awan, Schneider, & Till, 2011, p. 32).

From this understanding of agency the question arises: How can the esoteric use of sampling developed in the critical practice of the previous century empower the performativity and instrumentality of contemporary architectural practice (and vice-versa)? For Roomer Van Toorn the symbiosis of these discourses is a site where new social / spatial practices may develop, “It is the interaction between the dream of utopia and reality that could help a projective practice develop a new social perspective” (2004, p. 30)
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INTRODUCTION

This chapter identifies precedents that use the technique of sampling as a method of architectural production, or as a method of architectural inquiry. A variety of different approaches are investigated, and their efficacy in relation to my research proposition is explored. Firstly, this chapter looks at Peter Eisenman’s Romeo and Juliet Project, which uses existing site information to investigate the fictional story that is its namesake. Secondly, the rhizomatic processes of James Corner are discussed in relation to the commercial work performed by his practice, specifically The High Line in New York. Thirdly, Jeremy Till’s use of live video feeds to disrupt traditional urban planning techniques is explored. Finally, ARM’s National Museum of Australia is discussed as an example of modern spoliation.
Eisenman’s Romeo and Juliet project uses a rhizomatic process to investigate the themes of the Shakespearian tragedy that is its namesake (Whiteman, 1986, p. 12). The city of Verona is sampled, scaled, and superpositioned upon itself in a series of choreographed moves, which investigate the real city in relation to the fictional tragedy. This review will focus on the techniques used by Eisenman to transform this formal source material into an exploration of fictions.

Eisenman uses scaling to detach sampled material from the bounds of its original context. Whiteman describes this process “By the use of scaling Eisenman is seeking to avoid an architecture in which formal and structural relationships are set in a fixed and ‘natural’ hierarchy” (1986, p. 78). The diagrams generated from the superposition of these scaled elements are used by Eisenman to explore narrative themes. Whiteman discusses this project in detail in his essay ‘Site Unscene’ (1986):

The second superposition reveals the idea of union found in the three texts. Here the castle of Juliet, which appeared as a passive trace in the actual castle of Romeo, now appears as an active trace at the actual church of Montecchio. The tower of the castle surrounds the church. Superposed over the tower of Juliet is the tower of an active trace of the castle of Romeo. The church of Montecchio is an active presence registering the idea of union. The third superposition reveals the idea of dialectical relationship between union and division operating in the texts. Now the castle of Juliet is registered as an active presence over the tomb which is in the cemetery in the city of Verona (Whiteman, 1986, p. 82)

The source material used by Eisenman is prosaic. Figure ground, topography, site plans, he draws from material that is imbued with hierarchy, material which Jeremy Till describes as an obscurer of difference “ruthless in what it ignores, suppresses, or overrules” (Till, The Urban Miniature, 1995, p. 239). However, it is clear though—through Eisenman’s descriptions of his process that—scaling and superposition can be deployed to remove these hierarchies and to begin developing abstract connections
between urban fragments. As discussed in the previous chapter, this figure can be understood as rhizomatic (Parr, 2010, p. 19), a horizontal, non-hierarchical structuring that allows Eisenman to interrogate Verona not from the perspective of form or material, but as a spatial, functional, and social environment (Parr, 2010, p. 236). This project illustrates the potential of a sample based process to draw out spatial elements that are difficult to locate through traditional inquiry.

*fig 3.01 Peter Eisenman. Romeo and Juliet Project, 1986.*
fig 3.02 James Corner. Field Plots, 1996.
JAMES CORNER – COLLAGE DRAWING

Through utilising a variety of analytical and analogous imaging techniques, otherwise disparate parts can be bought into productive relationship, less as parts of a visual composition and more as means or agents (Corner, 2014, p. 253.)

James Corner uses collage drawing as a means by which to construct or reveal order that underlies conditions of site and program, developing drawings that comprise of sampled media that has been procured using a wide variety of techniques (Shields, 2014, p. 92). This can be understood as similar to the scaling and superposition used by Eisenman. However, Eisenman uses these techniques as a means of constructing fictions and interrogating the interiority of architecture (Whiteman, 1986; Eisenman, 1999, p. 31). Corner is more prosaic, his work in the book Taking Measure across the American Landscape (1996) uses collage to develop rhizomatic maps that investigate the “dynamic nature of site as it has been inscribed by human inhabitation” (Shields, 2014, p. 93). Corner describes this process as having three key stages: Field, Extract, and Plotting (Dovey & Ristic, 2017, p. 17). Field, is an analogic ground upon which mapping takes place. Extracts are fragments of sampled information, and Plotting is the practice of drawing new relationships between sampled materials (Dovey & Ristic, 2017, p. 17). These processes can be performed for analysis or design, and traces of it can be seen in projects such as The Highline that, according to Shields, “respond[s] to physical, material conditions while providing a multiplicity of spatial and haptic experiences, just as [Corner’s] collage drawings capture both formal relationships and experiential characteristics” (2014).
‘Please Touch’ was the mantra of the British Pavilion at the 2006 Venice Biennale. The exhibition presented a critique of the top-down hierarchies that typified the post-war housing estates of Sheffield, using sampling to confuse scales and subvert the logic of the architectural plan. “We too, have a model in the central room, but it mixes spatial realities through the confusion of scales and the doubling of virtual with real space” (Till, Echo/City, 2007, p. 40). Through a process of user interaction (with blocks intended to re-create the city of Sheffield, UK), and live feeds the pavilion broke up the central exhibition into fragments, that were re-contextualised as a video. “The intent is not to recreate Sheffield, but to give prompts as to how cities should be viewed and understood” (Till, Echo/City, 2007, p. 2). The arrangement of the new ‘Sheffield’ from a typical plan perspective was subverted by the use of sampling.
The National Museum of Australia (NMA) updates spolia for the 21st century, importing copies of architectural drawings to imbue the NMA with semantic meaning. Here, ARM have literally transposed the floorplan of the Berlin Jewish Holocaust Museum, re-appropriated the skylights from the Sydney Opera House, and even borrows almost the entire Villa Savoye as a research wing (Macarthur, 2001; Stead, 2004). Where the spolia of ancient times relied on the physical transportation of architectural elements, the digital age enabled ARM to lift copies of plans to enable their accurate reconstruction in a new context. For ARM, the re-use of the Libeskind’s floor plan is a clear allegorical message, drawing connections between “the Jewish Holocaust in the Second World War, and the consequences of white settlement for Australian Aborigines” (Stead, 2004, p. 387). What would be considered a reverent practice in antiquity (Bandmann, 2005, p. 147), and actively encouraged during the renaissance and neo-classical ages (Carpo, 2001, p. 49), raised a host of legal issues “about the availability of architecture for literal appropriation, and whether this is in fact plagiarism” (Stead, 2004, p. 387). When observed in relation to my research goals, this particular mode of sampling—with its overarching concern about semantics, and its questionable legal standing—is of less use to me than the design processes described in the analysis of Eisenman, Corners, or Till’s work. Where they concern themselves with interrogating spatial relationships, ARM’s work is preoccupied with symbolism and meaning, adorning the NMA with a modern incantation of spolia. With this in mind, spoliation is a process that I will approach with caution in the design sections of this thesis.
4.0 INSTALLATION
1.0 INTRODUCTION
2.0 THEORETICAL CONTEXT
3.0 CASE STUDIES

4.0 INSTALLATION

5.0 MEDIUM SCALE
6.0 LARGE SCALE

7.0 CONCLUSION
INTRODUCTION

This installation is intended to act as a jumping off point for my research, a method of narrowing the scope of the design research, and sharpening the tools of design that I will use to realise the following two projects. It focuses upon the ability of the sample to re-interpret urban space: Eking out alternative histories and proposing new readings that can be used to create the next stories of the city.

My process was not strictly linear. Simultaneous lines of inquiry ran parallel to one another, veering apart, coming close enough to touch and sometimes merging as their work became inseparable. This process is influenced in part by Michael Speaks’ writing on Design Intelligence (Speaks, 2002). This process has been presented as a linear inquiry of separate explorations to increase its legibility when presented as a thesis document.

AIM

This first design project focuses on developing methods for ripping samples from the city and the potential re-contextualisation as a new project. It engages with a site by breaking it down and rebuilding it. The finished installation will be a new representation of the original space whose specific configuration will depend on the samples taken and what kind of information unfolds as they are manipulated and repositioned within the original context of the site.

METHOD

A series of investigations were made into an urban site using different forms of media. Photogrammetry, photography, video, collage, 3D printing, laser etching were employed. These investigations ran parallel to each other, sometimes intersecting or veering apart. By engaging with each of these lines of inquiry simultaneously, a wide body of “soft” (Schurkamp, 2009, p. 67) information is developed which can be drawn from and interpreted to create the final installation.
Installation - Site

The chosen site for this investigation is Left Bank Arcade, Te Aro. It has been chosen as because it locality means that most of the installations viewers will have used this space before, meaning that they will be able to juxtapose the information contained in the installation against their own experience.

Installation - Design Process - Explorations 01

These explorations were preoccupied with developing methods for clipping samples from the alleyway and exploring two-dimensional manipulation techniques.

Photogrammetry was used to create a three-dimensional model of the site, converting photos to meshes of varying accuracy (fig 4.01). These meshes were exported as .OBJ files to yield UV texture maps that broke the digital interpretation of site into two-dimensional fragments. These fragments were then manipulated in Photoshop (Collaged, shrunk, enlarged, warped, re-coloured, de-saturated, blended, etc.) to explore the way the site could be re-imagined via sampling. By mixing these fragments with the images used to create the original photogrammetric models, and images of the generated 3D meshes, I sought to explore the relationship between the original, the sample and its manipulations.
These textures and the collages produced from them proved to be static and flat. I encountered difficulties working them into anything other than distorted representations of the original space.
Printed textures were folded and scrunched to explore the interaction between disparate parts of the site.
Testing collages at scale. Exploring the potential for the site as a wearable / drapeable object. These inquiries did not progress, as I favoured processes that mixed a wide variety of sampled material (in the manner of James Corner’s rhizomatic maps).
Exploring the interactions between photogrammetric models and the photos used to create them. The intent of these collages was to see how ‘real’ representations of site and the worlds created by digital manipulation interacted with each other. These collages formed the basis for the mixing of mediums that occurs in the final installation.
Installation - Design Process - Explorations 02

The potential for three-dimensional manipulation is looked at in this exploration. After taking samples from the city and converting them to a useful format it becomes possible to manipulate the samples, editing the cultural coding that they contain. By pushing and pulling the meshes of the sample, cutting and recombining, the forces that created it are manipulated too. Through this process new spatial conclusions are formed, a lamp-post stretches outward as space swirls around it, bricks become feathers and scaffolding an impressionist landscape.
fig 4.08_Digital Manipulations
Drag the cursor around the area you want to capture.
After my initial explorations into methods of extracting samples and manipulating them in 2D and 3D, I began to bring these digital representations back into the physical via 3D Printing. Clear ABS plastic was used to keep these models as blank representations of digital form. Whilst 3D printing can be imagined as a way to directly transpose material from modelling software into physical form, it – like the other techniques explored in this design – leaves its marks upon its product. The most apparent of these is the raft that is created to steady the model as printing takes place. After observing the output of several prints I decided to keep it attached to the models as it provides a sort of plinth that holds the model aloft for observation, and because of its sharp reminder of the agency of the digital processes used in the manipulation of the samples for this installation.

These models are intended to be used in conjunction with other samples to form a final work, a configuration of several elements that draws certain social / spatial conclusions about Left Bank Arcade. The specifics of these conclusions is not important yet, my work is currently focussed on the collection of additional samples and new interpretations those that already exist. Through this I intended to yield a body of work that naturally gravitates towards a certain locus of thought.
fig 4.12_3D Prints
In this fourth stage I sought to escape from the form based experimentation of the precious investigations. By widening my scope and branching out into new techniques (techniques still found within the boundaries of the sample), my intention was to create a critical mass of material that would see certain samples come together naturally. Through further coercion these samples would coalesce into an arrangement that would inform my final design.

I looked towards Jeremy Till’s work at the 2006 Venice Biennale (Till, 2007), utilising mixed scales and spatial confusion to create a strangeness that drew in the viewer and encouraged contemplation upon their relationship to the city, and the role of scaled tools in developing urbanity. Equally important was Sylvia Lavin’s’ writing on the ‘Kiss’ (Lavin, 2011). Lavin defines the figure of the kiss as a “coming together of two similar but not identical surfaces, surfaces that soften, flex, and deform when in contact, a performance of temporary singularities, a union of bedazzling convergence and identification” (Lavin, 2011, p. 5).

The figures of site that I had created via 3D printing were static, whilst they were formally interesting they lacked vitality. They were products of digital process and precision and a kiss was the perfect solution to their staticity. By engaging with the site intimately via video-recording, the materiality that the digital models were so lacking could touch up against them. Although they were records of the same site, the manipulation that the digital models had undergone had removed them several degrees from any sort of direct representation. To combine these printed samples with recorded video was to see two conditions of site touch against each other, one a direct 1:1 representation, and the other scale-less digital manipulations.
fig 4.14 Projection and 3D Prints
Experiments with GIS data uploaded by the Wellington City Council yielded new layers of information to add to the interaction between raw site and digital product. The 1:500 data provides rigid information regarding the location of buildings, services, topography and roadways. Laser-cut into clear acrylic it pushes upward against the scale-less prints, the formality of its representation intersecting with these distorted images of site. Meanwhile the brightness of the sites materiality melts through it, obscuring its scale.
**FINAL DESIGN**

The final design is created from an array of samples and representational techniques that are arranged to form a work that investigates the role of the sample in reconfiguring urban space and creating new readings of the city.

**3D Prints:** Sourced from photogrammetric models of the site, that have been manipulated in modelling software.

**GIS Data:** Laser etched into 6mm clear Perspex at 1:500 scale.

**Recorded Video:** An intimate investigation of the sites materiality, projected.

By bringing together the products of three lines of inquiry into a space, a dialogue is created between them. The projection melts into the printed models and GIS data. The lines between each element become blurred as the intensity and saturation of the video catches the eye. Sampled material comes together re-contextualising the cultural coding of the site: Instead of an architecture designed by plan that sits static until its demolition, Left Bank Arcade becomes a space full of material richness. This richness is spatialized by the printed interpretations of site proposing other ways of experiencing architecture and site.
INSTALLATION - REFLECTION

This installation was developed as a method of exploring my proposition, a means with which to sharpen my design investigations and develop the niche that this research would occupy. Sampling, (as described in the theoretical context and case studies chapters of this these) is a term that encompasses a wide variety of technologies and techniques. This installation has helped to narrow the scope of my inquiry from the whole breadth of sampling techniques down to one that is directly referential to the rhizomatic processes developed by Peter Eisenman and James Corner. This installation arranges sampled material into a state of superposition, generating an alternative reading of site that circumvents the hierarchies that reside inside the standard tools of urban inquiry (figure ground, site plan, detail, and so on). The layering of GIS data with site walkthroughs and photogrammetric fragments allows the viewer to draw associations between each disparate fragment, questioning the social / spatial relationships that are defined by the plan.

What this installation did not address was the ability of the manipulated sample to present new social / spatial relationships. Sam Jacob imagines architectural plans and form as the containers of social information: “Abstract social constructs are embedded in ... architectural form” (2015, p. 74). Through the sampling and editing of these constructs, it may be possible to create the dreams (read: alternative social / spatial arrangements) that Roemer Van Toorn describes as a necessary foil to the overriding pragmatics of the projective: “It is the interaction between dream ... and reality that could help a projective practice develop a new social perspective” (2004, p. 30). This installation has remixed site to challenge the preconceptions of traditional design processes, but it has not proposed an alternate set of social / spatial relationships. The next stage will have to engage with this in order to progress my design work towards a meaningful engagement with my research proposition.
5.0 MID SCALE
1.0 INTRODUCTION
2.0 THEORETICAL CONTEXT
3.0 CASE STUDIES
4.0 INSTALLATION
5.0 MEDIUM SCALE
6.0 LARGE SCALE
7.0 CONCLUSION
INTRODUCTION

The second project of this thesis seeks to explore the potential of sampling to edit and remake the histories of the city. Sam Jacob describes buildings as historical documents “architecture as we experience it, always becomes the past in the present. In other words, buildings are historical documents as well as structures ... Both architecture and city are collective social and historical forms” (Jacobs, 2015, p. 73). To Jacob, sampling is a tool that architects can deploy to simultaneously examine the past and consider the future (Jacobs, 2015, p. 77).

Sang Lee considers the sample in the context of contemporary architectural production. If current methods of architectural representation occupy themselves with obscuring the lively difference of the city (Till, 1995, p. 239), Sang describes the sample as a method of amplifying them. The intensely local histories embodied in the city are a productive space for those who wish to avoid the flattening effects of traditional investigation:

For architecture today, the opportunities lie where the sources of differences are located. One such source is the narrative that is specific, though not necessarily unique, to a particular place and its culture ... The potentialities in architecture today reside in the permutations of such mnemonic fragments that can actually pronounce and amplify the difference.
Lee, 2007, pp. 241-242

Whilst the installation phase contained multiple lines of inquiry that sprouted as I sought to draw out information from Left Bank Arcade, this phase was used to streamline my processes and create productive pathways that could be applied at the final scale of this thesis. The primary challenge of this scale was the translation of the methods of spatial representation (that were explored in the previous phase) into methods of spatial creation. Making this leap proved challenging, the design process was restarted twice before a process was found that engaged with my aforementioned aims.
**AIM**

The aim of this phase is to explore the uses of the sample as a technique for re-making urban space via the design of housing units. This process aims to engage with the way that sampling can be used to edit and re-make the histories of urban space (Jacobs, 2015, p. 77), exploring areas outside the confines of traditional architectural investigation.

**METHOD**

Similar to the installation, this phase makes a series of inquiries into a site using a variety of different mediums. However, as illustrated by the diagrams of the following pages, photogrammetry becomes the primary method of inquiry. A process was developed wherein photogrammetric fragments were sampled from the site, and then manipulated to create new spatial arrangements. Video recording was used to add materiality to the smooth digital surface, via a process of 3D printing and projection.
METHODS OF INQUIRY

- DIGITAL EDITING (2D)
- DIGITAL MODELLING (3D)
- 3D PRINTING
- LASER CUTTING
- PHYSICAL MODELLING
- PHOTOGRAMMETRY
- PHOTOGRAPHY
- VIDEO RECORDING
- PROJECTION
- SCANNING
- PRINTING
- DRAWING
Exploration 01 - Introduction

My initial explorations began by simply scaling up the formal enquires that I had made during the installation phase, and arranging the produced forms into mass models. This Jumping in scale drew from OMA’s practice of using scaling up and down to investigate the different parameters of design. I pursued this line of inquiry all the way through to a final design, but in the end found the results unsatisfactory. This methodology failed to engage with the potential of sampling as a method of investigating and remaking the complex histories of the city (Jacob, 2015, p. 77). Rather, it acted as a method of producing novel form which was disconnected from the rich urban fabric that it had been ripped from. It took two attempts at using this line of inquiry before I was able to step back and reflect upon my process, and pivot my approach to produce work more closely aligned with my proposition.

Nevertheless, these unsuccessful attempts have provided valuable material for reflection and have been instrumental in providing direction to my research.
**Exploration 01 - Basic Process**

These initial explorations manipulated fragments of photogrammetric models into new forms that were then arranged onto the site. The façade of the Bank of New Zealand building was stretched, swelled, pushed and pulled into new form. These forms were then positioned into new arrangements to testing the limits of their relationship to the original sample.
Exploration 01 - Concepts

Aim: To use the techniques developed during the previous phase to create conceptual masses.

Process: Clip samples from the photogrammetric model of my site. Modify them in 3Ds max, and reassemble them into new forms. These were printed and sketched on in order to build up detail.

fig 5.02 Sample Locations
fig 5.04 Sample Locations

Sample used in Concept 02
Sample used in Concept 03
Exploration 01 - Concepts - Evaluation

My process was effective at creating novel form, and engaged with the sample as a way of subverting traditional top down design processes. However, it did not engage meaningfully with the potential of the sample as a method of re-writing the stories of urban space. There was a strong focus on formal development, but little consideration of the positioning of the sampled material in relation to its origin. Samples were simply clipped from the model, manipulated, and placed onto site. Whilst this could have been a productive exercise exploring the breaking down and re-constructing of the relationships between classical building elements, the varying degrees of manipulation that each sample underwent restricted this.
After deciding to continue my investigation with Concept 03, I ran into issues 3D printing. This led to a breakdown in my process, wherein I could not feed the video from my site back onto the models in order to further develop my concept.

Conversely, this also provided me with time to reflect upon my process, and its relationship to my research goals. I found it difficult to position the mash-up of site investigations that I was currently using next to the questions posed by Sang Lee and Sam Jacob, specifically: How can the sample be used to edit the histories of the city? Currently my design process had focussed upon form and its potential for manipulation, in the digital realm. I was clinging very tightly to the methods explored in the Installation phase, artificially reducing the scope of my inquiry and restricting the potential of my mid-scale investigations to yield productive methods that could be applied at the next scale up.

In lieu of 3D printed models I began to experiment with photo collage in an attempt to draw out materialities and details from the site, which could then be ‘sampled’ and re-used in my project.

This process was also hampered by a lack of direction of after a concept had been formed, and it was left to the designer to elucidate built form from the dense and broken meshes of the samples. Even though the collages created in lieu of 3D prints were productive, the design struggled to move forward in a way that was relevant to my line of inquiry.
LIMITED FEEDBACK DUE TO ISSUES UPSTREAM

LACK OF CLEAR DIRECTION ONCE CONCEPT IS REALISED

VIDEO RECORDING

PHOTOGRAMMETRY

INTERPRETATION

CONVERSION

ARRANGEMENT

TECHNICAL ISSUES

3

MAX

MATERIALITY

PROJECTION

3D PRINT

fig 5.09_Process Breakdown
**Exploration 01 - Design Development**

I developed my design by drawing upon my collages, video stills, and site photos. But, the depth of information provided was not sufficient to add meaningful development to my concept, and the design was quickly rationalised in the absence of strong samples to draw from. Any connection the building may have had to the original source of its sample is severed, and the potential for the manipulated sample to act as a subversive addition to the fabric of the city is lost. The final product becomes another ambiguous form in the city, with no connection or conversation between it and its surroundings.
EXPLORATION 01 - REFLECTION

I felt as though this exploration had missed the mark. My design process was abbreviated, and lacked the richness that was present at the installation phase. Where the installation phase concerned itself with how urban space could be remade and given a different voice, this exploration was preoccupied with form. The installation contained a layering of data that could not be seen in the final product of this exploration. Therefore, the following exploration would attempt to incorporate video recordings and site photography into the design process, as a means of adding depth to the design process.
Exploration 02 - Basic Process

This exploration aimed to explore the possibilities of the design process established earlier in this scale. It was my hope that a more thorough engagement with the process would yield productive results. However, this line of inquiry ran into the same issues that the design before it met: An abbreviated process, a preoccupation with the generation of novel form, and a lack of engagement with the histories of the city.

Using a concept from the previous design phase, this exploration relied heavily on the use of collage and analogue to supplement a process hobbled by technical issues.

My review of this stage will be brief due to its similarity to exploration 01.

fig 5.15_Timeline
Exploration 02 - Collage / Overlaying

Collages of rendered digital manipulations and video stills were used in lieu of projections on 3D prints. These placeholders cannot replicate the intense materiality and vibrancy that occurs through projection, and this comparative dullness filters through the project.
Exploration 02 - Analogue

Another procedural crutch is the use of analogue to rationalise the complex meshes generated by manipulations of photogrammetric models. This process increased the distance between the original material and the sample, disconnecting the design from its source and reducing the efficacy of the sample as a method of commentary.
Exploration 02 - Reflection

Again I felt as though this exploration had missed the mark. My design process was abbreviated, and lacked the richness that was present at the installation phase. Where my installation phase concerned itself with how urban space could be remade and given a different voice, the previous two explorations have found themselves preoccupied with form.

I needed to pivot my investigation towards a new direction that prioritises the interpretation and remaking of space over the manipulations of urban form. To achieve this a deeper analysis of site is required, in order to gain a literacy of site that can lead to thoughtful lines of inquiry. The city, by its very nature is incomplete (Sassen, 2013, p. 209) and the relationship between the established histories of a city and the potentialities of its incompleteness is the space that I hope to explore further at this scale.
Exploration 03 - Introduction

This exploration narrows its focus to an extensive investigation of façade, seeking to engage with the language of the neo-classical Bank of New Zealand Building via elevation. Through the manipulation of the building’s façade I hope to twist its speech into soft forms that can coalesce into forms that occupy the space between new and old, exploring the potential of remaking.
Exploration 03 - Facade Manipulations

Photographs of the façade were manipulated in a scanner to distort its form, pulling at the logic that assembled it.
Exploration 03 - Generational Samples

Redrawing the façade of the building, was an essential part of this process. Drafting the façade formed part of my site investigation as I explored its assembly in detail, and it provided me with a literacy of site that was not present in my previous investigations. As much as the façade projects order and logic, close investigation reveals the leaps that have to be made to accommodate its rhythms.
The drafted façade was printed and manipulated via a scanner. Some manipulations were scanned again creating samples that slowly drifted further and further from the logic of the original. Through this a narrative was formed, centred on the distortion of the original away from the familiar patterns of the classical.
fig 5.29_Drafted Facade
fig 5.32_Seqential Arrangement of Manipulated Facades
Exploration 03 – Generational Samples

The sequential distortions of the colonial façade were arranged in sequence and then lofted to create a form that demonstrates the manipulation of the elevation over time. These forms are then arranged onto the site to create inhabitable clusters.
Exploration 03 – Moving On

At this stage the mid-scale phase was stopped in order to move onto the next phase. This investigation, whilst not successful at producing a successful building, had helped to develop methods of sample manipulation that would guide my process in the next phase.
fig 5.37 Scanned Facade
Mid-Scale – Conclusion

The mid-scale was developed as a method of devising methods of sample manipulation that could act as projections of alternative social / spatial relationships. By this measure, it was only mildly successful. The first two designs produced for it were the product of a pre-occupation with the manipulation of photogrammetric fragments. This process could be regarded as digital spoliation, the digital extraction of architectural fragments, and the direct reuse of them in another structure. This deviated from the rhizomatic processes that were employed for the installation, focussing less on developing new spatial connections, and more on the implications of rearranging the colonial language of the Old Bank Building. Spoliation was explicitly critiqued in the Case Studies chapter of this thesis, which argued that its concern with semantics made it less favourable than the other processes that were reviewed (when considered in relation to my research proposition).

The third exploration’s brief investigation into the Old Bank’s façade was more successful. The façade was sequentially manipulated via a scanner until its language was no longer comparable to the original. The forms generated by this process were spatially more interesting that the reductions of the previous explorations. However, due to time restrictions, this process could not be pushed further, but its development was essential in providing orientation for the next phase.

Adopting the techniques of scaling and superposition would have assisted these mid-scale explorations. The installation used these techniques to develop a richly layered image of site, and their omission here is jarring. During the next phase it will be important to look at the work of Corner and Eisenman to help orientate my process. Both use scaling and superposition to draw out abstract qualities of site (Dovey & Ristic, 2017, p. 17), and in Eisenman’s case, use these to imagine fictions of site (Whiteman, 1986). The large-scale project will also need to further develop the mixing of sampled material with the realities of the architectural project. This process of mixing is described by Van Toorn as an essential foil to the narrow viewpoint of the projective project (Van Toorn, 2004, p. 30). At this scale, it has been addressed only in passing. Samplings engagement with the architectural project extended only so far as the siting of the forms produced by it, the next phase will have to explore this relationship between the sample and reality in greater depth.
6.0 LARGE SCALE PT.1
INTRODUCTION

The third project of this thesis seeks to further develop the diagrammatic processes that characterised the installation via a redevelopment of Frank Kitts Park, Wellington. Where the mid-scale inquiry focussed upon form manipulation and semantic meaning, this scale aims to use sampling as a means of exploring alternative site occupations. Most importantly, this scale mixes samples of existing site data with external information. The introduction of alien information into the architectural project, and its treatment as a legitimate actor in the design process is performed to undermine the projective’s market based model of production (Spencer, 2016). Roomer Van Toorn describes the relationship between existing site information and the fictions of the sample as such: “It is the interaction between the dream of utopia and reality that could help a projective practice develop a new social perspective” (Van Toorn, 2004, p. 30).

Similar to the installation this project engaged with a wide variety of sampled material, which coalesced onto site in order to produce a final design. For the sake of brevity, this work is presented in a linear fashion. However, it is important for the reader to note that in the same manner as the installation, this design was the product of multiple design processes that ran in parallel to one another. This is partially a result of the design as research approach that this thesis adopts, it was useful to engage with several lines of design inquiry at once, as each provided information that could be used to inform the other and vice versa.

AIM

The aim of this scale was to present a speculative design process that raised questions about the social operations of projective architecture, and sought to develop ways of designing architecture that balanced the modern requirements of performance and instrumentality with the social conscience that the projective lacks (Van Toorn, 2004, p. 30).

METHOD

Similar to the installation, this phase makes a series of inquiries into a site using a variety of different mediums. It furthers the techniques used in the installation though, by engaging these diagrammatic processes as generators of form. More complex methods of sample manipulation are employed, using programmatic design tools to manipulate data and combine disparate data sets. This chapter draw heavily on the diagrammatic processes of scaling and superposition developed by Peter Eisenman (Eisenman, 1999), using them to help and develop new fictions for Frank Kitts Park.
Frank Kitts Park - Brief History

Originally known as Marine Park, Frank Kitts Park was constructed in 1974 on an infilled area between Queens Warf and the Lagoon (O’Byrne, 2016, p. 78). It was laid out as a flat, empty park that retained port access to the water’s edge, and had little pedestrian access. This was due to the influence of the Wellington Harbour Board, who required that waterfront developments did not impede the commercial uses of the harbour (O’Byrne, 2016, p. 78).

Re-development of the park in 1990 (O’Byrne, 2016, p. 97), transformed it into a multi-levelled space that contained a playground, event space, memorials, carpark, and shopping areas. Incorporated into this design was a wall along the seaward side of the park that blocked winds coming off the harbour and provided a safe vantage point to view the starting grid of the then annual Nissan 500 Street Car Race (O’Byrne, 2016, p. 98) (The race was discontinued in 1996 (O’Byrne, 2016, p. 98)). The re-development kept the original footprint of the park, leaving a substantial pedestrian walkway between the park and sea. Today, Frank Kitts Park hosts cultural events throughout the year and serves as a co-ordination space for competitions like Dragon Boat Festival.

General Site Analysis

Points of Interest

1. Len Lye’s Water Whirler
2. Spanish Civil War Memorial
3. Love Lock Bridge
4. Albatross Fountain

Primary Pathways

Motor Vehicle

Pedestrians / Bike
General Site Analysis

Interaction with Sea

View shafts to sea

Points of interaction with the sea

Pre 1900 waterfront

Barriers to the Sea

Currently Frank Kitts Park sits at odds with the council’s development goal of a strong city to sea connections (Wellington City Council, 2013, p. 12/3). Several barriers are presented to any pedestrian trying to access the waterfront.

Six lanes of traffic at Jervios Quay

The sea-facing wall at the eastern side of the park.

A sea wall that operates as both an interface with and a means of dividing the city and sea.
GPS Data

GPS data is a memory of experience, a method of accessing the innumerable records of a city that allows us to examine the experience of the city with a fine tooth comb. It is capable of acting as a counterweight to the reductive nature of the Site Plan. Where the maps on the previous pages show simple movement paths, GPS data reveals diverse interactions with site.
Photos publicly uploaded to Google Earth provide a very personal experience of site, wherein a user volunteers information about what was interesting about their experience.
fig 6.07_GPS Traces and Photogrammetric Data
FIG. 6.08 GPS Traces and Photogrammetric Data
From Index to Diagram

Photogrammetric fragments of Frank Kitts Park were mapped against public-facing GPS traces. This exercise exposed the limitations of GPS as a method of generating records. Interactions between GPS paths and photogrammetric fragments do not reveal an expression of human scale, but instead display the granular nature of the technology. From this arises my first challenge of this project: If I intend to use digital technology to circumvent traditional methods of architectural inquiry, I will need to contend with the extensive (that is to say, neatly measurable and divisible) nature of any digital record. Rather than returning a true record of an interaction between a person and the city (with the details and eccentricities that entails) GPS data creates a digital approximation via the recording of points mapped by latitude and longitude. The end result of this approximation being an index that sits halfway between the cold sweep of the masterplan and the thrum of inhabiting the city.

To circumvent this framework, I must shift from the index to the diagram. Diagramming contains the potential to break the indexical nature of the digital record via the superposition of new texts, as demonstrated by Eisenman in *Diagram Diaries* and the *Romeo and Juliet Project* (Eisenman, 1999, p. 171; Whiteman, 1986). The introduction of new texts into the diagram questions the representational and sequential ambitions of the original index (Somol & Whiting, 2002, p. 74), and allows the designer to evade the top-down reasoning of the masterplan. Through this superposition of new texts diagramming contains the potential to act as a generative device that breaks the traditional relationship between the subject/author of the work (Eisenman, 1999, p. 168).
fig 6.09 Mixing GPS Data
6.0 LARGE SCALE DESIGN PROCESS
New Sites / Superposition

My site analysis had led me towards exploring the notion of Frank Kitts Park’s role as a connector between the city and the sea. This informed my search for new texts to add to my diagrams of site, and I sought out GPS traces from locations that had a strong connection between an urban environment and the sea. Venice, Amsterdam, and Hong Kong were chosen due to their strong connection to water wherein bodies of water are treated as an extension of a cities infrastructure. Superposition is used to overlay these new texts allowing new readings to emerge, degrading the logic of the original index.
Programmatic Diagramming

Mapping the densities of the combined Venice / Wellington GPS traces further removes the data from its extensive origins, viewing it instead as an intensive system of pushes and pulls. Intersections between the original and combined point maps show points of interaction, indicating where the new collides with the original (and also where it pulls apart).

These diagrams were created in Dynamo and Revit by analysing the distance between a grid of points and the points created by GPS traces. Each point in the grid had a vector applied to its Z-Axis correspondent to the total distance between it and its closest GPS traces. This generated a topography that indicated areas of high and low density.
fig 6.15 GPS Data, the Diagram and the Index
**Programmatic Massing / Evading the Index**

The mapping of densities between data was further interrogated by isolating specific density ranges. These isolated densities were then blocked into masses, where the size of the mass was tied to the steepness of the gradient that its point inhabited. This exercise was grounded in my earlier discussions about the indexical nature of GPS data. The superposition of two texts (in this case: GPS data from Frank Kitts Park, and GPS data from a site of waterfront infrastructure) allowed for new readings to emerge from the diagram that are removed from the indexical nature of the original data.

The variations on the following pages show several iterations of GPS data expressed as a series of isolated densities. They were used to examine possibility of using the relationships between unique data sets as generators of program and form.
fig 6.17 _ Massing From Densities
fig 6.18_Massing From Densities
**Scaling Around Densities**

Peter Eisenman uses of scaling as a tool to explore fictions of site in the design of the Romeo and Juliet Project (Whiteman, 1986). Eisenman isolates particular objects / properties and re-contextualises them in a different location at a new scale. The authority of architectural scale is questioned as the drawing is inhabited by two mixed scales, and the superposition of one architectural object above another begins to create complex diagrams that draw out abstract qualities of site. Diagrams 6.19 and 6.20 used the devices of scaling and superposition to further explore the relationship between historical data (my previous GPS superpositions) and contemporary digital records (photogrammetric recordings of the site). The friction between elements that was so evident in 6.80 has been eased through the smoothing of the indexical GPS data via superposition. Now, the photogrammetric fragments of site are free to float on the densities of suggested occupation rather than conform to the rigid tracks of the index.

These diagrams contain the potential to operate as projected alternatives of site, drawing together a wide variety of sampled source material to create a new image of site and the agencies that inhabit it. Sampling enabled the preconceived notions of site to be overcome, and allowed for small suggestions of alternative occupation. Architecture designed in response to these diagrams may circumvent traditional processes, and open itself up to these new and foreign suggestions of occupation, scale, and form that arise from the sampled site.
fig 6.21 Massing Diffuse Maps
**Massing over a Speculative Site**

The outlines of diffuse map fragments taken from photogrammetric models were massed over a conceptual site (see figures 6.19 and 6.20). These masses were then extruded upward to create form. The interior content of the extruded diffuse maps was then projected over form, to re-introduce the detail that was lost during the process of extrusion.

By ignoring the interior content of each diffuse map during the extrusion process an oversimplified form is created. As there is no information other than basic form, the process mimics the simplification of the figure ground. Therefore I chose not to proceed with this method of form generation (even though detail and complexity was reintroduced at a later point), as it began using the same reductive techniques that I was manoeuvring to avoid.
fig 6.22 Extruding Diffuse Maps
Massing Over a Speculative Site

In figures 6.23 and 6.24 this method's preoccupation with extensive properties becomes clear. Although the interior of each diffuse map has been layered over it after extrusion, these discrete forms are visible as the product of a process that hinges upon the exploration of relationships between forms, rather than the investigation of the messier elements of occupation, program, and movement.
fig 6.27_Extraction of Densities for Massing
Arrange Densities Horizontally
Densities of occupation are arranged over a conceptual site.

Smooth Edges

Arrange Vertically
Program is pushed into each density and it is scaled vertically to accommodate it.

Make Solid
Form is created by sweeping solids horizontally over the varying heights of each density.
Scaling and Superposing Densities

By extracting densities of occupation from the diagrams created earlier in this process, the process of form generation begins on a more productive footing. These densities are less concerned with the shape of things, and more concerned with the potential of their interior and its relationship to the exterior. Thus, the horizontal arrangement that was troublesome when massing diffuse maps (6.23) becomes a productive space of exploration which is driven by the compatibility of differing densities, rather than the spatial relationships between discrete objects.
Arranging Densties

The speculative forms created by this process are arranged on site in response to the practical considerations of the project—what program works best where? Where are the primary circulation paths? Which areas receive the best daylighting? What programs will need shelter from the prevailing wind?
Developing Landscape

The landscape that stretches from the southern to northern end of the site was developed using a second technique, in order to extract a new layer of information that the buildings on site could be plotted in relation to.

Like the process used to generate the buildings that now sit on site, the landscape utilises Eisenman’s technique of scaling. In this case though, fragments extracted from photogrammetric models of site are used, rather than the densities developed through the superposition of GPS data. In addition, this process utilises data taken from site and does not sample any other locations. The intent behind this was to place this layer of landscape in tension with the buildings upon it, in a relationship that would hopefully allow the plotting of new relationships between Frank Kitts Park, Wellington City, and the imported site of Venice (specifically Riva Degli Schiavoni).

The process involved extracting fragments of site from a photogrammetric model’s diffuse map, editing those fragments intro detailed drawings of their interior information, and the superposition of these fragments onto site (at differing scales, and locations). These diagrams then had program assigned to their own interiors, which were then interpreted as differing conditions of landscape: Field, wetland, sand, water, tree, and concrete.
**Second Coat of Program**

The existing waterfront edge, pathways through site, and car-parking has been kept exert force backwards on the landscaping. Just as the existing carpark and street layout helped to influence the arrangement of form in conjunction with my conceptual site, the relationship between diagram and site becomes a driver for exploring relationships between the sample and the city that it has been extracted from.

After the landscaping has been finalised, program is assigned to it for a second time. In this instance though, a loose program is assigned to strata that run along the north south axis.
fig 6.43_Design Review 02_Section A-A
At the conclusion of Design Review Two, I feel that this scale has been far more successful than the previous. In part, this is because of a more rigorous application of processes that were grounded in my key research objectives. But mostly, the relative ease that the design process moved with at this stage can be attributed to a greater amount of energy being directed towards ensuring that my research during this phase held a strong connection to the work that was done at the installation scale.

However, many of the issues that were present at the mid-scale – namely the oversimplification of form – are found at this scale too. This is most evident in the interior renders of the ferry terminal, which show a prosaic, practical space which jars in relation to the ambitions of my design process. On one hand, I believe that this is an artefact of a design process that has not reached its conclusion, and that careful work performed before the final design review will bear a design that is much richer. On the other, this is also an issue of lazy representation. The image presented did not take full advantage of the space created, and when compared to the exterior render that is presented in this chapter finds itself lacking in visual interest. These concerns were echoed in feedback during my review, which centred upon how the richness of my design process could be translated into the built form.

The next stage of this phase will focus on re-developing the landscape, and adding more detail to the proposed ferry terminal. The landscape generated at this stage lacks any real engagement with concepts such as circulation, public transport integration, and interaction with the sea. The current buildings on site also lack in these areas. The ferry terminal in particular needs to be designed to a finer grain in order to function as a piece of transport infrastructure, and practical concerns such as the location of bathrooms and the legibility of space must be addressed. It is important to keep in mind that the interaction between the projections of occupation proposed by my sample based process and these practicalities of the architectural project are the crux of this thesis.

To conclude, I am satisfied with the development of my design at this scale. It has been much more successful than my experimentations at mid-scale, and I have been able to produce work that relates directly to my investigation of the sample as a method of developing alternative social / spatial arrangements in the city.
6.0 LARGE SCALE
PART 02
Large Scale Pt. 2 Introduction

This final stage of design focusses on the development of a new landscape for the park, and the detailed design of the ferry terminal. A new process for designing the landscape was devised that pays more careful consideration to the selection of samples, and the reasons for their manipulation and arrangement. The previous attempts at developing landscape from sampled diffuse maps had resulted in a site that did not respond to its context, here, sampled GIS data (storm and wastewater pipes) is used. This data’s relationship to the original site is manipulated through a series of scalings, producing a framework for a new site that is influenced the movement of waste water to the sea.

Developing an Alternative Landscape

This new process of landscape development sampled GIS data (in this case: water services) as the seed for generating a new topography for the park. The data was removed from its original context and placed through a series of superpostions and scalings to create a distorted grid. This grid was then extruded upwards to form a landscape. The freshwater and wastewater pipes of the original sample are infrastructure that is designed to move waste to the sea, their traces become landscape that copies this movement, contours of the landscape cut channels from the city to the sea.
fig 6.46_Scaling GIS Data
Developing an Alternative Landscape - Increasing Detail

The landscape developed in fig.6.47 was again placed through a process of scaling and superposition enlarging it to fill the whole site. To develop a greater level of detail, the developed landscape is placed back into the context of site. From here, considerations such as circulation, program, transport interfaces, commercial requirements are bought into play. The diagram on the left shows the introduction of additional circulation spaces in red, and the follow figure demonstrates the interfacing of this landscape with the existing carpark.
The final design is the product of a process that explores the relationships between discursive and mutual knowledge (Awan, Schneider, & Till, 2011), between the alternative realities proposed by sampling and practical realities. It proposes that sampling can be used to explore hypothetical social / spatial relationships, and then the mixing of these projected realities with the practicalities of the architectural project will empower the creation of architectures that engage with these projections in a meaningful way.

Frank Kitts Park has been almost completely erased and the replaced with a new figure that pushes outward towards the sea. The primary masses of each building float off the ground, opening up viewpoints and removing restrictions to movement. Program is encouraged to spill out from the rigid demarcations that define themselves in plan. This section will discuss three elements (landscape, market, ferry terminal) of the project, the process used to create them, and the outcome of this process in relation to its social / spatial operation.
fig 6.54
**Landscape**

*Process* – The landscape was developed through a process of scaling and superposing GIS data. In this case, data for wastewater and storm water piping was used. These data sets were selected because of their relation to the sea. Storm water drains push from the city to sea, moving water from drains out to the shoreline. Conversely, Wastewater drains move black water from human development away from the sea. Presented as a diagram these different traces represent movement towards and away from the sea. Scaling and superposing these traces forms an offset grid for generating a landscape that simultaneously pushes towards the sea, and turns back into circulation corridors.

*Form* – The grid described above has been extruded up and down to create channels that feed to and from the shoreline, linking the circulation spaces at the eastern and western sides of the park. Where the original design laid up barriers to the sea, these have been rotated to open up views and increase permeability. The design covers over the existing six lane highway, privileging the pedestrian and cyclist. The existing carpark structure has been retained, and acts as a method of orientating the generated landscape against the site.
Market & Pavilions

Process - The market and its surrounding pavilions were developed via a diagrammatic process that sought to suggest new ways of occupying Frank Kitts Park. Sampled movement data (GPS) was mixed together and then broken down from its indexical origins into a suggestion of potential site occupation. These projections were (re)sampled and massed together to form an assembly of program. This assembly then coalesced into form through a process of sweeping, extrusion, addition, and subtraction.

Form – The primary mass of the market floats 3.0m above ground level, allowing free passage through the space, and encouraging stalls and customers to spill out into the surrounding park. Due to this the market program is able to push out towards the shoreline, or back in towards the city depending on its needs. The lack of formal barriers ambiguous interventions encourage a relaxed approach to occupation and place making, the organising principle behind the space is bottom-up not top-down. In this way the structures are a trace of their sample based process, where detailed movement data was reduced from a rigid index to a suggestion of occupation.
**Ferry Terminal**

*Process* – The terminal was developed using a process similar to that described for the market and pavilions. However, the infrastructural requirements of the program placed pressures on the terminal that did not existing for the other structures. Where the market is loose and encourages varied methods of occupation, the terminal directs its users down specific pathways, and has performative requirements that necessitate the clear demarcation of space using formal elements. Therefore, once the initial process of form generation was completed, more prosaic requirements such as circulation, ticketing, bathrooms, offices, and ancillary spaces were developed. This can be understood as a balancing of the discursive process, with the mutual knowledge that is necessary to create an infrastructural space that operates effectively.

*Form* – Similar to the other structures placed on site, the main body of the terminal floats above ground level. A woven façade removes the permeability that is present in the market, instead channelling users into a single entrance / exit. Seating and ticketing booths float freely in the waiting areas. A central core breaks the circulation into two streams, the southern side feeds the ferry landings, whilst the northern shifts disembarked passengers towards the entrance. The formalism of the terminal is a counter point to the loose programming of the market and pavilions, the ferry terminal acts as a structure that the other activates on site can be organised around.
DESIGN REFLECTION

This new design for Frank Kitts Park engages with a process of sampling with the intent of subverting the neo-liberal tendencies of the projective project (Awan, Schneider, & Till, 2011, p. 39). The pragmatic realities of site are extracted and remixed with foreign information to generate alternative occupations, then these alternatives are fed back into the realities of the architectural project. The mixing of these discursive and practical bodies allows for a design to emerge that is the result of a negotiation between them. Sampled material is tempered by practicalities, and new practicalities emerge via an interaction with samples. As a final design, this re-development of Frank Kitts Park uses the technique of sampling to argue that discursive inquiry and architectural productivity are not mutually exclusive, that one enriches the other, and that by mixing these knowledges, meaningful social / spatial arrangements can be proposed.
7.0 CONCLUSION
1.0 INTRODUCTION
2.0 THEORETICAL CONTEXT
3.0 CASE STUDIES

4.0 INSTALLATION
5.0 MEDIUM SCALE
6.0 LARGE SCALE

7.0 CONCLUSION
DISCUSSION

This section critically discusses the inquiries presented in this thesis in relation to the stated research proposition. The research contained in this thesis explores sampling as a technique for developing alternative social / spatial relationships. This research is framed against contemporary discourse that disputes the ability of the projective or post-critical project to develop design proposals that sit outside of a neo-liberal paradigm (Awan, Schneider, & Till, 2011; Spencer, 2016; Till, 2017). The proposition was tested using a design-as-research process, through a series of three discrete design inquires. These inquiries were arranged as a series of increasing scales, moving from and installation, to mid, to large-scale, this encouraged a reflexive cycle of design and reflection that slowly honed my research down to the fine point that is presented in this thesis. Therefore, it is important to note that each design inquiry is a test that—whether successful or not—has helped to inform my research.

The first inquiry, the installation, uses sampling to pull apart an urban site (in this case Left Bank Arcade, Wellington) and reassemble it into a rhizomatic diagram. Sampling was used to investigate relationships between disparate fragments of site, in a method similar to the diagrammatic processes employed by James Corner or Peter Eisenman (Eisenman, 1999; Dovey & Ristic, 2017, p. 17; Shields, 2014, p. 91). A variety of techniques (Photogrammetry, GIS data, video recording) were used to extract information from site, then these digital records were made physical via 3D printing, projection, and laser etching. The final product presented Left Bank Arcade as an assemblage of urban forces, working simultaneously across a range of disparate scales.

The second inquiry, at a medium scale, proposed a redevelopment of the Renaissance Apartments that sit atop the Old Bank Building (located on the corner of Cuba Street and Manners Mall, Wellington). This inquiry disregarded the diagrammatic process that characterised the installation, instead adopting a method of digital spoliation. Photogrammetric fragments of the Old Bank Building were sampled, and then recombined to create new forms. This process echoes the use of spolia in ancient Rome and early medieval times, wherein physical pieces of a building would be repurposed in a new structure to imbue it with semantic meaning. Drawing upon the writing of Sam Jacob (2015), this stage attempted to manipulate digital records (samples) in order to edit their meaning, and the recombine these samples to create a new structure that was an edited record of the original. However, this practice drifted away from my research proposition—which discussed spatial / social relationships—
concerning itself with meaning more than the social operations of architectural space and form.

The final inquiry, at a public scale, was a redevelopment of Frank Kitts Park (located on the Wellington City Waterfront). This inquiry bought the diagrammatic process of the installation back into the fold, developing a new proposal for the site via the mixing of the practicalities of the architectural project, with the alternative realities proposed by sampled material. The mingling of these two disparate processes allows each to empower the other, the projections of the sample assist the practicalities of the project in imagining alternate realities, whilst the practical stops the discursive from disconnecting from reality (Awan, Schneider, & Till, 2011, p. 32).
REFLECTION

Through a series of three design inquiries, the technique of sampling was used to develop spatial relationships in the city that sat outside the neo-liberal framework that characterises the projective project. This amendment to the projective project was achieved by grafting the understanding of agency proposed in Spatial Agency (Awan, Schneider, & Till, 2011) to Somol & Whiting’s proposition (2002). Spatial Agency proposed a more complex understanding of the interrelationship between the practical demands of the architectural project, and the discursive realm where “knowledge is developed away from the immediate demands of the everyday” (Awan, Schneider, & Till, 2011, p. 32). The projective project in its rejection of criticality casts aside all forms of discursive knowledge, considering them inhibitors of architectural productivity (be it spatial, social, or economic) (Baird, 2004). Spatial Agency (Awan, Schneider, & Till, 2011) understands these figures of knowledge to both be important actors in the development of an architectural project, and, furthermore, states that they are a constant state of flux wherein practical (or mutual) knowledge constantly feeds into the discursive realm and vice versa. Romer Van Toorn describes this interaction as an essential amendment to the passion for the practical that embodies the projective, stating: “It is the interaction between the dream of utopia and reality that could help a projective practice develop a new social perspective” (Van Toorn, 2004, p. 30).

This project uses sampling as a tool of developing these dreams, a method of pulling apart reality and reconfiguring it to imagine new potentials. Sampling, though, is a broad term; it encompasses a variety of methods that engage with a multitude of technologies. Due in part to a lack of architectural discourse on the subject of sampling, portions of this thesis concern themselves with exploring the operation various sampling techniques, at the expense of investigations into their spatial / social outcomes. This is clear in the second design inquiry (mid-scale) where there is a preoccupation with methods of manipulating sampled form, instead of a focus on how these sampled fragments work together to develop alternative spatial / social arrangements. The final inquiry (public-scale), brings the research back on track focussing less on operation and more
 Representation of process is another area which could have undergone further refinement. The re-development of Frank Kitts Park was the result of a series of data manipulations, and the convergence of these manipulations onto site. Whilst the reasoning for this process is detailed, its operations are somewhat opaque, and it is unclear what sampling techniques are being used at each stage of the process. This inhibits the projects ability to clearly communicate the role of sampling in developing alternative proposals for the site. It is clear that sampling is being used, but the specifics of its operation are obscured. There are two potential ways of resolving this issue, firstly the development of a timeline that outlines what technique is being used where. Or, secondly, the narrowing of the thesis’ scope to just a small handful of sampling techniques. Both of these approaches would have assisted in improving the clarity of the work presented in this thesis.

Narrowing the scope of the final design inquiry would also have assisted in increasing the clarity of the work. Frank Kitts Park is a large site and the scope for its design is wide, encompassing transport infrastructure, commercial interests, public amenity, and the complex interactions that is has with the urban sites to its north, south, and west. A smaller site, with more focussed concerns would have allowed the testing of sampling at a slightly smaller scale allowing the design process to scale up and down from site-wide urban views, to 1:1 daily interactions. The choice of Frank Kitts Park was beneficial because it is a site where a variety of design concerns converge, but, reducing these concerns would have allowed this thesis to be more specific about the social operations of a sample based architecture.
FUTURE DIRECTIONS

This research takes a step forward in the development of a body of work that positions sampling as a legitimate architectural actor, one that has historical precedence and a wide variety of potential future applications.

Looking forward, this research would benefit from a better understanding of what social / spatial outcomes are desired. This thesis defines these outcomes by what they are not (i.e. not constrained within a neo-liberal framework), because a definition of what is desirable is harder to develop. In 2004 Roomer Van Toorn lamented that architectural research into this area was sparse, “What should fascinate projective practice is how it might inflect capitalism towards democracy. The only problem is that so far almost nobody has been prepared to ... carry out research into what democracy could mean today in spatial terms” (2004, p. 30). However, in 2017, discourse in this area richer. Specifically, the research and projects presented in Spatial Agency (Awan, Schneider, & Till, 2011) provides a catalogue of ideas that could have helped to define specific social / spatial outcomes and processes. Spatial Agency discusses social ideas such as appropriation, delight indeterminacy, sharing knowledge, subverting and opposing, and visibility of social issues in relation to spatial outcomes (Awan, Schneider, & Till, 2011, pp. 69-82). Future projects that engage sampling would do well to thoughtfully analyse design outcomes in relation to criteria such as these.

This low level of engagement with texts such as Spatial Agency (Awan, Schneider, & Till, 2011) can be traced to the research by design approach that this thesis takes. A design first ask questions later approach works well in some applications, but this topic would have benefitted from a greater mix of research methodologies. The early introduction of qualitative research methods would have assisted in developing specific desired social / spatial outcomes. Having these outcomes well defined at the beginning of this thesis may have allowed the research to be highly focussed, and take a less scattergun approach to investigating the technique of sampling. In addition to this, greater engagement with the concept of sampling from a music / media perspective may also be beneficial. The sample is a prolific contemporary actor in these areas, and the
CONCLUSION

This thesis used sampling to develop design processes that negotiated between projections of new occupations, and the realities of the architectural project. Here, negotiation is presented as a counterpoint to the innovation of the projective project which operates via a “different, more entrepreneurial logic where, by rigorous analysis, opportunities are discovered that can be exploited” (Speaks, 2002). By amending the projective’s exploitative logic with negotiation, a productive space was created where the social consciousness of discursive discourse could empower practical engagements and (vice-versa). Romer Van Toorn describes this negotiation as a necessary foil to the market instincts of the projective, writing “It is the interaction between the dream of utopia and reality that could help a projective practice develop a new social perspective” (2004, p. 30). Through this symbiotic relationship between sampled material and realities of site, an architecture emerged that was not critical, but instead projected alternatives spatial / social relationships that sat outside the neo-liberal framework of the projective project.
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FIGURE LIST

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All figures presented in this document have been previously assessed.


