utu.
(restoring balance)

Figure - 1 Taranaki, Digital Photograph

utu.

iv

(restoring balance)

An inquiry into the formal and spatial qualities
of ritual in Te Ao Māori.

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Preface

As Man Disappears

Whatungarongaro te tangata toitū te whenua - As man disappears, the land remains.

Tikanga Māori is known as the first law of Aotearoa. Growing up I came to know its meaning as simply “the way things are done”. Writing this now I’m struck with the realization that I had never searched for a dictionary definition for tikanga until attending university. Tikanga has been defined as a custom, habit or lore. Tikanga is also something with which Māori culture may not survive without. There is a saying Te Reo Māori me ngā tikanga, which means that tikanga and te reo Māori are not separate from each other, but go hand in hand, no custom without language and no language without custom.

“Some earlier accounts of how and why individuals behave they do were based on ideas which often began with a creation story to explain the presence of people in their specific environment and on understandings of human behaviour as being connected to some form of external force”.¹

To understand a Māori conception of space we must go back to the stories of creation. Te Kore, nothingness, the oppressive blackness that prevailed during the tight embrace of Ranginui the sky father and Papatuanuku the earth mother. The truer meaning of Te Kore is “unlimited potential for being”² the place where creation comes from. Their sons, squeezed so tightly between them began to debate on what actions to take. But in the end it was Tāne who lay on his back with his feet to the sky and pushed, thus bringing Te Ao Mārama the world of light and understanding. Rangi and Papa were saddened by the separation and wept for each other. Nonetheless this allowed the sons to be free and create life on earth as well as in the skies. So, when a Māori person looks to the environment they see the embodiment of this story surrounding them.

¹ Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 100.

² Barlow and Wineti, *Tikanga Whakaaro: Key Concepts in Maori Culture*, 55.

JOHN FEATHER (1853-1938), *Parihaka*, c.1898,
black & white photograph, 220x165mm.
Collection of Taranaki Museum

Utu is a word often assimilated with exacting righteous revenge upon another human, and this is one way in which utu is achieved. But at its essence, the concept is about maintaining a balance between all things. Anne Salmond writes “Utu was a human way of protecting mana”³ yet the concept must have extended further to include the environment and components of tikanga. One example is rāhui, which acts as a semipermanent form of tapu restriction in an area or on a particular resource. There were many reasons for restrictions historically such as conservation of wildlife numbers or, in the case of a human death in the area, respect for the mate (death). These customs are still a functioning part of society today and not only help to acknowledge events that have happened but to also maintain utu in the ecosystem.

Tapu and Noa are two elements of the rituals of encounter which are unseen yet completely underpin a spatial understanding of ephemera. “The land has tapu as well as the oceans, rivers and forests, and all living things upon the earth.”⁴ Let it be said then, that Tapu and Noa are opposing principles and are to be kept separate at all times to maintain utu. Tapu is known as “sacredness” and is historically attached to the male gender with many rituals being carried out only by men, e.g. whaikōrero. Therefore the opposite condition Noa is commonly associated with the female gender, one example is cooking food, which was used to take the tapu away from guests who consumed it. In this sense neither is more important, as each condition is necessary. Whenever there is tapu, there is also the need to whakanoa: to take away the tapu and give a state of noa. Therefore women in Māori society (mana wahine) are extremely important.

In te reo Māori the word for both space and time is the same: wā. Everything that takes place is connected through that entity. This goes against the traditional Western notions of space and time. Linda Smith writes “space is often viewed in Western thinking as being static or divorced from time”⁵ as a mechanism for sense making just as the people of the Pacific did conversely.

3 Salmond, ‘HUI – A Study of Māori Ceremonial Gatherings’, 13.

4 Barlow and Wineti, *Tikanga Whakaaro: Key Concepts in Māori Culture*, 128.

5 Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 109.

JOHN FEAVER (1853-1938), *Māori man in semi-traditional dress, Parihaka*, c.1898, black & white photograph, 220x165mm, Collection of Taranaki Museum

Albert Rewhiti talks of the Samoan concepts of Mavae (unfold/spread) and Tofiga⁶ (to gather and appoint) and how they come from the Samoan cosmogenic creation story Solo o le Vā (chant of the beginning of the world) Vā tells us that there are “relationships between the idea and something else in the environment... positions within time and space in which people and events are located”.⁷ There is a social structure which exists there and still connects people of the Pacific to their histories and environment. Much the same as tikanga Māori accomplishes here in Aotearoa.

Māori were traditionally an oral and performance-based society pre-contact, with many of the oral traditions dying out due to colonisation. Therefore, tikanga Māori was never written down or distilled into a solid truth “Embedded in these oral narratives were the notions of place which informed their concept of a cultural landscape; a place informed by narrative”.⁸ Flowing down from creation and into the landscape, tikanga Māori was a way of understanding the world at a human scale and ensuring that the balance of life (utu) was maintained as well as the inter-tribal social structure which reigned in Aotearoa.

This thesis searches for spatial representations of tikanga, in order to discover a new potential architectural language embedded within the traditions of ritual. This is a move away from the current status quo of current Māori architecture, which puts “Māori” next to decoration. I have decided that pōwhiri, or the Māori rituals of encounter will be the source material for my work. Pōwhiri serves as a suitable choice as it has both spatial and temporal qualities to be analysed. The inherent spatiality of Māori ephemera, expressed as a visual language can help to create new narratives in Māori design.

⁶ Refiti, *Mavae and Tofiga: Spatial Exposition of the Samoan Cosmogony and Architecture*.

⁷ Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 105.

⁸ Hakopa, *The Paepae: Spatial Information Technologies and the Geography of Narratives*.

Figure – 3 'Rēkohu/ Wharekauri'. (2020), Digital Photograph

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A huge thank you to my supervisor Chris McDonald, for your calm influence and seemingly infinite wisdom. This thesis has grown tremendously under your watch.

In loving memory of my grandparents Puroku Tunui, Edwina Tunui and Paul Reeves

and to my grandma Beverley Reeves

My family, the Tunui/Reeves' but in particular: Mum, Dad and Roimata for always being so supportive of me.

My friends I've met throughout my studies. Those who went before and those who did it with me. I stand on the shoulders of giants indeed.

And to my partner Phoebe, when I was down you picked me up and when my head got big, you put things in perspective.

Thank you.

KEI TE PAI TAUWI, NĀU TE PĀHUA TUATAHI -
TĀRIA AKE NEI, KEI ĀU TE PĀHUA WHAKAMUTUNGA.
- TE WHITI O RONGOMAI

ALL IS WELL COLONISER, YOURS IS THE FIRST PLUNDER -
SOMETIME SOON, THE RESPONSE WILL BE MINE.

- TE WHITI O RONGOMAI

Abstract

Contemporary Māori architecture in Aotearoa is rapidly becoming 'mainstreamed' within a New Zealand architectural idiom. However, Māori architecture has been narrowed down to surface ornamentation, a handful of motifs and exhausted narratives. This dissonance is owing to the fact that Mātauranga Māori is not at the iho (core) of Māori architecture at a formal and spatial level. Consequently, this thesis aims to expand Māori architectural theory and practice by proposing that elements of tikanga Māori can be understood both formally and spatially in ways that generate new architectural possibilities. The research was conducted as an iterative design process. Three parts of the pōwhiri process are mapped for their underlying spatiality, both in the physical and meta-physical worlds. The ephemera are translated through a design methodology which reveals what these patterns could mean for contemporary Māori architecture. The three rituals: karanga, wero and hongī are explored as a series of design experiments which follow the same workflow. Each design experiment developed a range of different architectural techniques for expressing tikanga Māori. The use of speculative drawing/ mapping techniques is the principal way in which the spatiality of the ephemera is excavated and interrogated. The following research is not tied to an architectural site. The architecture is not based within a specific context, rather it is born of context, conceiving an architecture of the ephemeral and atmospheric qualities of ritual. This research acknowledges the Māori concept of tuakana-teina (elder sibling-younger sibling) knowledge exchange and draws a parallel with architectural design methodology. This thesis suggests a method of speculation for future generations of architectural designers in Aotearoa to build upon with their own whakaaro (thoughts).

THE QUESTION OF ARCHITECTURE IS A SPECIAL CASE OF THE THEME OF RITUAL AND ART, SINCE IT IS ABOUT THE ORCHESTRATION OF (PERFORMATIVE) SPACE - THE FRAMES WITHIN WHICH PEOPLE WERE CONSTRUCTED AS RITUAL SUBJECTS - AS OPPOSED TO THE SPECIFIC ARTIFACTS USED BY PEOPLE WITHIN RITUAL. IN GENERAL, WHEREAS ARTIFACTS WITHIN RITUAL ARE SO OFTEN MANIPULATED BY BODIES, THE SPECIAL CASE OF ARCHITECTURE, ALONGSIDE LARGE-SCALE SACRED TOPOGRAPHIES, RELATES TO ITS ENCLOSURE OF BODIES WITHIN A SPACE AT LEAST POTENTIALLY AND ON OCCASION RESERVED FOR RITUAL ACTION. MOREOVER, INSOFAR AS ARCHITECTURE IS AN INVITATION INTO AND AN ANNOUNCEMENT OF SACRED SPACE, IT SERVES A MATERIAL FUNCTION ANALOGOUS TO SOME QUALITIES OF RITUAL ITSELF. NOTABLY, INSOFAR AS RITUAL IS ABOUT LIMINALITY AND THE ARTICULATION OF BOUNDARIES BETWEEN SACRED AND PROFANE, ARCHITECTURE IS POTENTIALLY ONE OF ITS SUPREME MATERIAL FORMULATIONS.

- JAS ELSNER

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Introduction

“It appals us that the West can desire, extract, and claim ownership of our ways of knowing, our imagery, the things we create and produce, and then simultaneously reject the people who created and developed those ideas and seek to deny them further opportunities to be creators of their own culture and own nations”.⁹

Through this work, the rituals pertaining to pōwhiri are seen as a bodily representation of the spatiality of tikanga Māori. The rituals of encounter which make up the pōwhiri are events built upon intricate layers of understanding in the physical and meta-physical worlds. We can grasp the spatiality of the rituals through re-imagining, tracing and interpreting the temporal qualities of ephemera.

In the face of ongoing colonial definition of Māori space, this thesis re-imagines the spatiality dwelling within Māori ephemera and translates these phenomena into an architectural language. This thesis acknowledges that ritual and performance constitutes an intrinsic part of Te Ao Māori, and through these practices the culture is able to survive. The thesis seeks to expand our understanding of Māori space and explore its potential to inform contemporary New Zealand architecture.

This thesis explores this idea through the study of three rituals pertaining to pōwhiri: kāranga, wero and hongi. Three clear design experiments are undertaken for each ritual. It questions how elements of contemporary tikanga Māori can be expressed both formally and spatially for each through a seven-stage design method employing cartographical studies, speculative drawing, symbolism, physical and digital modelling techniques culminating in an architectural outcome and spatial observations for each ritual.

⁹ Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 30.

Thesis Scope

Te Kore (an architectural seance)

This thesis employs design-research to situate itself in the realm of formal speculation. Drawing becomes a tool for excavating the spatiality of ephemera in Te Ao Māori. The investigations contained within this research are expressed as observations in drawing, a technique to reveal the unorganized potential of ephemeral margins.

The drawings produced within this thesis are based within a “limbo”: a world of imagination called Te Kore, the known concept in Te Ao Māori of what (non)existed before creation. These drawings seek to defy the logic that normally dictate form and relishes in the poetry of reflexive spatial relationships ¹⁰. This research generates a speculative methodological lens for unveiling the ephemeral spatial qualities of Māori ritual. It seeks to challenge wonted presumptions of the event, context and occupants through the understanding of tikanga Māori. Drawing is seen as more than a medium of representation; it transforms formal understandings, space, time and ideas. Therefore, the traditional architectural notions of site context, programme, construction costs etc fall outside of the scope of this thesis. This allows for the architecture to become free from material restraints and allow for the drawings and architecture to transcend traditional conventions. There was also the additional task of preparing for the NZIA Student Design Awards, which manipulated the scope of work due to time constraints and preparation for the presentation. This didn’t necessarily change the nature of the project, but it progressed my thinking further than if I did not compete.

¹⁰ Spiller, *Drawing Architecture*, 118.

The drawings produced in this thesis are borne of the belief that architecture has much left to discover and that the architect can make drawings that transport him or her into a form of séance ¹¹. The drawing becomes an essential part of architectural production; part of a method or process as opposed to stand alone works of art ¹². Architectural drawing therefore becomes the critical method of investigation, distancing the architect from the construction site and redefining her (him) as an analyst of spatial phenomena better grasped and investigated through drawing and text¹³. My process begins with the drawing as a way of unfolding spatial potential; re-making and re-claiming conceptual cultural space. The mapping of ephemera through drawing does not become about projecting power-knowledge, but seeks to become an instrument of architectural liberation. The method seeks to neither reproduce nor impose but rather to uncover realities previously unseen or unimagined¹⁴.

¹¹ Cook, *Drawing: The Motive Force of Architecture*, 177.

¹² *frascari, Hale, and Starkey, From Models to Drawings: Imagination and Representation in Architecture*, 5.

¹³ Haralambidou, 'The Allegorical Project: Architecture as Figurative Theory', 118.

¹⁴ Corner, *The Agency of Mapping: Speculation, Critique and Invention*, 213.

Methodology

Finding the Balance

“Architecture is not only a matter of construction... It is about fusing irreconcilable dimensions, analysable in geometric terms and practical terms, but also in dimensions that are ineffable and worldly”.¹⁵ (Libeskind, ‘3 Architectural Space’, 46.)

Research by design is the chosen method of working for this project. Peter Downton writes “knowing is embodied in the outcomes of enquiring. It transforms and evolves as collective knowledge of design provides a basis for learning”.¹⁶ The design methodology in this project forms multiple enquiries based upon a single research question. The enquiries are explored thoroughly through the design process.

This thesis proposes a staged design methodology as a means for translating three stages of the pōwhiri into architectural form and space. The method manifests as a by-product of research by design. The same method is used for all three rituals. Three vastly different outcomes are produced, which can be seen as a testament to this methodology. There is an amount of feedback from discoveries throughout the process which informs the overall method for all three rituals.

Downton’s aforementioned notion of the design methodology as a ‘basis for learning’ draws parallels with the Māori concept of tuakana-teina (elder sibling-younger sibling) knowledge exchange. Peter Walker explains “This concept acknowledges that knowledge is tapu (sacred); people were never meant to be gods over knowledge, they were meant to serve it”.¹⁷ By creating a design methodology for this thesis, it creates a blueprint for future Māori designers to build upon this work with their own whakaaro about Māori space.

¹⁵ Libeskind, ‘3 Architectural Space’, 46.

¹⁶ Downton, *Design Research*, 131.

¹⁷ Walker, ‘Partnership Models within a Maori Social-service Provider’, 159.

01

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02

03

This thesis takes the approach of using iterative drawing and modelling within a feedback process to reach design outcomes. Each of these outcomes is then analysed to inform the next step in the process of excavating the spatiality of Māori ritual. By the nature of this process, unforeseen outcomes are embraced and incorporated into the process to enrich the building of a spatial repertoire. This is a process akin to that of Daniel Libeskind, who said of his own method: “These are drawings that explore different types of experiments where there is a connection between the wildest intuition and something that can finally become an object”.¹⁸

There are moments of breakthrough in the design process. An insight. An understanding. If recorded, this knowing becomes knowledge.¹⁹ Downton’s statement suggests that the design process is the catalyst for architectural research and is accountable for the final outcome of a project. My own method evolved rather organically throughout this thesis and consisted mainly of cartographical studies in both two and three dimensions, mixed media speculative drawing, charcoal, physical models, digital modelling and mixed media representational drawing.

To begin the process, hybrid speculative mapping (01) was used to articulate the context of the selected Māori ritual, and the videographic points of observation (perspective). These include small format images in both two and three dimensions, working in conversation to translate the narrative of the ritual from non-static video footage to static speculative compositions.

¹⁸ Libeskind, ‘3 Architectural Space’, 55.

¹⁹ Downton, *Design Research*, 97.

04

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CLOAK

KOROWAI

05

06

The process then becomes about mapping the spatiality of the ritual through the simple tracing of movement with a pencil (02). These seemingly simple excavated geometries are then interrogated through a rigorous speculative drawing process where geometries are examined and extracted (03 - 05). The drawings produced are then re-drawn through the medium of physical modelling, bringing them a step closer to tangible architecture (06).

The final outcomes are the marriage of drawing and physical modelling, expressed as mixed media representational drawings. The mixed media style blends the pencil and charcoal with the editing capabilities of the computer to create images that stem from a search for space and form within the underlying spatialities of Māori ephemera (07).

07

Te Reo o ngā Waitohu/ The Language of Symbols

Hundertwasser's Contribution

"Pictures for me are gateways, which enable me, if I have been successful, to open them into a world which is both near and far for us, to which we have no admission, in which we find ourselves, but which we cannot perceive, which is against the real world.

Our parallel world, from which we remove ourselves in one respect" .²⁰ (Hundertwasser, 120.)

Architecture has played a large part in the ongoing colonization of Māori motif. During settlement these new symbols were likened to traditional British floral motifs. Superficially these composite images were novelties for consumption by the metropolis. Yet on a symbolic level, the interwoven motifs reinforced the connection between Māori and the natural world²¹. These motifs are still recycled tactlessly reinforcing architects in Aotearoa's failure to engage with Te Ao Māori critically and conceptually. If there was to be a language of imagery extracted from this research it would work to reclaim the conceptual space of Māori motif in architecture.

Due to the speculative nature of the diagrams drawn within this thesis, much of it is only truly accessible by myself as it is my own subjective interpretation of Māori ephemera. The variety of images and diagrams within the design experiments can be read and interpreted together, yet it became important for me to be able to communicate my findings in a succinct way.

²⁰ Hundertwasser, *Hundertwasser Barbican Art Gallery, London, 1983*, 120.

²¹ McDonald, *The Ephemeral Architecture of New Zealand's 'Better Britons'. Constructing National Identity during Royal Visits to Wellington, 1901-1927.*, 103.

Upon reading a book about/by Friedensreich Hundertwasser, which once belonged to my grandfather, I was struck with how I may be able to create my own motifs from my research. Inspired by small illustrations affixed throughout the spread, these symbols as I call them seem to be taken from larger illustrations of his. They appear across a range of his work, and he has chosen to reiterate them specifically on their own, generating a meaning associated to that symbol.

"I went for those long walks and for days on end I would search for a motif worthy to be painted by me. During that period, I did not yet know that the best pictures are in a man's soul".²²

The symbols gleaned from the ephemera of Māori ritual are of a spatial and formal inception. They exist as standalone discoveries, distilled into an essence to be expanded upon again. Once these symbols are observed it can become possible to put patterns together in such a way that many of these patterns can begin to overlap within a single physical space: the building is very dense; it has many meanings captured in a small space; through the density of interwoven symbols the space becomes profound²³. The building blocks which I have created are an attempt to bring Māori motif into architecture in a constructive way; to engrain these symbols into the spatial fabric of architecture, rather than default to our pre-colonial symbolism; so long appropriated it cannot be conceived of having any new meaning.

²² Hundertwasser, *Hundertwasser Barbican Art Gallery, London, 1983*, 50.

²³ Alexander, *A Pattern Language: Towns, Buildings, Construction*.

HUNDERTWASSER EGE DUNKELBUNT TAG

16

"Pictures for me are gateways, which enable me, if I have been successful, to open them into a world which is both near and far for us, to which we have no admission, in which we find ourselves, but which we cannot perceive, which is against the real world."

Cryptic Cartography

The drawing influences of Perry Kulper

*Design opportunities can be discovered, exposed and realised through the medium of the drawing, a key disciplinary ally for architecture.*²⁴

Speculative drawing as a vehicle for design research possesses the potential of shedding light on untold truths in architecture. There is much architectural potential in the discovery and interrogation of unexpected geometries. Observing the works of Perry Kulper was vital to gaining insights about my own drawing method and its contribution to my research objectives.

The first speculative drawing I will discuss is Perry Kulpers', Strategic Plot, David's Island competition, New Rochelle, New York, 1997. The drawing is a plotting of various subject matters over and through time, coalescing in formal and spatial speculations through the various drawing layers forming a working dialogue. The relative positioning of elements within the drawing seem to be applied in layers, generating relationships otherwise unformed had they not been introduced to each other.

The critical thinking behind this drawing style is what makes the work all the more stunning. The notion of considering the architectural qualities of ephemeral and stable conditions through visual layerings of static and non-static 'marks' achieves outcomes otherwise unreachable through the conventional architectural drawing. These theories were implemented in the drawings produced for my own interpretation of Māori ephemeral conditions. As in David's Island, depiction of a site or venue becomes the stable condition upon which the ephemeral qualities of ritual and performance can be transcribed. In other words, the ātea become the contextual space upon which the layering of ephemeral qualities of ritual can be drawn and observed as further content for formal and spatial speculation.

²⁴ Kulper, *A World Below*, 59.

Figure - 11 Kulper, 'A World Below', 60.

A second drawing to be discussed is *Cryptic Drawing, Muse Archival Surface*, Central California History Museum speculative project, 2011. This drawing is a visualization of the genetic characteristics of an element for the museum. Nine Greek muses are referenced in order to relate the object towards its origins. The media Kulper chose were pen, paint samples, found imagery and cut paper. The drawings were etched by nine different drawing instruments, each one perhaps representing a Greek muse.

Cryptic drawing acknowledges the absence of typical architectural form. Instead, the layering of marks upon the page begins to form a dialogue. Not only the marks are to be considered, but also the voids between. This work captures the sensitive qualities of ephemeral space through the use of the line, creating paths of movement across the page. The overlapping of medium and form links aspects of the story together. The new relationships are made and revealed through the speculative drawing process of Kulper.

These insights from Perry Kulper's speculative drawing process supported my own methodology, and in particular the cartographical ephemera studies undertaken. A similar drawing method is utilised in this thesis to capture the ephemeral qualities of *tikanga Māori*. The diagrams drawn for *Utu* acknowledge the absence of architectural form, instead the formal qualities are expressed through the layering of marks upon the page. These marks are drawn from the ephemeral conditions of the ritual. The overlapping of these drawn temporal conditions tell a story over the duration of the event.

Figure - 12 Kulper, 'A World Below', 61.

TONY FOMISON (1939-1990),
Circus-Hand Remembers Taranaki, 1984,
oil on hessian on board, 295 x 405mm,
Private collection, Auckland

Figure - 14 'Visual Pepeba'. (2020), Woodcut ink print on white card

Inspired by marks on colonial maps indicating Māori settlements. These unrecognisable 'gouges' attempted to marginalise Māori space.

Figure - 16 Depiction #2, Woodcut ink print on white card

Inspired by the passive resistance of Te Whiti o Rongomai and Tohu Kākahi, who refused to be governed by a western concept of ownership.

Figure - 17 'Taepa #1'. (2020), Woodcut ink print on white card

Figure - 18 Taapa #2, Digital mixed media, Woodcut ink print on white card

Figure - 19 'Woman performs a Karanga'. (2020), Mixed media photograph

Design Experiment One:

Karanga

The karanga is a long, high pitched calling given by the women of the tangata whenua and responded to by the women of the manuhiri. The call offers a welcome to the living, invokes the spirits of the dead and raises the level of emotions for those involved.

This design experiment translates the spatial conditions of the ritual karanga through a staged design methodology. The ephemeral qualities of the ritual are excavated in order to expose the underlying spatiality of the event.

The aim of the design experiment is to conceptualise new starting points for Māori architecture. These starting points are not drawn from what we know Māori art or design to be. The method is as explained in the appropriate chapter. Please refer to this section for an oversight of the process.

Method

- 01 - Video
- 02 - Cartography
- 03 - Diagram
- 04 - Array
- 05 - Symbol
- 06 - Model
- 07 - Design

01 - Mātakitaki/ Video

Karanga

The video analyzed in this design experiment comes from my grandfather's funeral. My grandfather's name is Sir Paul Reeves. He was a special man who did many amazing things. This video was taken at his state funeral at Holy Trinity Cathedral in Auckland. The karanga which is analyzed here, took place in the cathedral courtyard.

The first stage of the process was to digitally model the space which the ritual took place in. This was done through watching the video, looking at mapped imagery of the area, and my own experience of that place.

I also thought it important to place the camera perspectives within the digital model, to give the context of where the video views are coming from.

The next step was to then locate the participants of the event within that digital model. Once all the appropriate participants had been located and added, a digital three-dimensional 'storyboard' was created. This combined the digital model made with still images of the ritual.

The final image made transfers the context of the three-dimensional storyboard to the architecturally typical plan. This plan is a further contextual explanation. It aims to fuse the entirety of the context into one image. Camera angles, ritual axis, and participants.

Overlapping geometries of all objects and participants begin to generate interesting spatial outcomes.

02 - Whakamahere/ Cartography

Karanga

The second step in the method is called cartography/ whakamahere. This is the step when I subjectively map the ritual. This is my own interpretation of the ephemera. There are three main participatory groups: tangata whenua (people of the land), manuhiri (guests) and the mate (dead).

The first mapping is a simple line drawing, which expresses the physical movements and sounds of the ritual. There are three stages to this drawing. The drawing tells the story of the dead being welcomed into the space, followed by the living behind him. The intersecting lines express the overlapping of sound and movement of the karanga. This mapping is completely devoid of the surrounding context highlighted in 01 mātakitaki.

A key understanding is that the ritual contains both physical conditions and meta-physical understandings. After mapping the ritual, and finding these hidden geometries I began to interrogate my findings through my own process/ style of speculative drawing.

Throughout the speculative drawing process, there are often unforeseen outcomes. The following drawings have many overlappings of form. The drawing opposite is an artistic impression of the karanga mapping. It begins to map my interpretation of the meta-physical conditions within the ritual, represented through black and white space/ positive and negative forms. The many crosses and point agencies indicate participants and points of action within the ephemera.

The third drawing in whakamahere, looks specifically at the overlappings of the drawn geometries. This was a way for me to express the 'collisions' of voices, actions and perspectives within the ritual. The interchange between black space and white space highlight the potential of breaking down this ritual into small formal components. In turn these components can be taken as they are, but the methodology again takes this image and inserts it back into the process to be speculated.

03 - Tuhituhi/ Diagram

Karanga

Diagram/ tuhituhi is the blending of steps one and two in the methodology. It takes the space built in mātakitaki and the forms drawn in whakamahere and combines them.

The first drawing is placed at the same scale that the original mapping study was taken at. We can observe the image as being a layering of static and non-static forms which are combined to create a visually rich illustration.

This image also begins to tell a fuller story. We can begin to associate the participants in the ritual with their role in the proceedings. The six crosses at the top of the image represent the women of the tangata whenua, two men perform a taki around the perimeter. There are three women responding from the side of the manuhiri.

The three crosses aligned with the central axis represent the three locations of the mate (dead) over the three stages of the ritual.

The next image is a re-contextualization of the first image in tuhituhi, at a different scale. This image is rather more emotional than the first image given in tuhituhi.

The large scale re-contextualization adds further levels of context and complexity onto the mapping of the ephemera. Through the layering of multiple contexts, a feeling of ambivalence is captured. This is a feeling that many people experience during the undertaking of a ritual, especially at an extremely large scale like this. It was the same emotion that I felt on that day too.

04 - Kape/ Array

Karanga

Array/ kape simply takes the mapping study undertaken in 02 whakamahere, and simply duplicates the drawing incrementally. As well as playing with the black and white tones within that drawing.

The first image in array looks at the duplications at a smaller scale, almost climbing into the spaces presented. This small scale drawing is analysing these duplications at a spatial level. The overlapping of lines creates a ghostly space within and evokes a sense of movement.

The second image in array zooms out in scale to analyze this object at a formal level. This drawing became more of a exercise of twisting and stacking multiple versions of the arrayed form on itself, creating this interesting object to be observed for further speculation.

05 - Waitohu/ Symbols

Karanga

This methodological approach to design is based off of my own hunches about this question. Much of it may only be understood by me, or those with a footing in te ao Māori. But for this idea to truly hold some semblance of academic value, it must carry architectural principles back across cultural lines.

Symbols/ waitohu was inspired by a Friedensreich Hundertwasser book I own. Dispersed throughout the pages, there are small black symbols which I interpreted as a simplified language of his other works. The symbols produced for the karanga are extracted from my own observations of the spatialities that dwell within the prior images produced.

Korowai is derived from the flowing, non orthogonal movement of the taki being performed around the stationary positions of the women delivering the karanga. In this ritual, the taki is the only non orthogonal movement made. It is as if the movements of the men form a protective cloak around the calls of the women. Non orthogonal trajectories seem to be the only kind of movement that can intersect an orthogonal trajectory.

CLOAK

KOROWAI

Figure - 29 'Waitohu #1 Korowai'. (2020), Charcoal on white card

Point agency explains the actions of the women in the karanga. The women who give the call become the points about which all the actions in this ritual pass through or around. This symbol describes the overlapping of the womens cries.

Waitohu relates this work to recognisable “building blocks” of a western notion of architecture. They serve as triggers for ideation of spatial formation.

POINT AGENCY

Figure - 30 'Waitohu #2 Point Agency'. (2020), Charcoal on white card

06 - Mahi ā-ringā/ Model

Karanga

After the study of symbols is complete, I felt ready to take a step closer to fabricating an architecture of the karanga.

All of the physical models made for this thesis are not seen as architecture, but as a physical manifestation of earlier drawings which nonetheless move the investigation towards an architectural vocabulary. They are liberated so to say.

Each vertical member of this model represents a participant of the ritual. There are three levels to this model, based upon the three stages of the ritual. There was no intention of creating a form that could become functional architecture, but to explore how my drawings respond when expressed physically. The notions of korowai and point agency are present within this model.

Figure - 31 'Karanga Physical Model'. (2020), Plywood, Steel Re-bar, Copper Rod, Tracing Paper, Solder

Figure - 32 'Karanga Physical Model'. (2020), Plywood, Steel Re-bar, Copper Rod, Tracing Paper, Solder

Figure - 33 'Karanga Physical Model'. (2020), Plywood, Steel Re-bar, Copper Rod, Tracing Paper, Solder

Figure - 34 'Karanga Physical Model'. (2020), Plywood, Steel Re-bar, Copper Rod, Tracing Paper, Solder

Figure - 35 'Karanga Physical Model'. (2020), Plywood, Steel Re-bar, Copper Rod, Tracing Paper, Solder

07 - Whakaahua/ Design

Karanga

The concluding stage of the process was to harness the visual base of imagery and built forms to express an architectural voicing of the karanga.

Firstly, the bones of the physical model were constructed in Rhino 6 (a useful program for manipulation of masses as a formative tool) with the triangulated structure planing horizontally. The horizontal spanning triangles were also stacked vertically forming levels. A while was spent trying to solve how this building may work. The iteration similar to the physical model contained elements which I liked but it also lacked something. Ultimately it was decided that whilst this form was drawn from a representation of the karanga, it had not become the karanga yet.

The women who perform the call are the sentinels of the process. So rather than letting the floor plan stretch long and flat, the modelled forms were flipped 90 degrees so that the triangulated structure stands upright and tall. The manuhiri and tangata whenua sides were then separated again along the drawn central axis of the ritual. The long reach and strongly repeated geometries of the bridge tell the story of the sentinel women calling to each other through space and time. Echoing and responding to each others calls of welcome.

Figure - 37 'Birdseye and Long Elevation for the karanga'. (2020), Mixed Media

Figure - 38 'Perspective drawing for the karanga'. (2020), Mixed Media

Reflection

In design experiment one 'karanga' I discovered that there is a strong spatiality embedded within the overlapping geometries of the womans calls. A phenomenological understanding of the ritual blends the perception of a womans call with a conceptual interpretation that questions who she is calling to, why she is calling and how the kaikaranga (woman who calls) controls the movements of the participants.

The interesting finding within this study was that for the architecture to evoke not only a spatiality but also the emotions of the ritual, it had to represent both the calling, and the caller themselves. The women become the vessels of emotion during karanga. Using geometries created from the methodology, and blending those with the narrative of the ritual itself helped to personify the architecture in a way that is completely natural for architecture in Te Ao Māori.

It was this final crossing over of excavated form and narrative which proved to be successful in this particular design experiment.

Figure - 40 'Man performs the wero'. (2020), Mixed media photograph

Design Experiment Two:

Wero

The wero is a ritual challenge issued when two stranger parties meet. Historically, it was a display of strength by the receiving party. In modern times the wero has become a form of pageantry, performed on the behalf of a distinguished guest.

This design experiment translates the spatial conditions of the ritual wero through a staged design methodology. The ephemeral qualities of the ritual are excavated in order to expose the underlying spatiality of the event.

The aim of the design experiment is to conceptualise new starting points for Māori architecture. These starting points are not drawn from what we know Māori art or design to be. The method is as explained in the appropriate chapter. Please refer to this section for an oversight of the process.

Method

- 01 - Video
- 02 - Cartography
- 03 - Diagram
- 04 - Array
- 05 - Symbol
- 06 - Model
- 07 - Design

01 - Mātakitaki/ Video

Wero

The video analyzed in this design experiment was filmed during a Waitangi day welcoming for Dame Patsy Reddy, at Waitangi in 2019. I found this video posted to the Waitangi Treaty Grounds facebook page. The footage is of amateur phone quality. The film captured succeeds in recording all three stages of the wero taking place across the treaty grounds.

As in karanga, the first stage of the process was to digitally model the space which the ritual took place in. This was done through watching the video and looking at mapped imagery of the Waitangi treaty grounds.

The space covered by the ritual is drawn, with each point of the challenge being marked along the line. The camera perspectives are also positioned within the digital model.

Along the path of the ritual, the points of action are plotted. A digital three-dimensional 'storyboard' was created. This combined the digital model made with still images of the ritual.

The image opposite transfers the context of the three-dimensional storyboard to the architecturally typical plan. This plan is a further contextual explanation. It aims to fuse the entirety of the context into one image. Camera angles, ritual axis, and participants.

Overlapping geometries of all objects and participants along the path of the ritual begin to generate interesting spatial outcomes.

02 - Whakamahere/ Cartography

Wero

Cartography/whakamahere subjectively maps the ritual. This is my own interpretation of the ephemera. There are three main participatory groups: tangata whenua (people of the land), manuhiri (guests) and performers of the wero (also tangata whenua).

The first mapping is a simple line drawing, which expresses the physical movements and sounds of the ritual. There are three stages to this drawing. The drawing tells the story of the manuhiri being issued a challenge in three stages. The challenge works to slowly draw the manuhiri further into the space of the tangata whenua without the opposing parties meeting. The circles indicate where a challenge has been laid down (often a feather).

An interesting observation is the focusing of geometries through the point of the final challenge. This mapping is completely devoid of the surrounding context highlighted in 01 mātakitaki.

A key understanding is that the ritual contains both physical conditions and meta-physical understandings. After mapping the ritual, and finding these hidden geometries I began to interrogate my findings through my own process/ style of speculative drawing.

Throughout the speculative drawing process, there are often unforeseen outcomes. The following drawings have many overlappings of form. The drawing opposite is a more speculative impression of the wero mapping. It begins to map my interpretation of the meta-physical conditions within the ritual, represented through black and white space/ positive and negative forms as well as the line.

The many crosses indicate participants and points of action within the ephemera. The weaving lines indicate the trajectory of the wero, they come to rest on the circles, where the challenge is issued.

03 - Tuhituhi/ Diagram

Wero

Diagram/ tuhituhi is the blending of steps one and two in the methodology. It takes the space built in mātakitaki and the forms drawn in whakamahere and combines them.

The first drawing is placed at the same scale that the original mapping study was taken at. We can observe the image as being a layering of static and non-static forms which are combined to create a visually rich illustration.

This image is built up of all the geometries found through observations of the first two stages of the method. Overlaying all these geometries over each other gives us this interesting spatial outcome.

An interesting observation is the way in which the trajectory of the manuhiri zigs and zags from the bottom left corner to the top right of the image.

TIPUNA

ACCEPTANCE

ALERTNESS

SACREDNESS

The next image is a re-contextualization of the first image in wero tuhituhi, at a different scale. This diagram adds back in the context of the treaty grounds over the top of the previous drawing.

This smaller scale re-contextualization adds further levels of context and complexity onto the mapping of the ephemera.

Through the layering of multiple contexts, the understanding of the image becomes confusing. Having this emotion present within my drawings is a key understanding of what the pōwhiri entails.

04 - Kape/ Array

Wero

Array/ kape simply takes the mapping study undertaken in 02 whakamahere, and duplicates the drawing incrementally. As well as playing with the black and white tones within that drawing.

The first image in array looks at the duplications at a large scale context. The arrayed cartography of wero has been stacked upon itself and then further duplicated across the page in a radial pattern. Observing these arrayed forms as architectural artifact offers an interesting perspective for this exercise.

05 - Waitohu/ Symbols

Wero

For this idea to truly hold some semblance of academic value, it must carry architectural principles back across cultural lines. Waitohu/ Symbols is my attempt at this.

The first waitohu in wero is named directed. The form is taken from the trajectory of the manuhiri moving onto the marae. The directions of the manuhiri are controlled by the challenger, more specifically where the challenge is placed. Directed also lends the idea of compression and release, which is already a well understood architectural technique.

DIRECTED

Figure - 48 'Waitohu #3 Directed'. (2020), Charcoal on white card

The second waitohu derived from the wero is named the intermediary. The intermediary references the function of the challenge in Te Ao Māori, which is channelled through the man who performs this ritual on behalf of the tangata whenua.

The focal point of the challenge is the intermediate space separating the manuhiri and the tangata whenua in this process. It is also the point of focus that is bringing these two parties together.

From this observation, I was given the sense of a space that has a joining aspect to it, or perhaps some form of bridging, since this ritual is about bringing these two opposing parties from a state of separation, to a state of union.

THE INTERMEDIARY

Figure - 49 'Waitohu #4 The Intermediary'. (2020), Charcoal on white card

06 - Model/ Mahi ā-ringā

Wero

The physical models made for this thesis are not seen as architecture, but as a physical manifestation of earlier drawings which nonetheless move the investigation towards an architectural vocabulary. They are liberated so to say.

There are three characters expressed in this physical model. The manuhiri, tangata whenua, and the intermediary. The manuhiri are represented by an orthogonal long, low form in approach. The tangata whenua are represented by a vertical orthogonal tower, which leans backwards away from the challenge, as if they are helping to pull the manuhiri in, evoking the time old haka; tōia mai te waka!

The intermediary is represented by the conical tower projecting up through the space in between the two parties. This space becomes the bridging space between the two opposing sides and offers a way in which these two opposing sides will become one.

Figure - 50 'Wero Physical Model'. (2020), Balsa, Skewers, Brown card, Tracing Paper, Black Thread, Concrete, Steel Re-Bar

Figure - 51 'Wero Physical Model'. (2020), Balsa, Skewers, Brown card, Tracing Paper, Black Thread, Concrete, Steel Re-Bar

Figure - 52 'Wero Physical Model'. (2020), Balsa, Skewers, Brown card, Tracing Paper, Black Thread, Concrete, Steel Re-Bar

Figure - 53 'Wero Physical Model'. (2020), Balsa, Skewers, Brown card, Tracing Paper, Black Thread, Concrete, Steel Re-Bar

Figure - 54 'Wero Physical Model'. (2020), Balsa, Skewers, Brown card, Tracing Paper, Black Thread, Concrete, Steel Re-Bar

Figure - 55 'Wero Physical Model'. (2020), Balsa, Skewers, Brown card, Tracing Paper, Black Thread, Concrete, Steel Re-Bar

07 - Design/ Whakaahua

Wero

The final step in the method was to implement my findings from the wero and express them as architecture.

The physical model was first re-constructed in Rhino 6 as a base model for me to begin turning it into a built form. Each of the character's; being the manuhiri, tangata whenua and intermediary were modeled separately.

Once I had these three separate pieces, I needed to create a way for them to become joined through this intermediary character form in the middle.

So I returned to my drawings for inspiration on how I may solve this. The answer came from my first waitohu for the wero, which was directed. The zig-zagging geometry of the manuhiri's trajectory was lifted from my images in tuhituhi, and overlaid back over the geometries of the building in plan. This gave me the forms of the extruded bridges seen in the drawings of the building.

This building seen from side elevation seems to have a balanced tension between the two sides, held together by the form of the intermediary.

Figure - 58 'Birdseye Plan for the Wero'. (2020), Mixed Media

Reflection

In design experiment two 'wero' I discovered that there are movements of focused tension and release, guided by the warriors who perform the ritual. The phenomenological interpretation blends the perceptual movements of the male performer and his dialogue with the manuhiri group with the conceptual interpretation of what happens in the moment of the challenge, what this challenge means to both sides, and how this ritual brings two sides closer together.

In retrospect, I observed the initial cartography of this ritual as a pattern which could be interpreted as a large scale representation of space ordering. The findings within 'Wero' were perceived as relational. The observations were about how the three 'characters' of the ritual relate to each other and how that relationship evolves over the duration of the event. The main example being the manuhiri, who are drawn further towards the tangata whenua on shifting axes facilitated through the three challenges of the wero.

The final expression of architectural form was created through the physical modeling stage of the methodology. Yet it aims to explain the relational narrative of the ritual through architectural representation.

Figure - 60 'Crossroads'. (2021), Woodcut ink print on white card

Design Experiment Three:

Hongi

The hongī is the final stage of the pōwhiri. A hongī involves the pressing together of noses. It can be seen as the final stages of welcoming; it is both a sign of peace and of life. Outside of the pōwhiri, hongī is also used as a casual form of welcome.

This design experiment translates the spatial conditions of the ritual hongī through a staged design methodology. The ephemeral qualities of the ritual are excavated in order to expose the underlying spatiality of the event.

The aim of the design experiment is to conceptualise new starting points for Māori architecture. These starting points are not drawn from what we know Māori art or design to be. The method is as explained in the appropriate chapter. Please refer to this section for an oversight of the process.

Method

- 01 - Video
- 02 - Cartography
- 03 - Diagram
- 04 - Array
- 05 - Symbol
- 06 - Model
- 07 - Design

01 - Video/ Mātakitaki

Hongi

The video analyzed in this design experiment was filmed during a pōwhiri welcoming at Ōmaramutu Marae, near Opotiki on the northern side of the east cape. this video was found in the public archives of Ngā Taonga sound and vision. It is of amateur quality and dates back to the year 1953. This was the oldest example of a ritual that I found.

The method stays the same for this design experiment. The space in which the ritual took place was modeled through careful observation of the footage as well as using mapped imagery of that place.

The appropriate camera angles are placed within the modeln correlating with their view. Since this is a ritual happening at very close quarters, the movements of the people involved are not drawn onto this three-dimensional storyboard.

The next image in mātakitaki takes the three-dimensional perspective into the typical architectural plan. From this view we can gain further insight into the positions of the camera and specific axes pertaining to the ritual.

In this plan, the space in which the ritual takes place is drawn, which sits to the top right of the wharenui.

As in the previous design experiments, this image is also excavating form and space from this documentative stage of the methodology.

02 - Cartography/ Whakamahere

Hongi

Whakamahere is the stage of the method where the ritual is mapped in a way. In this mapping there are two parties involved; manuhiri and tangata whenua.

This first mapping is a simple line drawing. It expresses physical movements and meta-physical understandings of the hongis and attempts to draw this. It tells the story of the two parties forming a line so that they may move past each other and share a hongis with each person on the opposing side. Each person is indicated by a black cross. As we see the two lines moving past each other connections are formed, and maintained as they move onto the next person. The building up of these connections formed the drawing you see here.

A key understanding is that the ritual contains both physical conditions and meta-physical understandings. After mapping the ritual, and finding these hidden geometries I began to interrogate my findings through my own process/ style of speculative drawing.

The drawing opposite is a more speculative impression of the hongí mapping. It begins to map my interpretation of the meta-physical conditions within the ritual, represented through black and white space/ positive and negative forms as well as the line.

The many crosses indicate participants and points of action within the ephemera. The intersecting lines indicate the connections both formed and maintained during the process of the hongí. These geometries seem to be an infinite repeating spiral.

This particular image differs from any of the other images created in this thesis. It is an experiment in modelling three-dimensional forms over the top of the original line drawing in this step. Elements such as post, beam, wall and roof were constructed over the line drawing and rendered from plan view.

This highlights the shadows which fall upon the page, working to become a part of the drawing's language.

03 - Diagram/Tuhituhi

Hongi

Tuhituhi/ diagram is the blending of steps one and two in the methodology. It takes the space built in mātakitaki and the forms drawn in whakamahere and combines them.

The re-contextualised diagram pictured begins from closer in this time so that we can see the overlayed mapping of the hongi situated where it had taken place.

From here, the drawing became about using all of the directed axes of the original mapping to overlay black and white space onto the image.

Due to the symmetrical, radial nature of this mapping, many geometries are found through the interconnectedness of the drawing.

The next image is a further re-contextualisation of the previous two images, from slightly further out as to capture more of the context. We can see the seats placed on either side of the paepae, the wharenuī and the camera perspectives present.

As we move further out, the nature of the drawing becomes blurred, harder to understand or perhaps confusing. This is done to speak of the ambivalence of the rituals of encounter. Having an emotional quality present within the drawing helps to heighten my interpretation of the ephemera.

04 - Array/ Kape

Hongi

Array/ kape simply takes the mapping study undertaken in 02 whakamahere, and simply duplicates the drawing incrementally. As well as playing with the black and white tones within that drawing.

The first image in kape/ array for the hongis is a larger scale drawing, which looks at the formal composition of stacking and arraying the original hongis mapping. This is perhaps the most successfully arrayed formal composition from the design experiments. It evokes a clear form and spatiality from an extremely simple exercise.

The second image in this series is a large scale drawing, moving closer into the first image. This drawing becomes an investigation into the spatiality that may dwell within a drawing of this kind. The ghostly overlapping lines create subtle reveals of space hiding behind. A temporal sense of movement is evoked within these drawings.

05 - Symbols/ Waitohu

Hongi

Again, the next step in the process is to return to the exercise of creating symbols from my observational drawings in order to create tangible architectural principles or building blocks.

The first waitohu observed from Hongi is embrace. This symbol is taken from the trajectory of the participants in this ritual. The lines of participants have a gentle curve reminiscent of the koru.

It is a gentle embrace of two groups or opposing forces.

EMBRACE

Figure - 71 'Waitohu #5 Embrace'. (2020), Charcoal on white card

The waitohu 'entwine' is taken from the overlapping of connections between the manuhiri and tangata whenua over the duration of this ritual. It references the connections formed, currently being formed and yet to be formed.

It is depicted as a seemingly random overlapping of lines disconnected from their body origin. The name entwine comes from this weaving of lines and space in between.

ENTWINE

Figure - 72 'Waitohu #6 Entwine'. (2020), Charcoal on white card

06 - Model/ Mahi ā-ringā

Karanga

For the physical modelling component of the methodology I chose to interpret the cartography as section or elevation. Using the symbol embrace, the two ridge beams become twin backbones for this model.

The connections in between were interpreted as curved members rather than the straight connections seen in elevation. These cardboard members begin to wrap and entwine forming the shell, or the ribs of the building.

The physical model stand on the curved central beam, and tensioned upright through the use of string.

Figure - 73 'Hongi Physical Model'. (2020), Brown card, Skewers, Black Thread, Brown Twine, Concrete, Steel Re-Bar, Steel Anchors

Figure - 74 'Hongi Physical Model'. (2020), Brown card, Skewers, Black Thread, Brown Twine, Concrete, Steel Re-Bar, Steel Anchors

Figure - 75 'Hongi Physical Model'. (2020), Brown card, Skewers, Black Thread, Brown Twine, Concrete, Steel Re-Bar, Steel Anchors

Figure - 76 'Hongi Physical Model'. (2020), Brown card, Skewers, Black Thread, Brown Twine, Concrete, Steel Re-Bar, Steel Anchors

Figure - 77 'Hongi Physical Model'. (2020), Brown card, Skewers, Black Thread, Brown Twine, Concrete, Steel Re-Bar, Steel Anchors

Figure - 78 'Hongi Physical Model'. (2020), Brown card, Skewers, Black Thread, Brown Twine, Concrete, Steel Re-Bar, Steel Anchors

07 - Design/ Whakaahua

Hongi

The concluding stage of the method was to once again represent my findings as architecture. For the hongi, I thought that the outcome of the physical model was really interesting structurally. So for this building I wanted to keep it very simple and focus on how I could enclose the space and give it some levels so that it may be habitable.

Firstly, I once again began by quickly modelling up my physical model in Rhino 6. This step in the method allows for me to be able to expand upon my physical model quickly and in ways I may not be able to do materially.

I thought the building should not lose its form by translation to architecture. So lofting together the pieces of structure gave me this panel like shell encasing the building while also retaining an interesting shape dynamic.

The outcome of this building was extremely interesting, it speaks of the hongi through its curved embracing forms. The curved members of the structure create this rather awkward but geometrically intriguing example of architecture.

Figure - 80. Perspective Drawing for the Hongi. (2020), Mixed Media

Figure - 81 Long Elevation for the Hongi'. (2020), Mixed Media

Reflection

In design experiment three 'hongī' I discovered that to draw this ritual (subjectively) I was presented with a seemingly architectonic diagram from the outset. This leads me to wonder whether this may always be the case for this ritual because of its simple, confined and repeated process. The phenomenological interpretation blends the perceived movements of the participants from either side and the conceptual interpretation of the meeting exchange between people from either group forming and maintaining connections.

Translation of the original pattern into architecture was relatively direct, owing to the interesting formal dynamics of hongī. Yet it would not have been so easily translatable if it were not for the observation of symbols study undertaken within the methodology. Embrace and entwine formed an architectural language which I was able to apply to the cartographical drawings undertaken in whakamahere. When applied to the cartographical drawing study, the waitohu developed begin to form new architectural meanings.

NZIA Student Design Awards 2020

Reflections

In October 2020 this thesis was selected as one of the four projects to represent Victoria University of Wellington at the NZIA Student Design Awards. The awards took place at St. Matthews in the City church, Auckland. 12 projects were chosen, the other participants came from Auckland University and Unitec.

Being chosen for the awards had a huge effect on the pathway this thesis was headed. Prior to being selected I had plans to do one more design experiment, but base this experiment at Parihaka (based off Parihaka tikanga) where I have some whakapapa links. In doing so I would be able to observe how the method would change again when confronted with a living site. But, in the words of Mitchell from Parihaka, who I was in conversations with: me aro ki ngā taiepa kei mua rawa i ā koe - pay attention to the fences in front of you.

Instead, being in the awards meant spending those months finishing the design experimentation up to a point, creating exhibition models as well as designing the exhibition itself. Preparing for the awards was of great help to distill the essence of my thesis into a twenty minute speech. To be able to do this aided me in my writing as it was all about taking these key ideas talked about in my speech and expanding them back out again into an academic writing formula.

Figure - 83 'Exhibition of UTU, NZLA SDA 2020'. Photo by David St George

The competition presentation could be treated as a final iteration of all three experiments within the project, to be able to combine all of the work within a single space. Both in practicing and participating, I learned more about my own project through discussion with others than if I did not. I also believe that to behold the entirety of the projects imagery within a single space aided in communicating an overall language from the drawings, and clarity of the method that you may not necessarily perceive by interpreting the images as stand-alone.

I was very privileged to take away the top award for student architecture in 2020. This thesis was situated amongst the top twelve projects in the country and I got to know, and meet some amazingly talented and beautiful people along the way. I was also fortunate to have my family there to tautoko (support) me and to bring Te Ao Māori into a space where Māori are marginalised, as is the case in society and so many professions. It's an experience that I am extremely thankful for, truly a lifetime memory.

Figure - 84 'My whānau, NZIA SDA 2020'. Photo by David St George

Reflection

Ka Mua, Ka Muri

The speculative methodological path of this thesis is a suggestion for how Kaihoahoa (Māori architects) can begin to reclaim a conception of Māori space in the practice of architecture. I believe that this project is a celebration of culture, albeit in a way which may seem unconventional. It does not seek to obey or impress. It began one hundred and eighty years ago, born from the inter-generational trauma felt by so many. We must hold onto the shreds of culture we have left, as the contemporary Māori art movement demonstrates. However, it is also time to expand the discourse of contemporary Māori architecture into a genuinely spatial vocabulary that is applicable to architecture.

The nature of this research-by-design method meant that during the process of this thesis, many discoveries have emerged. Firstly, it has demonstrated that a design method that translates other forms of cultural tradition into architectural expression can work when applied to aspects of Te Ao Māori. In this case, that aspect of culture is the ephemera which lie outside the traditional definition of architecture. More specifically, it has also highlighted the variety and complexity of spatial relationships embedded within the performance of Māori ritual. The design method developed a new framework for Māori architecture but stops short of becoming a step-by-step guide. The speculative nature of the project allowed me to freely express myself creatively and permitted me to call upon sources and references outside Te Ao Māori whilst contributing to the Māori architectural conversation in a constructive way. Future designers should not follow my method exactly, instead they should expand upon the root idea, applying their own architectural style. This would certainly produce different results and test the versatility of my general approach.

Upon setting out on this journey of discovery, I had no intention of creating such a design methodology. I did not anticipate that design strategies would be the main by-product of this thesis. The steps involved in the method were never a considered move, at least from the perspective of the creator. Instead, they were based on hunches initiated by my own personal conceptions of the rituals motivated by the desire to create something visually interesting. However, by conducting three separate design experiments, I was able to refine the analyses into a set of clearly defined tasks within a standardised sequence. I believe that all of the steps taken in the method work well.

However, it would have been beneficial to set clearer goals against each step of the process. This would have enabled me to evaluate each step once it was completed.

As a provocation to myself (and definitely to others) I sought to create a project of Māori influence, that in turn looked nothing like a typical Māori design. No recycling of the typical wallpaper motif, it was to be the form of the building that spoke of rootedness in Māori culture and identity. Ultimately this gave me a huge sense of freedom to be bold with my design moves. So, upon reflection I am relatively surprised by the fact that each architectural experiment evokes the qualities of ritual it is derived from.

More time spent on the notational system for translating these aspects of the ephemera would have been beneficial for this project. After reflecting on the way I chose to express these sacred geometries, I would have spent longer creating a more defined language of symbolism pertaining to specific aspects of the ritual. There are undoubtedly more than just these patterns to be found within the three rituals examined. There are also other rituals to be examined in this manner and other forms of ephemeral cultural production that could offer equally rich sources of spatial patterns. This is a technique I wish to continue developing further in my own time.

The limited duration of the project imposed another constraint on research outcomes. The architecture produced in this thesis is conceived largely from the outside. I did not get a chance to extend the approach to interior design of these buildings, using the same method of ritual exploration. This important aspect of the project is missing or undeveloped.

I abandoned a final site-specific design experiment in Parihaka, which would have originated from local tikanga. This decision was made in order to allow preparation time for the NZIA Student Design Awards. This less abstract study would have tested how my design approach responds to the particularities of site, client and brief.

This thesis is a suggestion for how the repertoire of strategies for producing Māori spaces can be expanded through the observation and cartographic analysis of Māori ephemera, notably three rituals associated with pōwhiri. This research presents a speculative and highly experimental approach to Māori design through mapping, re-imagining and re-interpretation of three traditional choreographed performances. These culminate in new architectural expressions based on spatial relationships within the enactment of tikanga Māori. It makes the statement that through a speculative drawing and method-based approach to Māori ephemera rather than the typical cultural object itself we can unlock a new wealth of spatial potential.

Three ritual aspects of the pōwhiri were observed and analysed graphically so that they may be translated into an architecture. The three design experiments each produced a distinct Māori architecture, as the speculative lens shifted for each ritual based on the interpretation of tikanga pertaining to them. For example, the hongī expresses connections formed during first physical contact, whereas the karanga interprets the women's voices calling over a vast space. These new symbols and expressions challenge the existing notions of a contemporary Māori spatiality. This project applied several innovative and contemporary drawing and modelling techniques sourced from Western artistic and cartographic traditions: such as Perry Kulper, James Corner, Neil Spiller, Mo Kelman and Friedensreich

Hundertwasser. These analytical techniques merged this with my own personal interpretation of the pōwhiri/ rituals of encounter. Throughout the research, I have made spatial discoveries (fig. 86) and come to some conclusions relating to the research question.

The process of translation from ritual to architecture eventually reaches a crossroad. Because the ritual is broken down by a series of speculative drawings; patterns and symbols can be disassociated from their original program. In other words, I allow myself to disassociate these symbols from their origins, letting the drawing speak for itself. The analysis and the findings that emerge can be criticized for the symbols being dissociated from one another and for being excessively formal or abstract. When it comes to creating architecture from these forms, I could not convincingly assemble these disassociated forms as Māori architecture. So, I found myself returning to the narrative of the ritual in order to make sense of how these patterns could be arranged in a meaningful way. This is confirmed by the creation of symbols throughout the process (pg. 68-71, 104-107, 146-149), binding these abstracted forms back to principles and observations of the original ritual.

There are prescribed parts/movements of the ritual performance which correlates with associated symbols or fragments, as a way of analyzing and ordering. The Wero process disassociated these symbols from their cartographical 'ordering' which gave them a representative form. Once these 'entities' were constructed through the physical modelling process they were then re-associated with the prescribed movements of the performance as an ordering device. Both the Hongi and Karanga processes gained formal and spatial qualities through the overarching geometry of the cartographical analysis. The symbols for these rituals are ordered within those mapped geometries, and were not disassociated. The symbols within these rituals were used during the physical and digital modelling processes as a way of developing a more sophisticated formal outcome.

Entwine

Embrace

Directed

The Intermediary

Korowai

Point Array

It is when these symbols are applied as architectural form that they begin to gain new meanings. Before its application to architecture, the symbol works to re-associate the abstract form with its origin within the ritual. In other words, the symbols help to bind a piece of seemingly random geometry with a principal spatial understanding taken from the ritual. This is a process of interpretation and understanding, and it helped me to understand what the respective ritual is accomplishing. By combining these patterns in an architectural language through physical modelling, I was able to uncover further meaning, i.e. how these fragments can generate architecture. Through this process of disassociation and re-interpretation, a new spatiality for Māori architecture was imagined. The research offered a deeper understanding of Māori ritual processes and how these performances are organized at a formal and spatial level. This methodology found an innovative approach to generating new form by observing and drawing the rituals found within pōwhiri. These forms only begin to become a Māori architecture when they are re-imagined back into their contextual ritual. This re-imagining provided me with the logic I needed to order and construct these architectural symbols to convey meanings and emotion.

Once again, it should be re-iterated that this thesis is not a literal step-by-step guide for how to create a new Māori architecture. Rather, this research is simply my own subjective interpretation of a research question. There is potential for the methodology to be followed, and adapted towards the aesthetic style and ritual understandings of the designer. For the benefit of Māori design, a body of work pertaining to these studies can continue to grow and inform understandings of the complexity of Māori ephemera.

Conclusion

Te Mutunga

This thesis outlines a complex issue facing architectural praxis in Aotearoa. Referring to Māori ephemera, it questions how we perceive and conceive of cultural space. It creates a method for excavating and translating spatial patterns within rituals pertaining to the pōwhiri, proclaiming that these spatial phenomena can constitute new architectural languages in Aotearoa.

Using speculative drawing as a tool for research and design, I had the freedom to disassociate spatial patterns from their original ritual context. Although this couldn't be justified as a way of directly generating architecture, it was evident that the logical ordering of the ritual (and associated narrative) contained generalisable spatial patterns that could order these 'disassociated' symbols in a meaningful way. The process of disassociation and re-association occurred differently in each of the rituals examined.

Prescribed parts/ movements of the ritual were given correlating symbols as an ordering device for the ephemera. Both 'Karanga' and 'Hongi' gained formal and spatial qualities through the cartographical analysis of the ritual. 'Wero' found success in disassociation because the cartographical analysis did not produce an architectonic result which could be interpreted as formal. So, the patterns were disassociated so that they may be given formal qualities. Once these forms were created, they were then re-associated within the prescribed movements of the ritual.

The symbols created began to generate further meaning through their application as architectural form. The symbol works to re-associate the abstract form with its ritual context. The symbols bind seemingly random geometries with an overarching spatial understanding taken from the ritual. This mode of interpretation furthered my understanding of what each ritual is accomplishing. By combining these patterns in an architectural language, I was able to uncover how these fragments can generate architecture. If repeated, an interesting addition to the thesis would be to explore how this same fundamental idea could influence the interior spatiality of architecture.

This thesis presents architectural praxis with a new way of perceiving tikanga Māori at a formal and spatial level. It also offers Māori architects a way in which we can begin to reclaim these conceptual cultural spaces, armed with the knowledge of growing up with one foot planted within Te Ao Pākehā and the other in Te Ao Māori. The methodology created for this thesis creates a pathway for other architects in Aotearoa to contribute to the expanding discourse of Māori architecture. By doing so, this research opens up more of Te Ao Māori for spatial interpretation, as only three rituals within the pōwhiri were analysed. Within the bounds of Te Ao Māori, there is an abundance of oratory and performance-based rituals to be re-imagined at a formal and spatial level and translated into architecture. Utu creates the potential for Māori architecture to surpass the bounds of graphic design (or decorative arts) and a handful of direct historical architectural precedents. Instead, it searches for spatial compositions that are contemporary yet grounded in a living culture

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