Conversations with the sea:

How local design-things can sensitise communities to the conditions of the Anthropocene.

Abstract

As we attempt to sidestep ecological collapse, new creative methods of engaging publics with the Anthropocene are urgently required. Yet, public indifference and even climate change denial persist, despite the overwhelming evidence that we are irreversibly changing our ecosphere. Meanwhile, traditional models of communication design do little to motivate collective action and behavioural changes at multi-national, governmental and individual levels. Instead, emotive pleas to "save the planet" or visualisations of scientific information cause us to recoil from the overwhelming scale of the crisis. People then often cognitively distance themselves from a causal relationship between human behaviours and the effects of climate change, including their fundamental interdependency on the earth systems it is altering.

Nonetheless, communication design, as a generator and mediator of culture, can actively connect communities with our ecological moment when combined with emerging lay-design and participatory design practices. This research investigates how a relational design approach can generate local forms of ecological understanding and agency by asking: how can participatory communication-design tools help us to comprehend and become responsive to the Anthropogenic conditions that are altering our world?

To test the efficacy of such an approach, an invitation was issued, in the community of Waiheke Island in Aotearoa New Zealand, to enter into a dialogue with the sea, a key figure and non-human other in the climate-change narrative. Through public video projections and social media at first, I explored how communication design can bring people into closer connection with the sea. From this, participatory workshops evolved to engage community members in design activities founded in more-than-anthropocentric approaches. I combined a situated design inquiry with Haraway's (2016) notion of sympoiesis, or making-with, as a frame to investigate how participatory communication design might invite us to 'digest' climate change. I organised public design events on Waiheke and observed what conditions and interactions became possible through visual communication practices – and what productive crossings occurred during the making of communication 'design things' (Atelier, 2011). The research asks how communication design can sensitise us to the urgency of reimagining human and non-human relations (Boehnert, 2018). Notably, this research emerges from a particular island setting; it is a localised effort to offer a model of relational communication design that encourages social change.

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Ethics approval

This thesis was granted ethics approval by Auckland University of Technology Ethics Committee's (AUTEC) on 15 June 2017 under the application number 16/271.

Attestation of authorship

I hereby declare that the submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), or material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Signed.. 6 September 2019

Dedication

I dedicate this work to the sea and my family; one in the same.

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Chapter. 1

Chapter 1.
Standing at the shoreline: An introduction

This project considers how communication design practices may be utilised to encourage relational, ecological and generative understandings of the Anthropocene.[1] To do this, I explore my capacity as a trained designer to work together with lay-design practitioners in this time of environmental emergency, in a specific Island location.[2] On a broader level, the thesis investigates how visual communication processes can be used as "imaginative practices" to bring people into a different relationship with the natural systems we depend upon (Tsing et al., 2017, p. M8). In this chapter, I introduce myself as a researcher, my location and the rationale for the thesis. I then situate and briefly describe my methodology and theoretical frames before outlining the exegesis structure.

Throughout this exegesis I use a personal voice to convey the specifics of my location, position and experience – as a producer of situated knowledge (Haraway, 1988), as a mother, a community member and a design scholar responding to the enormity of the climate crisis. I often bring emotive qualities from each of these roles into the scholarship, including joy, grief and vulnerability.[3] Writing in this way signals an intersectional approach, as argued by Couture, Zaidi and Maticka-Tyndale (2012), in which researchers' varied identities, and their role in navigating and shaping insider/outsider positions, are reflexively considered.

1. Paul Crutzen and Eugene Stoermer coined the term Anthropocene to denote the closing of the Holocene era and the onset of a new geological epoch defined by the impact of human industrial activities on the earth and atmosphere (2000). I use the term, noting it has recently been constructively problematised (see Boehnert, 2018; Donna Haraway, 2016; Moore, 2016), because it is increasingly deployed in public discourse and therefore accessible in participatory settings. I frame the Anthropocene as a "boundary event" to be made as "short/thin as possible" by altering understandings of ourselves in the world (Haraway, 2016, p. 100).

2. I borrow "lay-design" from industrial design-researcher Angus Campbell who employs the term to describe "a common person who designs without any judgment of inferiority in terms of professionalized knowledge" (2017, p. 30).

3. Feminist scholar Suzanne Fleischman notes emotional aspects of female lived experience are often excluded from recognised forms of academic knowledge production (1998, p. 989)

Figure 1: Looking back towards Auckland City from Waiheke ferry, L. Waldner (2018).

I foreground the conditions of my life because these factors influenced my work with participants as lay-designers, beyond the collection of 'data'.

Laurene Vaughan also emphasizes how differently the intangible qualities of design practices might be articulated in ways that are "both accessible to others and authentic to the practice and the research" (Vaughan, 2017b, p. 116).[4] In order to achieve such accessibility and authenticity, and because they contributed to my design-based, embodied approach, I discuss personal motives for undertaking the thesis alongside my reactions to themes and methods. Photographs and video samples collected during the research are intended to give the reader a sense of the place and position from which the research unfolded. As a way of bringing my community into the thesis from the outset, headings in the introduction are in part taken from comments made during participatory design workshops on Waiheke Island, a key site for my research. The first heading, below, includes a phrase written by an anonymous contributor to my concluding project *The Intertidal Zone*.

1.1 Locating the researcher: Finding courage to play with the wildering waves

My research emerges from a particular position: I am a communication designer, educator, and solo parent of two young children; I live on a Waiheke,[5] a small but fairly well populated island in Aotearoa New Zealand, a small country at the edge of the world; I have a deep interest in ecological issues and social justice; my investment in design's potential to help us imagine our world differently influences my professional life and pervades my research. This thesis evolved in the context of a pregnancy, a birth, a marriage separation, and during the first years of my second child's life. This context shaped my research into a life-world, immersive project that worked with, rather than against, specific limitations and opportunities. The design processes I developed within these constraints are at once "critical, conceptual and speculative" (Anderson, 2015, p. 338).

Living in Aotearoa New Zealand presents its own constraints and opportunities. We are a small nation, physically separated from others by the sea. As a modern nation, we are young and grapple with complex colonial histories. For those growing up here, relational mātauranga Māori[6] ways of knowing and being are available, but not always widely engaged with by Pākehā.[7] For me, island life is part of Aotearoa New Zealand's geographical condition: the sea is a component of daily life, materially, emotionally and semiotically embedded in our existence. Waiheke, the principal site from where I generated and tested my methods, connected me to climate change and highlighted an "awareness of belonging to the world" (Le Guin, 2015, p. vii) and a sensitivity to my dependence on the world at large and the fragility of the natural and artificial systems I rely upon.

On Waiheke, I communed with the sea, celebrated its beauty, feared its strength, mourned its future and, through these contemplations, I pondered my children's future. I questioned what the quality of life will be here in decades to come: as sea levels rise and weather events worsen, will the surrounding ocean protect or isolate my children?[8] If trade and monetary systems collapse due to climate-related events, will food and other supplies continue to move easily from the mainland or will Waiheke return to being an agricultural community growing supplies for city dwellers?[9] Maintaining curiosity, amidst mourning and celebration, is a way to stay present to this ecological moment (Haraway, 2016, p. 2; Tsing, Swanson, Gan, & Bubandt, 2017, p. M7).

In some ways, Waiheke is a microcosm of Aotearoa New Zealand,[10] where prosperity and ongoing human flourishing are entangled with activities that contribute to climatic changes. Life "on the rock"[11] relies on fossil-fuelled infrastructure: diesel-powered ferries transport people, food, and all other supplies to and from the island. Freedom of movement, physical connection with my wider family and work opportunities are governed by systems that contribute to the demise of the natural beauty tourists flock to the island to witness. A maddening paradox. For me, this highlights how the structures that make life tenable (and comfortable) in many Western countries (globalised trade, economics and agriculture) are enmeshed in the climate crisis. Throughout the project, I questioned how I – a student deeply involved in this area – could struggle to keep the looming climate catastrophe in focus.

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5. Waiheke Island lies approximately 20km, or a 35-minute ferry ride, from Auckland, New Zealand's largest city. The permanent population of the island is approximately 9000 people although numbers swell significantly in summer months as tourists and holiday makers visit.

6. Māori term that refers to Māori knowledge systems (see Mead, 2003).

7. Māori term for New Zealanders of European descent.

8. Waiheke relies upon Auckland for its power supply, which in storms regularly cuts out. In extreme weather conditions, ferries carrying people and supplies can struggle to operate; factors that may effectively cut the island off from essential health care services and provisions

9. In the mid 1800s, when Europeans began to populate the Auckland Isthmus, local Māori cultivated crops on Waiheke to supply the increased demand (New Zealand Waitangi Tribunal, 1987, p. 7; Piritahi Marae, n.d.).

10. Waiheke Island is not an accurate cross section of New Zealand in that it lacks cultural diversity, for instance, and now has a disproportionally large number of holiday homes owned by wealthy individuals.

11. Term used by Waiheke locals when referring to the island.

Figure 2: Boat adrift in water, L. Waldner, (2018).

This sensitised me to consider how others in my community might be feeling, and how communication design[12] could possibly serve the magnitude of this purpose. Borrowing from philosopher of science and technology, Donna Haraway (2016), I ceased wishing for technological fixes, or longing for a supposedly Edenic past. Instead, I now asked: how can I remain present to this moment – to this beauty and this terror – as a means of staying connected to climate change, and how might communication design serve this purpose? It is time to imagine things differently, starting with our connection to and inter-reliance upon non-human nature.[13] Change we must, because, as author and activist Naomi Klein asserts, the severity and scope of the climate emergency "changes everything" (2014).

1.2 Rationale: Time to clean up this mess

Our home is burning, yet our actions continue to feed the fire rather than help extinguish it. The responsibility for our current plight cannot be attributed equally to all humans. As colonial and extractivist histories attest, industrialised Euro-American countries have disproportionately contributed to, and profited from, warming the planet.[14] Corporate greed holds sway over their governments. Meanwhile, the global 'South' begins to experience the worst impact of climate-affected weather extremes, including tropical storms and drought, and island nations, in particular, are highly affected by sea-level rise. Individual responsibility for our own carbon consumption remains a peripheral consideration for most people in developed nations, as climate youth activist Greta Thunberg reminds us (2019).

Without rapid and sweeping changes to our fossil-fuel- and growth-based economic systems, anthropogenic climate change is set to heat our world beyond 1.5˚ C above pre-industrial levels, as soon as 2030. This is the warming level deemed 'safe' by scientists to avoid more catastrophic effects of climate change (Intergovernmental Panel on Climate Change (IPCC), 2018). Even at this lower level of warming, effects include (but are not limited to): an increase in severe weather events, widespread drought and resultant wildfires, death of coral reef systems, melting of the polar ice caps, dramatic sea-level rise and the mass extinction of many kinds of flora and fauna. Current fires in the Amazon (August 2019) and the Arctic alert us to the catastrophic tipping points we are nearing (Cockburn, 2019; Khadka, 2019). All of these impacts pose serious threats to human health, livelihood, food security and economic growth (IPCC, 2018). Risks and impacts significantly increase at warming levels of 2˚C and over; the difference between warming levels of 1.5˚ C and 2˚C is crucial for humanity and other life on the planet. Without unprecedented changes to emissions across all sectors of society we are on course (or rather off course) to reach 2˚ C above pre-industrial levels by 2040.

12. Following Frascara (2004, p. 2), I employ 'communication design' to define processes of designing visual communications and 'graphic design' to describe the output of such activity.

13. I use the term non-human interchangeably with more-than-anthropocentric and other-than-human. These terms are employed in a similar spirit to post-anthropocentric, or post-humanist literature, for example Latour (2016) and Haraway (2016).

14. Extractivism is characterised by the removal of large quantities of natural and raw materials for the purpose of manufacturing consumer goods, as described by Browder (1992),Bebbington et al. (2018), and Baver (2020).

Beyond this, since most countries have not committed to the targets they agreed to under the Paris Agreement (COP 21) the world looks likely to heat to 3˚C above pre-industrial levels by 2100 (Climate Action Tracker, 2019). As the effects of climate change intensify, large numbers of people migrate and resources dwindle, the likelihood of geopolitical conflict will increase (Intergovernmental Panel on Climate Change (IPCC), 2013). These are but a few probable scenarios on a planet warmed above the critical level of 1.5˚ C. Beyond this point, there are dire implications for large swathes of humanity, the systems we rely upon to sustain ourselves, and the non-human beings we share this planet with. To stay below this level of warming, we need to rethink how many humans live. Current economic models based on consumer capitalism and endless growth need to be refigured, as do industrialised agricultural methods, modes of energy production and consumption, and transport (see Henfrey & Penha-Lopes, 2015; Porritt, 2007; Wright, 2015).

How we face the climate emergency, along with the non-human systems of which we are part, first requires recognising and connecting with these systems – a complex process demanding creative solutions, and one that might help us reconfigure our thinking and re-envisage the yet-to-come. In short, we must evolve from the way we have been, towards new ways of operating and understanding ourselves in the world. Statistical and scientific facts are one way of knowing climate change; design offers another. Like many other creative practitioners, designers are increasingly called on to offer strategies to comprehend the enormity of our situation.

Ecological designer and academic Joanna Boehnert argues that design is well-placed to foster emergent and relational ways of thinking (2018, p. 2). She asserts that communication design can shift the frames we use to perceive, and act within, the world, deeming current approaches to knowledge too reductive to deal with the complexity inherent in ecological collapse (p. 1). Post-development theorist Arturo Escobar argues for the localised potential of design to alter realities, noting recent shifts towards

relationality amongst objects and things across science and technology studies, anthropology and geography (2018, p. 2). Thus, community-focussed and relationally-oriented creative activity can be understood as an entry point to new ways of considering ourselves in the world; an anthrodecentric movement (Anderson, 2015) to unsettle our relentless subjectivity.[15]

This research is premised on an acceptance of our fundamental interconnection with nature. My design processes foreground the necessity of being present to human and non-human entanglements by forging emergent conversations.

1.3 Methodological approach: A design-based inquiry

Design-based research is my overarching methodological paradigm and I developed my methodology through design ways-of-doing and knowing.[16] Essentially, I constructed my methodology by utilising my background as a design practitioner and educator to develop pragmatic, applied, and speculative methods. The research employed modes of ideation, iteration and reflection to advance creative themes and participatory approaches. Hence, the research evolved through two concomitant design-based strands: an exploratory solo creative practice and participatory design interactions with members of my community. In the first strand, I designed hybrid kinetic-typography animations and situated visual responses to climate change generated for public distribution.[17] Gathering content from my environment, I videoed and photographed my local coast and seascape, utilising these materials and processes to generate design work. To test the impact of my designs, I initially projected moving-image works onto buildings on Waiheke.

15. The term anthrodecentric is deployed here to explain a philosophical movement away from anthropocentricism (Crist, 2014; see Küpers, 2020; Segall, 2014)

16. Learning scholars Sasha Barab and Kurt Squire note design-based research projects are "interventionist (involving some sort of design), take place in naturalistic contexts, and are iterative" arguing that this is "not so much an approach as it is a series of approaches, with the intent of producing new theories, artifacts, and practice" (2004, pp. 2–3)

17. Hybrid kinetic-typography describes the way in which I combine animated or kinetic typography (Brownie, 2007, p. 2) with live action video; blending these two formats results in a visually hybrid form (Manovich, 2007).

Later, curiosity about how others would interpret climate-related themes, combined with a desire to make the project more interactive, led to the development of local design workshops in which participants undertook communication-design-based tasks on smart devices. Participants utilised pre-selected consumer-level software to create their own graphic designs grappling with the idea of a sea conversation. To support their movement into imaginative design spaces, I engaged them through written and design methods. Participants' use of communication design processes to explore their own thoughts about the sea suggests that communication design can, indeed, enable human / non-human conversations.

Gradually, during this design-based inquiry, I came to understand my principal process as reflective, exploratory movements between ideation and iteration that directed me towards the final explication of my ideas. I applied these phases iteratively through visual, written and embodied methods to refine responses to my research questions, while attending to the conditions of design as emergent states (imagination and discomfort, for instance, being generative modes; these methods are covered in-depth in Chapter Two Design of study). Concepts of relationality,[18] connection, and conversation informed the development of methods, reflection on design outcomes and creative briefs: I engage design as a relational activity though which to explore my bond with the sea and make this process available to others outside of the profession. These approaches involve a knowing-through-doing that lies is at the heart of design inquiry (Nelson & Stolterman, 2014) and culminated in *The Intertidal Zone*, a participatory design space in which I honed presentation modes and developed role-play activities for participants over six weeks (covered in depth in Chapter Five).

Figure 3: *Dear ocean...I'm Sorry*, participant design work, (2017).

This thesis offers creative and participatory methods, or 'ways in' for people to engage with, and to explore their own understanding of, climate change. According to Dewey, "knowing is not the act of the outside spectator but of a participator' and "the object of knowledge resides in the consequence of directed action" (1960, p. 167). In other words, people know through doing much like designers know through designing. By developing new, creative, relational and collective ways of thinking, I work to foster the knowledge and recognition of interspecies co-dependency so urgently needed to tackle complex climate issues (see Boehnert, 2018). Conducted as a mode of inquiry combining scientific models, metaphors[19] and communication design, my thesis project seeks to further relational understandings of communication design (or, communication design-things) as dealing with "matters of concern" (Atelier, 2012, citing Latour) and generating new ways of seeing the world. Underlying this is a refiguring of the traditional role of the (communication) designer and the assertion that designers' skill-sets have wider and more substantial contributions to make than serving consumer-capitalism (Meurer, 1997).

18. I use relationality in the spirit of Escobar (2018) and Haraway (2016): to describe thinking, and ways of being, that consider relations between entities in ways that support recognition of our own connectedness to the natural systems we are part of.

19. There are many metaphors employed in the thesis, examples include: sympoiesis, networks, and trails as per Haraway (2016), Latour (2005), and Ingold (2008b a) respectively. I also deploy the metaphor of a conversation with the sea to describe a human/non-human dialogue, climate change as an elephant in the room, and use the phrase intertidal zone alongside marine related terminology to describe flow and exchange within my major participatory project.

Considering through design-based methods how communication design can be used as a practice of eco-politics in participatory research settings, the project contributes to the emergent field of communication-design inquiry as a form of academic research and a participatory mode. In an era when so many people designs through ubiquitous software applications (Manzini, 2015; Shao, 2009; van Dijck, 2009), there is an opportunity to extend and open up the role of the designer to help us all to imagine new futures.

1.4 Conceptual approaches: Being the ocean waves and the wind

Creative practices can help us reimagine our connection to the world: stones can have agency, trees autonomy, the sea a voice. In this research, lay-designers and I collectively reconsider our relationships with natural systems in a dialogue with the other-than-human. My design processes were influenced by Latourian concepts, including how non-humans might enter a more expansive version of democracy (see Latour, 2005, 2016), and I increasingly understood the sea as an entity to be communed with. I questioned how different the world could be if we considered non-humans on equal terms: what if we could converse with the entities we share life with? The relational sensibility woven into the project's conceptual framing flowed over into participatory methods, and I used public workshops to explore how lay-designers would interact with Latourian concepts. If the tools of design can help us communicate our thoughts and, importantly, listen to the non-human world and ourselves, could they provide an entry point for people to approach climate change? Are they a way to engage people with anthropogenic conditions?

Transdisciplinary scholars on the Anthropocene, Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt invite our "attunement to multispecies entanglement" (2017, p. G11). Such attunement emerged out of my design practice, where I visually explored the premise of a conversation with the sea, and then developed into a participatory communication design

activity which left trails to be followed,[20] as each creator's tacit understanding of their sea became visible.[21]

I combined the relational and participatory approach of the 'design-things' model (Atelier, 2011) with Haraway's (2016) take on sympoiesis and developed a way of thinking about design experiments that foregrounded evolution through collaboration. Participatory design practitioners that make up the Atelier group, Thomas Binder, Pelle Ehn, Giorgio De Michelis, Giulio Jacucci, Per Linde and Ina Wagner also use Latourian concepts in their design projects. With reference to the etymology of the word thing,[22] Atelier coined the term 'design-things', or 'sociomaterial assemblies' to attend to the relations generated between humans and non-human elements of a design project (2011, pp. 6–7).

Figure 4: Participant holding his final design work in *The Intertidal Zone*, L. Waldner, (2019).

20. Tim Ingold's (2008 a) concept of trails is useful to articulate an emergence of designed objects that can only retrospectively be described (and understood).

21. Tacit knowing "refers to things we know but are not able to verbally communicate to others". It is a form of knowledge more easily accessed through visual and creative methods (Sanders & Stappers, 2013, p. 52).

22. The Proto-Germanic origins of the word thing refer to "meeting" or "assembly", also see Old Frisian thing "assembly, council, suit, matter, thing,", Middle Dutch dinc "court-day, suit, plea, concern, affair, thing," Dutch ding "thing," Old High German ding "public assembly for judgment and business" German Ding "affair, matter, thing," Old Norse þing "public assembly". This sense of the word did not survive Old English." (Online Etymology Dictionary, n.d.).

Figure 5: Running towards the sea, Waiheke, L. Waldner, (2018).

This participatory outlook addresses "matters of concern", such as the climate emergency (Björgvinsson et al., 2012). With the help of these terms, I looked to connections between actors in the web that made up my design inquiry, and then foregrounded collaboration through participation in design experiments as design-things.

Also in co-relational terms, Donna Haraway uses 'sympoiesis' to conceptualise how humans may move forward with the other-than-human during ecological crises (2016, p. 5). As the opposite of autopoiesis, sympoiesis means making-with: "Nothing makes itself; nothing is really autopoietic or self-organizing" – rather, sympoiesis is "proper to complex, dynamic, responsive, situated, historical systems. It is a word for worlding-with, in company. Sympoiesis enfolds autopoiesis and generatively unfurls and extends it" (p. 58). It describes evolution at a cellular level: cells digest one another, making-with one another as they grow together into something else. Particularly the digestive component of this metaphor offered me new ways of considering designing: concepts are digested by professional and lay-designers as they work to visually communicate something. They become part of the designers on some level and are processed through the designer's personal viewpoints. Both design and concept evolve in this process. Thus, designing-with can be understood as a

way of evolving-with, a notion discussed in more detail in Chapter Three, *Design things in context*. Eventually, when hosting the interactive design space *The Intertidal Zone*,[23] I shifted from being a design educator toward being a "designer as enabler" (Armstrong, 2010) and tested sympoietic forms of designing-with: I invited my community to enter into dialogue with the sea.

1.5 Exegesis structure: Diving in

The exegesis is made up of six chapters. Following this introductory chapter, Chapter Two, *Ways-of-doing: Design of study*, covers my research design beginning with a description of my approach to design-based inquiry as a research-generating practice and a methodological structure (Markussen, 2017; Sanders & Stappers, 2013; Vaughan, 2017b, 2017a). I unpack further the key co-relational concepts: design-things, the non-human turn, and sympoiesis before describing how the research is a form of situated knowledge production by an 'insider'. Drawing on designer practitioners, I conceptualise design as a situated conversation between designer, concept and artefact then describe my experience of communication design practice as movement between ideation, reflection and iteration. I expand on the notion of design as an emergent space, which can be used to attune to emotion and imagination and ultimately distil our unspoken knowing to be articulated through design. I describe supporting activities for each mode, including reflective photographic documentation and reflection-through-design, and enactment. Next, I outline methods of making-do as a intentional use of defined life parameters and making with as an approach to utilising existing community synergies in participatory modes. The remainder of the chapter is divided into sections that outline and contextualise participatory approaches in terms of generative design research and participatory design. I describe the design of original workshops, approaches to reflecting on their outcomes, including journaling and a form thematic analysis and then move on to the use of communication design as a 'maketool' (Sanders & Stappers, 2013).

Chapter Three, *Design-things in context*, is a contextual review drawing on diverse literatures and design case studies that engender participation and creative-public practices that respond to the conditions of the Anthropocene. I begin with a detailed discussion of 'design-things' (Atelier, 2011) and then refer design literature on the transformative potential of design to post-anthropocentric theory on the value of attuning to nature. In *Other ways of seeing things: Ingold's trails* I trace how Tim Ingold's theory of trails complements the research before returning to Haraway's digestive metaphor of sympoiesis in relation to design practice. The following section *Communication design-things* reflects on selected literature concerning participatory and generative forms of communication design. *Climate things* describes creative public-facing climate initiatives in New Zealand such as Joseph Michael's projection work *While you were sleeping* before attending to interactive and community-based practices such as TEMP°, O-Tu-Kapua and the work of Gabby O'Connor. Finally, *Making things* compares commercial, artistic and research-based projects wherein design process was a tool to engage key audiences.

Chapter Four, *Conversing with the sea: Sites, events and processes*, reflects on sites and events where methods were explored and is divided into two main sections: *Designing alone* and *Designing with others*. These sections describe the practical application and outcomes of my methods as they relate to my individual, creative practice and participatory practices where I worked with others. These are the foundational works that led to a workshop-based model of design practice with lay designers. Consequently, the chapter is rich in imagery and video clips.[24] This chapter considers the turning points in my research journey that guided me towards the final articulation of the thesis: *The Intertidal Zone*.

Chapter Five, *Reflections on The Intertidal Zone*, explicates my experiences during the culmination of the research, a community-orientated, series of communication-design workshops and design interactions as part of the 2019 *Sea Conversations* exhibition.

I offer a critical commentary on *The Intertidal Zone* as a test bed for the creative methods developed during the project. Here I compare the differing participatory formats employed, including: structured workshops, impromptu design interactions, and satellite events with community groups and organisations. Accordingly, I describe the emergence of new techniques and observations, including the use of roleplay and ways participants surfaced of their unspoken relationship to the sea.

In the conclusion, Chapter Six: *Imagining the world differently*, I summarise the main concepts of the research and how they were operationalised. I offer my reflections on the findings from *The Intertidal Zone*, including a comparison of the group participation in design-things versus individual design interactions. I consider what the project contributes to the practical and theoretical fields it connects with in several ways; as an example of the potential of communication design to engage communities with relational outlooks; a deployment of ecologically-focused lay-communication design; and a refiguring of the capacity of communication design. I then provide an indication of possible future research directions and community-based actions, including collaboration with the Waiheke Marine Project and a continuation of design workshops as community education. Finally, I recount the contribution the thesis makes to increasingly relational outlooks towards non-human nature.

Throughout the text I use 'the terms participant', 'lay-designer', and workshop 'attendee' to refer to the people who engaged in my community-based design activities. In an effort to describe my experiences working with actual people, and 'warm up' cold terminology commonly used in this area, I discarded the term 'user' or 'user-generated' in favour of the above.[25] Although I did collaborate with others, the terms 'co-designer'/ 'co-researcher'/ 'co-contributor' do not accurately reflect participants' roles, because they assign people active functions in deciding the direction of the research. Rather, people designed their own creative works even

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24. Please note, in the compressed version of the exegesis, higher-resolution video media can be found in the separately labelled appendix file.

25. Initially I borrowed the word 'user' from Human Computer Interaction (HCI) research (Edmonds, 2010), but found it implies that people are test subjects. 'Nondesigners' is another term I eschew; it implies judgement of who is permitted to design, it is binary in that someone is either a designer or not a designer.

if they used pre-defined fonts and typographic arrangements; and though their contributions play an important role, I, as the researcher, benefit from the research quite independently.

The task of explicating creative, practice-based methods in a written, linear document always presents a challenge. Processes that were, in reality, intermingled and concomitant must necessarily be separated, categorised, and ordered in ways that fit an exegesis structure. To mitigate this, I have referred to corresponding areas, so that the reader may navigate to find more information, or a further application, of concepts and processes. To support the articulation of intuitive, and occasionally intangible, aspects of creative work and methods, I include photographs, videos and diagrams throughout the exegesis. In the interactive version of this document here there is a triangle next to an image caption, the media is 'playable'; click on the frame to activate the video. The same triangle icon indicates video media in the interactive table of figures; click on the figure entry to go to the relevant media. Please note that in the lower resolution print version of this document the reader is referred to a separate appendices to view high resolution video. These appendices can be downloaded separately.

As this is a practice-led thesis my research is orientated toward design ways-of-doing and emergent knowledge, rather than a finished artefact. Design futurist Tony Fry notes:

> "The designed prefigures the nature of those things that are determining the fate of the world we are bringing into being...much more attention needs to be given to what designers do" (2010, p. 76).

Figure 6: Holding part of the island in my hand. L. Waldner, (2018).

Chapter. 2

Chapter 2.
Ways-of-doing: Design of study

2.1 Overview

The knowledge developed in this thesis emerged out of my communication design-based research in two complementary ways: first through my practice as a trained designer, and secondly through 'lay' communication design practiced in community workshops, as participatory methods of engagement.[26] I evolved my methodology through design specific ways-of-doing and knowing. Design-based inquiry guided my research questions and allowed me to move between methods involving ideation, iteration, and reflection. Along the way I paid close attention to the 'conditions' of design as I understand them: emergence (Atelier, 2011, p. 107), imagination and emotion as spaces of possibility for socio-ecological change. Throughout this chapter co-relational concepts such as sympoiesis, as a means of making-with (Haraway, 2016), will be introduced as part of this design methodology, along with key authors on design-based research paradigms. Design academic Laurene Vaughan calls for design research to embrace, value and articulate its own forms of knowledge generation (2017a, p. 11). So, rather than assume the methodology of another discipline, I understand my design process in this project as a research-generating practice and a methodological approach, drawing on Vaughan (2017a), Sanders & Stappers (2013) and Thomas Markussen (2017).

Explaining my methodology in this way allows me to remain authentic to the way the project unfolded and foreground my design-led thinking and action as a form of situated and locatable knowledge production (Haraway 1988). Vaughan asserts "practitioner research is deeply situated in the nuances of the practice of the researcher" (2017a, pp. 16–17).

Therefore, after broadly highlighting co-relational concepts drawing on post-anthropocentric currents in the humanities, I will relate methodologies from outside the design disciplines, including insider research and situated knowledge as appropriate to my localised practice on Waiheke island. I then provide an account of my design process in practice, touching on ways practical methods of photography and reflective writing supported different design modes and visual explorations of the felt experience of climate change, including grief and loss. Next, I describe the generative potential of emotion's relationship with the imagination in emergent spaces of design, to then move on to methods of 'making-do' and 'making-with' involving life-parameters and community connections impacting design-based modalities of social change. After positioning the overarching methodological paradigm as a design-led inquiry, I address participatory aspects of the project – including ways in which generative design research supported the development of community-based workshops; the role of communication design as a 'maketool' Sanders & Stappers (2013); and deployment of reflective writing and journaling to digest outcomes.

Through iterations of community design workshops, I applied and developed concepts central to the thesis, including a framing of design projects as 'design things' (Atelier, 2011, p. 103). The potential role of communication design for 'making with' non-human others, and developing post-human sensibilities in a process of sympoiesis (Haraway, 2016, p. 5) will be further developed in what follows. With reference to Social Design academic Thomas Markussen, my research may be understood as 'building theory' through a design practice that connects and integrates knowledge from diverse fields of science, feminist theory, communication design, design and post-humanist philosophy (2017, p. 93). How my design methods manifest in particular parts of the research is described in detail in Chapter Four, *Conversing with the sea*. To begin, I focus on the importance of relationality to my methodological approach.

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26. As previously mentioned, I borrow this terminology from Angus Campbell who coined the term "lay designer" to describe ways people outside the design professional engage in design activity to generate novel solutions (2017, p. 30).

2.2 Thinking-with/through relationships: Relationality and the non-human turn

The theoretical constructs and methodological underpinnings of my design of study share a sense of ecological connectedness. As I designed methods and communication design pieces, I 'thought-with' and 'made-with' ecological and relational theories – during concomitant modes of ideation, iteration and reflection. Haraway's speculation on the value of ecological processes and metaphors (in dealing with complex issues such as climate change) advanced my design thinking about the connections and relationships between human and non-human entities (Haraway, 2016, p. 58). I considered the constituents of social and environmental networks I worked with and looked to interactions between them to find research possibilities. Thus, my practice developed through an attention to communities, relationships and interactions, reflecting my part in many social, political and biological systems. This turn towards relationships, connection and exchange influenced how I generated ideas, tested concepts and reflected on the design artefacts generated in the workshops.

An orientation towards less-anthropocentric ways of being has been fundamental to my research. I took cues from Actor Network Theory (ANT) to commune creatively with my island surroundings, employing a variation on Latour's (2005) theoretical turn towards the non-human as agentic to develop the imaginative premise of a conversation with the sea. When working alone, I used this notion to ideate and reflect, to sensitise myself, and my audience, to our interdependence on the sea, and to confront "human exceptionalism" (Haraway, 2016, p. 13). I return to design practitioner Kayla Anderson's call for "anthrodecentric" practices (2015, p. 338) and for design works that pose questions rather than present solutions. Anderson suggests that open-ended, speculative design works foster critical and relational thinking, instead of reproducing anthropocentric notions of clever humans as top dogs who can 'beat' climate change.

Applying a relational outlook to design practice directed me towards the greater potential of thinking of design as process rather than in terms of outcomes. I comprehended design projects as "sociomaterial assemblies", focusing more on the agency of design itself, and less on designed objects (Atelier, 2011, pp. 6–7). A curiosity about how design methods might connect others to climate change then became the impetus to work with my community in workshop sessions. Haraway's (2016) speculation on sympoiesis and other post-humanist ecological, emergent and relational ways of thinking expanded my design processes (I touch on these throughout this chapter and return to each more deeply in Chapter Three). Ingold's (2008a) concepts of trails and meshworks offered an additional lens through which to consider the interrelated and emergent processes of design. I considered how communication design could potentially serve new priorities and cultivate increased ecological sensitivities (Boenert, 2018, p. 119). I opened my practice outward, to the non-human other and my island dwelling conditions, while simultaneously looking inward to my insider role in this research.

2.3 Situating the researcher

Island-life takes place in a specific geographic position; our territorial boundaries are demarcated by the ocean thus influencing our connection to it. In other words, although we may be an ideologically diverse community, as island dwellers we are likely to have a direct relationship with the sea; it has a bearing upon our lives. Along with being situated in a particular location, the way I take the sea into account as an entity with agency, as a less anthropocentric way of considering being, is central to my methodology. I thought-with and designed-with the sea, drawing on the embodied experience available to me via my insider position as an island inhabitant. Residing on an island conditioned my process through the daily, lived experience of one of the key protagonists in the project, the sea. In this exegesis, I highlight my experience as the practitioner-researcher, who is part of a particular island community, as this was central to how research advanced. The use of my personal voice in the exegesis

reflects this position, as I detailed in the thesis introduction. Approaches from the social sciences help clarify my role, place and relationships with participants in the research, while design-based research is the over-arching paradigm in which I operate. In her seminal work on situated knowledge, Donna Haraway (1988) emphasises the importance of locating both the researcher and the context of research, as this has direct bearing on how and why the knowledge was produced in particular ways. For Haraway, recognising the specific origins of knowledge claims, alongside their partiality, allows for accountability across all areas of knowledge production: researchers become "answerable for what we learn how to see" (p. 583).

Forms of situated knowing emerge in multiple ways from the parameters of my life and location, my lived world. As a designer I researched through design practice, sympoietically making-with my surroundings to surface my own sensitivity to human and non-human entanglements; gathered content and inspiration from being a mother of young children on an island facing an ecological emergency; conversed with the sea as an all-surrounding entity in my community. In my dialogue with the sea through design, theoretical frameworks intermingled and re-directed the research design. Before I opened my curiosity outwards and engaged with others, I also listened for what the design process was telling me about my relationship to the ocean. Then, in projection tests onto easily accessible buildings, first on the mainland then on Waiheke Island, I used visual materials I had gathered to generate hybrid kinetic-typography combining animated words and video footage. Speculating on the sympoietic capacity of communication design, as a metaphor for designers assimilating concepts, I took what emerged from my own design discovery and tested how design activities might sensitise others to similar eco-political themes.

The participants in the design workshops, organised through local interest groups, the public library and environmental community events on Waiheke island, were often casual acquaintances or part of my personal networks. As a community member and designer, I am afforded the position of "insider researcher" in many ways. My positionality in relation to the research participants provide me with both insights and access (Greene, 2014, p. 1). Education theorist Melanie Greene suggests the most straightforward definition of insider research is "the study of one's own social group of society" (p. 2). Originating from ethnographic field research practices, the term specifically denotes the position of a researcher in relation to their research participants. Psychology scholar Anne Brodksy emphasises the importance of understanding differences between insider and outsider perspectives and points to how meaning is constructed between researchers and participant (2008). Brodsky's assertion of the researcher as a "person" playing a profound role in all parts of research is useful here, as is her notion of researcher as instrument. Just as design can be a "maketool" to access participant knowledge, I position myself as a 'designer as instrument': knowledge emerges through both my independent design practice and the participatory design activities I facilitated. However, her emphasis on the individual researcher is perhaps problematic. She writes:

> [...] analysis, interpretation, and meaning-making come from the researcher, using all of her or his personal and professional skills, training, knowledge, and experience as an instrument to produce a coherent authentic picture of the research as the researcher saw and experienced it. (Brodsky, 2008)

This focus risks overlooking the other agents in the process. Consequently, the findings arising 'in-situ', in irreplicable interactions with participants, are partial, specific forms of knowing, gathered from an insider position and documented in reflective writing in this exegesis. As Haraway asserts, "it is precisely in the politics and epistemology of partial perspectives that the possibility of sustained, rational, objective inquiry rests" (1988, p. 584). Accordingly, the research offers one possible, located response to the question of how to engage people with climate change.

2.4 Inquiring through design: Employing design process as methodology

Communication design, as a form of practice-based, academic research, is an emergent area. There is little theory on how communication design activity might be used as a practice of eco-politics or participatory research.[27] Diverse accounts of professional graphic designers' processes attest to the variety of communication designers' approaches to their practice (see Ahlberg, 2016; Shaughnessy, 2010; Skolos & Wedell, 2012). Esteemed designer Michael Beirut asserts that the work professional designers generate "is the product of personal idiosyncrasies" (Ahlberg, 2016, p. 20), a view echoing ethnographer Michael Agar's stance that a researcher's personality matters in research matters (1986, p. 13).

While there is no singular textbook on the use of communication design as a research method,[28] it can be situated within the paradigm of design-based or practice-orientated research. Vaughan (2017a, see above), Barnard (2013), Ings (2014) and Ehn & Ullmark (2017) provide supporting arguments, and I will discuss them in what follows. The construction of a design-led methodology in this research draws on sources both inside and outside of design, while utilising my situated knowledge as a designer and design educator (Haraway, 1988; Karhumaa, 2019) and that of key design thinkers and authors, such as Kees Dorst and futurist Tony Fry and, for instance, the work of design research group Atelier and practitioners Experimental Jetset.

2.4.1 Design as dialogic movement towards articulation

Renowned anti-consumerist design activist Tibor Kalman once defined communication design as a "language not a message" (cited in Barnard, 2005, p. 40). When perceived as a language, communication design is always in formation and in dialogue

27. Exceptions framing communication design as a participatory, social change endeavour include Peters et al. (2009), Bennett et al. (2006), Taffe (2018), and Taffe and Barnes (2010) all of which are contextualised in Chapter three in section titled *Communication design things*.

28. There have been calls to devlelop a more systematic approach to design research and design methods, however, these originate from a professional rather than a design-based research context (see Cooke, 2006; Frascara, 1997, 2004).

with social and political conditions. Following Russian linguist Mikhail Bakhtin's conception of language development, designed communications can be understood as visual utterances of a specific historical moment (1981). Communication design is then at once a social language, 'spoken' by particular social strata (designers) and a unitary shared language; part of a heteroglossia that defines a particular place, time and set of circumstances.[29] Echoing Kalman's desire to enlarge "the parameters of design from service to cultural force" (Heller, 1999), this research makes use of communication design practices to formulate dialogic utterances about the ecological imperatives of our current epoch.

The design process is also an exchange or conversation between designer, concept, and material artifact under construction, in a sense, a situated dialogue, as Haslem emphasises (2011, p. 15). For me, the communication-design process is a call and response through modes of iteration, ideation and reflection (figure 7).
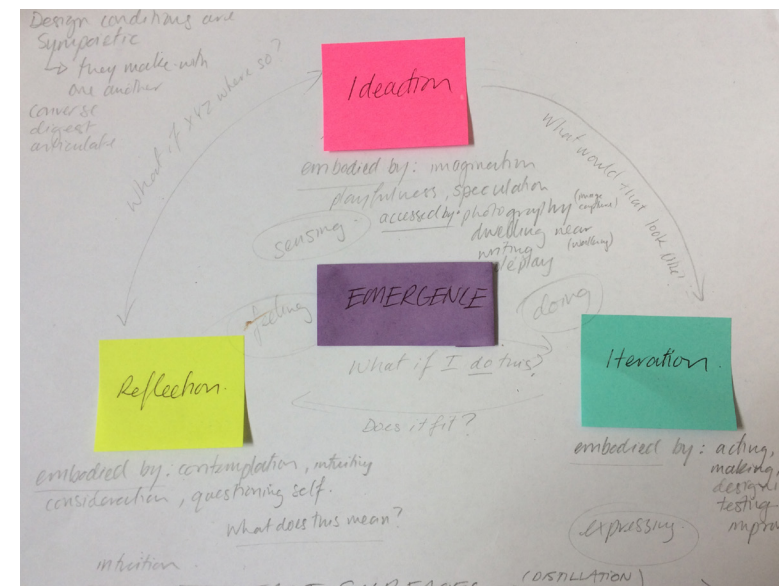
Figure 7: Communication design process sketch , L. Waldner, (2019).

29. Translators Caryl Emmerson and Michael Holquist define Bakhtin's use of heteroglossia as "the base condition governing the operation of meaning in any utterance. It is that which insures the primacy of context over text. At any given time, in any given place, there will be a set of conditions-social, historical, meteorological, physiological that will insure that a word uttered in that place and at that time will have a meaning different than it would have under any other conditions" (in Bakhtin, 1981, p. 427).

Motility between modes is driven by intuition,[30] the practitioner's situated knowing and capacity as an instrument of the design-research process (Brodsky, 2008) a reflective outlook built into decisions. This is neither a linear nor circular process, but an ongoing exchange between modes, a dialogue of sorts. For example, ideation triggers reflection, which sparks ideation again, before an iteration is generated to be reflected upon, and so on... Movement between modes generates, all going well, a momentum that moves the project forward and towards visual articulation. Figure 8 is one visualisation of the kind of momentum I refer to: a designer's process takes the form of a spiralling arc, describing progress from the start of a project (A) to the end (B) as neither short nor linear. And so, on this view, the communication-design process is a designer's movement towards articulating their idiosyncratic version of whatever theme they are designing with. The visual process can communicate issues that may be difficult to express by other means. For applied descriptions of design as a movement towards articulation, see Chapter Four, particularly subsection titled *Talking to/with myself*.

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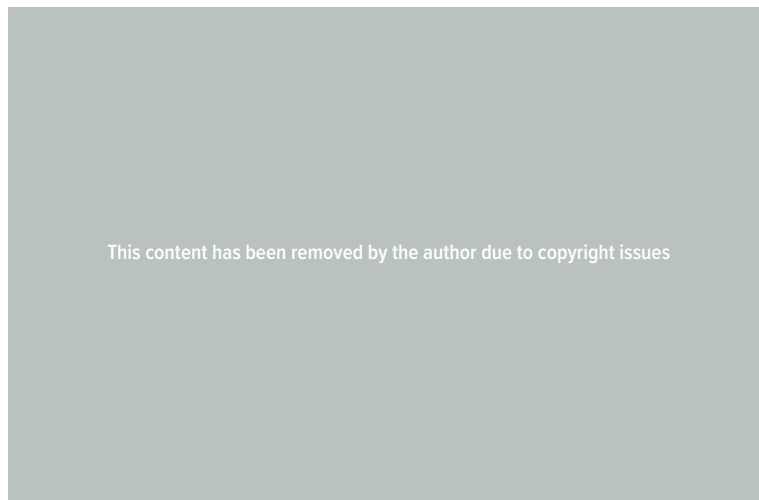
Figure 8: Diagram of design process describing moves from A (beginning) to B (end) of a project. From *Please make this look nice: The graphic design process.* (p. 12, Ahlberg, 2016).

30. Intuition here refers to the use of internal knowing to advance the research, an approach recognised by Albert Einstein and others as also relevant to scientific endeavour: "The supreme task of the physicist is to arrive at those universal elementary laws from which the cosmos can be built up by pure deduction. There is no logical path to these laws; only intuition, resting on sympathetic understanding of experience, can reach them" (1954, p. 226).

Other designers explain their processes in similar terms: motion towards a final outcome. For example, communication designers at renowned firm Experimental Jetset describe process as the dynamic movement between identifiable steps; the steps can be measured, yet the movement between them remains intangible (Ahlberg, 2016, pp. 25–26). Former industrial designer and academic Kees Dorst explains design as a form of learning wherein designers move through "learning cycles" of "propose-experiment-learn, again and again" towards a solution (2006, p. 16). Members of participatory design network Atelier also consider designing an integrated movement towards a final design artefact (Atelier, 2011, p. 95). They all describe a trail left by a process that can only be recognised in hindsight.[31]

In contrast with the work of designers servicing a market, design processes presented in this thesis are less dependent on commercial constraints. Here, communication design is positioned as a method of knowledge production with the goal of engaging publics with the necessary shift in our ways of being in response to the conditions of the Anthropocene. My focus is on the potential that communication design offers for lay-designers, in this case to facilitate understandings of ecological interdependency, yet I arrive at this emphasis via my own design practice. For me, ideation, reflection and iteration are key modes in design practice that I use to design and develop the study and ultimately to design tools for lay-designers.[32] Following this, I investigate the generative value in design of feelings such as discomfort, grief and hope, along with the value of imagination in design processes.

31. Interestingly I was only able to articulate my own version of the communication-design process near the end of this process, as I was able to view the trail.

32. As noted in chapter one, I select the term lay-design for its sense of equity: to recognise that people outside of design professions can also produce knowledge through the practice of design

2.4.2 Design modes: Ideation, iteration, reflection

In my practice, I ideate and explore possibilities through applied methods, including photography and moving-image recordings. I process and expand upon thoughts that arise via handwritten and digital journaling. To enable situated responses, I supplement creative methods with embodied practices such as walking, sitting, or lying in proximity to my subject. Ideation is a recognised phase of communication design. Designer and writer Gavin Ambrose asserts ideation as the most creative phase of design process, wherein a designer "seeks to generate concepts that will be worked up and resolved in subsequent process stages" (2019, p. 49). Beyond Ambrose's functional definition, my curiosity turns to what the condition of communication design ideation offers as a space in which the hypothetical can be entertained. Attending to ideation in this way parallels the "B" side of design educators Anthony Dunne and Fiona Raby's "A/B" list, wherein extended versions of design (B) are listed alongside current design manifestations (A) (2013, p. vii). Applying notions from the "B" side; ideation can be seen a questioning condition that helps us consider "how the world could be" (ibid.). In this speculative mode, ideas are first entertained and formulated, in an expansive realm characterised by the question, "What if…?"

While ideation can be seen as its own mode of doing, ideation can also be sparked while designing; this is what Donald Schön refers to with his "reflection-in-action" categorisation of practitioner knowledge (1983). In addition, designer and filmmaker Welby Ings highlights the significance of creative activities when dwelling with concepts we cannot yet articulate (2014b, pp. 197–198). For instance, these methods help materialise thinking in a more speculative mode, and imposed orders can be imagined differently: "What if the earth was my cousin?". During ideation, we can practice new ways of thinking about the world and ourselves in it. Our current thought systems direct us towards ecological collapse, and we need new thoughts to think-with, as Haraway asserts (2016, p. 39). The condition of ideation offers this. We also need ways of testing and assessing new ways of thinking, which is what iteration offers us.

In both research and design contexts, iteration describes methods of repeated 'doing' and 'acting' to refine ideas en route to their articulation. In my communication design practice, I iterate when trialling arrangements of type and image or selecting fonts and typefaces, as well as scale and colour of type. I sketch storyboards for moving image work; test effects of animation timing; and project work onto differing surfaces and locations. In participatory modes, I trial varied locations for workshops, different session durations and formats; recruitment practices; a variety of software for lay-design activities; as well as iterations of activities, such as role-play.

Iteration is a common term in design to describe the process of implementing ideas, with an intention towards improvement (see Dubberly, 2005; Lupton & Phillips, 2015; Nottingham & Stout, 2019). Action is informed by reflection on previous attempts. Design researcher and practitioner Neal Haslem describes this as materialising a concept in the form of a "propositional artefact" which can be reflected upon to "produce a further propositional artefact, one that incorporates what I have learnt from the first" (2011, p. 24). Iterative processes are continued until a final outcome is located.

Iteration is a material, embodied design approach that informs the trajectory along which a designer's knowledge about the topic at hand increases (see Nelson & Stolterman, 2014). Through iterating, I reply to the ideational question "What if?" through the lens of "What now?". The motion of these "learning cycles" (Dorst, 2006, p. 16) captures existing knowledge in new versions. While designing, I materialised ideas, generated versions of each concept and listened to what the design was telling me about the emergent object. When trialling designs in context, I tested different locations (e.g., physical projection on public architecture on the foreshore and clips in social-media settings) and reflected on advantages and drawbacks of each. Iterations of participatory methods were implemented via community design and through design events with local environmental organisations and gatherings.

Through iteration, methods were tested, developed and tested again, with reflection being the key driver of these movements. The practical application of these processes is discussed further in Chapter Four.

Reflection is regarded as intrinsic to communication design practices (Barnard, 2013, p. 10), and vital to design as a method of inquiry (Ehn & Ullmark, 2017, p. 83). In my understanding of design practice, it is an ongoing mode that connects processes of iteration and ideation, and generates an exchange between these modes that directs movement towards explication. Haslem discusses the function of reflection using Schön's concept of 'back talk' (1983, p. 78). He identifies the ongoing dialogue between designer, propositional artefacts and outcomes as the path along which "design moves" (Haslem, 2011, p. 65).[33] Expanding on Schön's insights with a slightly different inflection, [34] reflection-during-design as a generative process can reveal new understandings of the matter at hand. For example, I reflect on successful or unsuccessful elements of design iterations to advance work, meanwhile I also look for clues in my decision making to better understand which themes and modes are important to me and why.

In keeping with dialogic elements of Schön's theories, when designing, I converse with myself and measure what I am producing against my sense of the concept, drawing my situated knowledge as a designer and researcher to assess what my design movements are telling me (Haraway, 1988.). For me, questions embedded in reflection while designing are: "What does this design move tell me about the concept?" and "How / why does feel right / wrong?". As I ask questions, I listen to myself and my work; my thinking is dialogic (Sinfield, 2016, p. 35). Thus, designing facilitates a conversation with myself via reflection on the emergent object. I augmented reflection-during-design with

activities to support the development of research and design concepts, using journaling, photography, and dwelling near the sea as settings to enhance reflective thinking.

In a social-change context, dialogue with ourselves is at a starting point for any intention to sustain shifts in ideology. Design futurist Tony Fry suggests that our internal experience is fused with external worlds of meaning; we must collectively change how we "dwell within ourselves" to alter how we comprehend, and interact with, the world (2010, p. 3), another form of situated knowing to return to Haraway (1988). In my case this entails probing which internalised ideas reproduce anthropocentric disconnection from the natural world: reflecting on our tacit knowing. Design practices can enable this type of connection between our internal and external worlds, they translate the invisible into visible forms (Frascara, 2004, p. 2). It follows that designers, lay and professional, can reveal internal connections (or disconnections) through communication-design methods.

2.4.3 Design as emergent: The role of imagination, emotion, and distillation

I use the term emergence to describe a state within design processes where the 'something' being designed is coming into being: it is emerging and therefore not yet distinct. Members of collaborative design project Atelier and participatory design advocates Thomas Binder, Pelle Ehn, Giorgio De Michelis, Giulio Jacucci, Per Linde and Ina Wagner suggest that, "design is about bringing forth something that does not exist through material transformations and communicative acts" (2011, p. 105). The authors point out the peculiar nature of emergent processes where designers must remain focused on something that "does not yet exist" (Atelier, 2011, p. 51). This state of emergence I consider to be a valuable condition of design in participatory environments that require us to stay-with the unknown and remain open. As a condition in design practice, an openness to emergence can help to work toward a future that is as yet unknowable. Just as climate change is an emergent condition, and our response to it as humans and as designers is still coming into being. I sought

33. For Schön "back talk" describes practitioners' conversations with the materials of a situation via a reflective mindset, activity he names as "reflection-in-action" (1983, pp. 78–79).

34. I diverge from Schön however and avoid labelling my process as reflection-in-action, drawing on Peter Erlandson's critique of the label, in that reflection, by its very definition, contemplates prior action (2006, 2007). Instead, I extend Downton's research-through-design knowledge making assertion, I consider the value of reflection-during-design as a generative process that can reveal new understandings of the matter at hand.

out design methodologies to "stay with the trouble" (Haraway, 2016), discomfort and other emotions that may come with difficult eco-political territory. To forge a practice of staying-with the unknown, and to remain with a climatic condition that is only just visible, tests the limits of the imagination. I propose design activity as a way of making-with the unknown that utilises design modes of ideation, iteration and reflection, to guide us through the discomfort of emergence. Design practice may also offer space to stay-with the unavoidable difficulty and the grief involved in losing the present and imagining a better future.

The imagination involved in designing exercises a creativity comparable to that required to imagine the world otherwise: both ask "What if?" By definition, to call on the imagination asks us to form a mental image of something that is not present, to expect, believe or suppose (Merriam-Webster, n.d.). It follows that imagination can help us envisage issues presently out of sight. As Tsing et al. argue, imaginative practices can help us to imagine our world differently (2017, pp. M8–9). The participatory practice of forming a conversation with the sea invites such imaginative operations as a process of speculation which builds on Tony Fry's notion of design futuring, discussed further on in this chapter.

Imagination made conversations with the sea and with climate crises present to me. As I watched my children play in the water, I imagined how I would explain future seas – would they be deserts or too polluted to swim in or would the beach where I stand be underwater? This aroused heartache and regret, intermingled with joy and hope for the future of the next generation of all children. Scenarios were imaginary, but the emotions evoked by these processes were heartfelt forming the basis for design work and motivation for participatory practices. I understood the role of imagination, and my situated, emotional reaction to it, as generative. Design researchers Elizabeth Sanders and Pieter Stappers assert in *The Convivial Toolbox* that emotion plays a key role in creative practices: creative thought occurs pre-verbally and is evident in feelings, bodily sensations, imagery and intuitions (2013, p. 48). In the frame of design, ecology

and politics, scholar Joanna Boehnert points out "feminist and ecofeminist scholars describe experiential, situated knowledge and emotion as central to resolving the false dichotomy between intellect and body, humanity and nature" (2018, p. 65).

Counter to advice of climate-communication expert Susan Hassol (TEDx Talks, 2015) and psychologist Per Espen Stoknes (2015) I share my despair as a means of connecting others to climate change. Discussing situated knowledge Haraway asserts "location is about vulnerability, location resists the politics of closure" (1988, p. 590), I utilised my context specific vulnerability to remain open to my feelings about climate change and channelled these into my design work. Staying-with complex emotions while ideating for design enabled me to confront the despair the conditions of the Anthropocene have wrought. By grieving-with our ailing world we might move forward, together with the other-than human biota and abiotic life: a matter of reflecting on "What is". In Staying with the Trouble, Haraway suggests: "Grief is a path to understanding shared living and dying: human beings must grieve with because we are in, and of, the fabric of undoing" (2016, p. 38). She reminds us, citing Iris van Dooren, that the work of "reflection and mourning" is a hard, yet necessary, practice in our difficult present (p. 38).

Many experienced designers refer to feeling discomfort when in bringing a new piece of design into (see interviews with communication designers in Ahlberg, 2016). In design-based research, learning can be attained by paying attention to sources of discomfort (Haslem, 2011, p. 53). I see design activity as a way of 'practicing being uncomfortable'. My design work aims to disrupt the escapist dream of an island lifestyle, and the business as usual of commerce and consumption. Along with Haraway, I try to cultivate 'response-ability', or the affective capacity for others to respond to the urgent ecological crisis, both for us and for our companion species (2016, p. 12). To encourage a collective response to a seemingly out-of-sight crisis, my participatory approaches also engaged emotion and discomfort, making them visible to participants in the work they designed.

Finally, the process of distillation is important to my methodological toolkit. I employ the term to describe the 'refinement' of concept via design practice (Ambrose, 2019, p. 77). In other words, how parameters of communication design activity, that an idea must become visual and communicable, forces clarity of an idea: the concept is distilled into a concentrated, explicit form. In my participatory practices, participants were invited to distil their conceptualisation of a sea conversation through image and text, within the software constraints. By working intuitively and using reflection to enable self-dialogue, the participants' tacit and latent knowledge along with my own, rose to the surface (Sanders & Stappers, 2013, p. 58); they were distilled.

2.5 Making-do/making-with: Utilising life parameters as opportunities

Professional design practice works within parameters, including budget, timelines, predefined communication mediums, and a client's personal outlooks (Bierut, 2019, p. 21). Practice-based design research has other constraints and is contingent upon the parameters of context and daily life, as Vaughan asserts:

> "When research is undertaken through practice, the site of the research is the site of the practice: this is a location where the action takes place. These every day sites of practice are integral to research inquiry; they provide the context, means and parameters of the study" (Vaughan, 2017a, p. 12)

I worked within the parameters of my life as an explicit practice-based method and approach that I termed 'making-do'. Making-do embodies a designerly mindset (Cross, 2001), in that parameters are a normal feature of a professional design brief. I worked with what was available to me – a useful frame in this eco-political context where the limits of planetary resources are at stake. Making-do embraces grassroots notions of change, in line with Manzini's notions of localised change, whereby all citizens must act within the means available to them (2011).

My constraints included: being a solo parent operating at considerable distance from my university. I addressed this by working where and when I could; research methods had to be portable and flexible therefore I used a laptop, notebook and smartphone to ideate, design, capture and edit images. I worked in local libraries, in cafes, amd on ferries (figure 9). Constraints also offer opportunities; I worked in and with my local community, looking for opportunities and synergies within my reach. I used my local context and personal position to ideate, reflect, and iterate. I found ways to stay-with climate change in the context of my lived reality.

Figure 9: Designing on ferry between Waiheke and Auckland, L. Waldner, (2017).
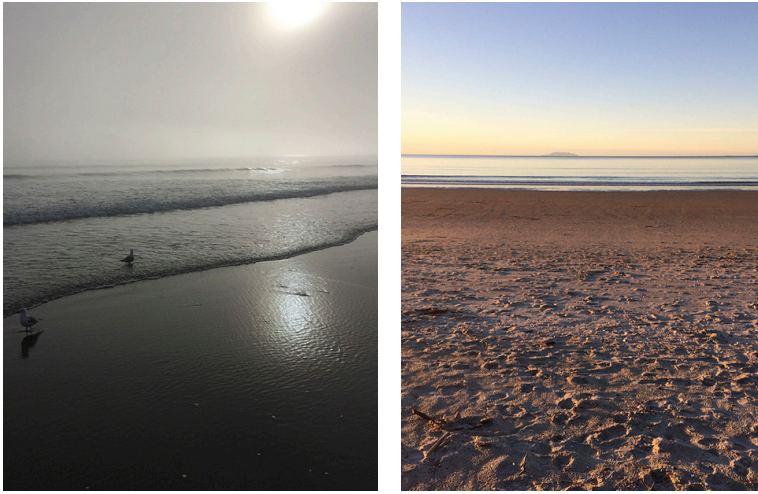
Figure 10: Smart phone image capture, beach on foggy day, Waiheke. L. Waldner, (2018).
Figure 11: Smart phone image capture, beach at sunset, Waiheke. L. Waldner, (2017).

Where I live allows me to stay-with the sea physically and conceptually, frequenting the seashore regularly to commune with the sea. Walking and sitting, floating and swimming, I 'felt' my response to the experience of this sea, as it is now, and used this to conjure possible future seas: too acidic to hold life, too dangerous to swim in, awash with only jellyfish. Such located "enactments" facilitated my creativity (Sanders & Stappers, 2013, p. 51). I mourned anthropogenic impacts on the ocean, experiencing a full range of emotions related to my locale. My local seascape became my primary content, where I gathered visual material and processed my thoughts through lens-based and written practices. I frequented the same beaches and shorelines photographing and videoing a sea in varying conditions as a means of staying in relationship with the sea (for example see figures 10-11). Design concepts sprang from these interactions but it was the practice of listening to myself while capturing images that moved me closer to articulating my relationship to the sea. Working photographically, I am able to link possibilities in intangible, abstract ways, similar to the sketching practices Ings describes, I stay-with creative thoughts as they form, and I feel my way into an emerging concept through immersion in the world of the image (2014b, pp. 197–198).

I looked towards my community, in terms of interpersonal relationships and localised setting, as sites of practice, in a method I saw as another form of 'making-with' or sympoiesis. As Haraway points out "situated knowledges are about communities not isolated individuals" (1988, p. 590). When the research required practical support and feedback, I utilised personal networks and community contacts, many of whom are women, to test iterations of ideas and to expand the scope of the research. Foregrounding the specific domestic conditions that influenced the course of research, alongside my particular ways of being and relating as significant to knowledge production, is a recognised approach in feminist scholarship. A feminist position, central to my Master's thesis, is implicit in this research, and the discourse of "standpoint theory" (Harding, 2004; Maynard, 2004, 2011). [35] In her introduction to standpoint and related controversies Sandra Harding asserts that the intention of this outlook is that feminist concerns "be focused on every aspect of natural and social orders" (2004, p. 2). Harding's assertion carries weight; anthropocentric, patriarchal, and colonial social orders have generated the conditions of industrialised consumer capitalism so fundamental to the anthropogenic warming of the planet. Natural orders are already impacted, and will continue to be, witnessed in rapid biodiversity loss, warming oceans, and shifting weather patterns, all of which will disproportionally effect women in developing nations. The Anthropocene heralds major shifts to all forms of social and natural stability that were present in the Holocene. Therefore, approaches to knowledge, such as feminist standpoint, challenge the status quo through validation of locatable, varied forms of knowing, thereby advancing "the very standards for which what counts as knowledge"(2004, p. 2).

Jessica Martin points out the ongoing relevance of domestic spaces as "key and legitimate site for resistance, consent and for political analysis" (2020). My domestic situation in the open-plan home studio, which doubled as living-room and play space, was constitutive to the direction of the research: constraints on time, personal energy and mobility were deciding factors in

35. My Masters research, also design-based research, addressed complexities and contradictions inherent in the lived lives of young New Zealand women. Using kinetic-typography and interview audio, I considered ways a postfeminist sensibility is manufactured and reinforced throughout contemporary popular media (Waldner, 2013).

development of research methods. Eighteen months into the project, with a new baby, I was compelled to consider: how could I generate projection events to the scale I had envisaged? Who were the 'right' people to reach and what was the best way to speak with them? How would I measure the effect of my work? How best to communicate visually? Overwhelmed, I felt my singular voice was not enough and began to include others in my process, initially through conservation. This was a turning point in the project where I moved towards participation and interaction with my community. Following Haraway, I found the value of sociality in matters of meaning-making and creative materializing of emergent concepts. She writes: "Bodies and objects of knowledge are material-semiotic generative nodes. Their boundaries materialize in social interaction" (p. 594). I interacted with collaborators, often working around our children, in domestic and community spaces, including friends' private homes, public playgrounds and the local library.

The method of engaging others in dialogue can be employed to sound out the value of ideas and generate material for creative avenues (see Bohm, 2004; Lupton & Phillips, 2015; Trede et al., 2008). Returning to Bakhtin, dialogic encounters need not necessarily lead to a "merging or mixing" of ideas but were instead often mutually enriching exchanges (1986, p. 7). I conversed with others to seek feedback on design work and copy, to clarify ideas, and test concepts. Informal discussions with Susan Wills (a writer friend), Damon Keen (fellow communication designer and co-creator of High Water) and Lucy Eglington (visual artist) were valuable ways to test ideas and refine language, and often altered the course of my practice I engaged wider groups of friends in loosely participatory practices, such as text message lines of questioning, and worked collaboratively with others on environmentally focused projects, including Plastic-Free initiatives. Working with networks available to me is way of making-with that acknowledges and celebrates the context in which I produce knowledge.

These frames support the situated nature of my project and reinforce the participatory positions wherein people are experts of their own experience. For me, participatory communication design is an example of situated knowledge in a sense produced from multiple viewpoints (Haraway, 1988, p. 589). By enabling my community to design their own responses, I embrace 'interested' knowledge and promote the wider aspirations of the project: that none of us can afford to be disinterested in climate change and the threat it poses to current human civilisations.[36] Producing design from my personal position, I realised I could not only make my relationship to climate change visible to myself, but that sharing this process could be beneficial for others.

2.6 Generative change: Envisaging design as community engagement

Design, as a way of knowing, is available to non-professionals as well as professional designers (see Manzini, 2015). Indeed, Nelson and Stolterman point to design as one of human's first traditions and argue for design to be a method for integrating thought and action (2014, p. 11). I explored such propositions through iterations of a design workshop model throughout 2017 and 2018, which developed participatory communication-design methods. The goal was to create an environment where communication design was central and accessible participatory method though which participants could imagine their relation to the world differently – digesting something of the enormity of the Anthropocene through this process. In community workshops, I invited participants to partake in a speculative creative task and to consider their relationship with the other-than-human. This was intended as a 'redirective practice', as Fry (2010) calls it, in which we can shift our inner thinking about our external relations to the world. Here the invitation to converse with the sea intimates the sea as sentient and worthy of our consideration, it is a prompt to contemplate our relationship to the non-human world.

36. As opposed to claiming neutral or "disinterested knowledge" identified by feminist scholars as problematic (Maynard, 2011).

This goes some way to responding to Fry's entreaty to grasp the fundamental source of our own imminent extinction: "our anthropocentric modes-of-being-in-the-world", arguing that "unless we fundamentally change how *en masse* we dwell within ourselves [...] we will have no future worth having" (author's own emphasis) (2010, p. 3).

Participatory modes in this project have ties with established participatory design traditions. Often deployed nowadays in the field of Human Computer Interaction (HCI) (Rosenzweig, 2015, p. 44), participatory design was "as much as a design movement as it was an approach and suite of methods [...] strongly aligned with the interest in practising design through values-based agenda and consultation with people" (Vaughan, 2017a, p. 15). Originating in Germany and Russia in the 1970s and applied in Scandinavia during the 1980s, participatory design methods sprang from a move towards democratization of workplaces as new technologies were introduced (Hartson & Pyla, 2019, pp. 398–399). This participatory turn saw workers affected by proposed changes actively involved in developing solutions from the perspective shop floor (Fetherolf, 1992). Motivations behind this approach that resonate with my research are the social, democratic and explicit valuing of workers tacit knowing.

In addition, Sanders and Stappers note that in design research, participatory modes exist on a continuum from 'research-led' (Scandanavian) to 'design-led' (generative design research) identifying "a key characteristic of the participatory design zone is the use of physical artifacts as thinking tools throughout the research process"(2013, p. 19). While participatory in nature, my research is design-led, therefore sharing more ground with generative design research approaches as research participants are involved in creative making activities geared towards accessing unspoken or tacit knowledge (Sanders and Stappers p. 19). Generative design research methods, including use of generative tools, aim to create a shared design language for participants and researchers to share information through. Such tools and methods are generally employed as part of a 'for design' research approach in that they inform the design of a particular

product or service (Downton, 2003, p. 17). My research builds upon participatory and generative design research foundations, asserting that design-based methods of knowing-through-doing (Nelson & Stolterman, 2014) are an available and attractive means for engaging public participation.

The aim of workshops was to engage people with climate change themes through the activity of communication design. Typical workshops were held in recognisably 'community' spaces including the library and sustainability centre. Groups of between three and ten people were recruited through poster (and social media advertising that offered a "free graphic design workshop" and the opportunity to "create fresh climate communications". Accordingly, participants were provided some communication design fundamentals prior to undertaking a lay-design process. The 'brief' asked participants to use a piece of consumer grade software to visually communicate, through image and typography, a conversation they would have with the sea. I posited design as a mode through which participants could imagine and articulate different layers of their connection to the sea, through multiple design iterations. As it was the primary method of participation, employed with the intent of uncovering participants knowing, I framed communication design as a generative 'maketool' (Sanders & Stappers, 2013). Based on my own experience designing, I speculated that while generating designs, participants would consider, on some level, what the concept of a sea conversation meant to them; they had to digest this concept, make sense of it through their own frame. I consider these processes a form of sympoiesis as participants made-with (Haraway, 2016) the open-ended question I presented. Haraway's (2016) discussion of sympoiesis,[37] introduced in the previous chapter, was particularly useful when conceptualising participatory approaches to my research questions, as the Greek origins of this word imply (sún, "together", poíēsis, "creation, production"). Her understanding of how complex, interdependent entities 'make-with' one another helped me envisage interconnectivity within my community. I reasoned

37. Originating from the natural sciences, the term most simply means "making with" (Haraway, 2016, p. 58).

that we evolve and change through interaction with others and that lay-design is likely to enable such relations. This required a type of processing that differs from simply viewing or adding to an existing piece of design, as is common in other participatory communication-design proposals which I disuss in the following chapter (also see Armstrong & Stojmirovic, 2011). From digesting the brief to their final design iteration, participants were responsible for visually articulating their own sea conversation; they used communication-design tools to reimagining human and non-human relations.

2.6.1 Communication design as a 'maketool'

My interactions with my community began with seeking content for my designs, then moved to public design workshops where I refigured communication design as a 'maketool' (Sanders & Stappers, 2013, p. 70). Developed by design researcher Elizabeth Sanders, the term maketools describes creative implements used in generative research contexts (Sanders & Stappers, 2013, p. 70). Maketools and techniques borrow from design and psychology, and involve participants through the performance of a creative task. Sanders (2002) promotes design-based, visual 'maketools' for use in creative, participatory practices, to act as a "common ground for connecting thoughts and ideas from people of different disciplines and perspectives" (p. 4). She also asserts that making processes are most likely to reveal what people know, feel, and dream about a subject (2002, p. 4), an important aspect since we all face climate change from very personal, located positions. These methods are normally used to develop and inform other design processes, but they also offer a framework to understand how participants' tacit knowledge may be revealed through design practices (figure 12).

This content has been removed by the author due to copyright issues
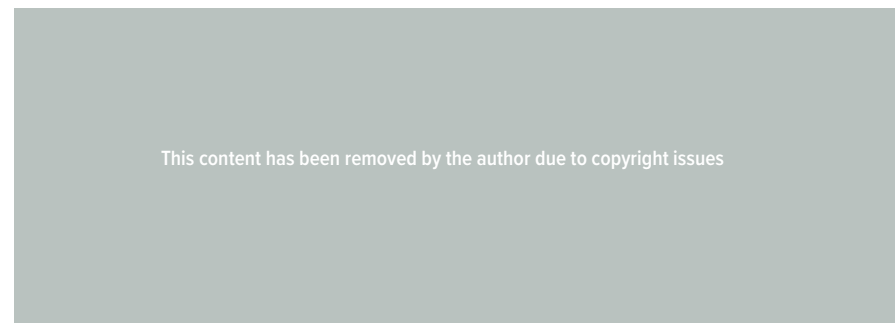
Figure 12: Methods and knowledge they reveal. From *The Convivial Toolbox,* (p. 67, Sanders & Stappers, 2015)

During my workshops, akin to Sanders' 'maketoolkits' I provided participants with an activity, and implements required to complete it (a device and software). These kits included 'trigger sets'[38] in the form of a question,[39] photographs, and a set of layouts and fonts defined by the software. Participants used iPads provided, with software preloaded, or their own device, downloading the software. To draw out responses to current Anthropogenic conditions, tool kits were refined over various iterations, as I changed the software, employed more nuance in the creative question, and provided self-generated local imagery (as I discuss further in Chapter Four).

2.6.2 Workshop design

In the design of these community workshops, I drew on my expertise as an educator. At first, I used a lesson-like model and engaged adult participants in design-based tasks on smart devices. At the start of the workshop, using a large screen television, I presented communication-design basics, before asking participants to undertake a design task and implement what they had just learnt. While I did have a teaching role, I considered myself an enabler – equally invested in the politics of the workshop, rather than a neutral facilitator – a role that expanded and changed over time. Design educator Helen Armstrong suggests enabling may be the future for professional designers as we move away from roles as authors and service providers (Armstrong, 2010). Thus, there was an exchange: I enabled participants' design learning, and they shared their thoughts via their design work and feedback, and in turn I learned from them. We worked together in the face of climate change, and the workshops were an invitation into the learning cycles made possible by design (Dorst, 2006, p. 16).

38. Pictorial elements used in 'make' exercises are aimed at triggering associations and/or memories that can be made explicit during making processes. Sander and Stappers (2013) recommend selecting items specific to the research.

39. Initially this was: "If you could talk to the sea what would you say?" and later "if you could converse with the sea, what would you say?" followed by "What would the sea reply?"

These workshops tested the argument that it is democratic to enable lay-designers to participate in design as 'socio material assemblies', a phrase I will return to in more detail within Chapter Three (Björgvinsson et al., 2012, p. 102). Extending the work of political theorist Chantal Mouffe, on the potential of agonism within renewed forms of democracy, Björgvinsson et al. suggest that design-things can constitute agonistic public spaces: they allow a multiplicity of voices to be recognised. This supports Mouffe's call for new types of localised, political engagement (2005) – especially direct interventions in multiplicities of social spaces that branch into the creative realm (2007). For me, this manifested in running workshops in a public library, a local sustainability centre and, later on, my community art gallery. Workshops acted as creative eco-political spaces, where participants were encouraged to use communication design to come closer to engaging with climate change. To understand how this might work for participants, I borrowed from generative design research, an area of participatory design research asserting that all people are creative, participants are experts of their own experiences, and creative practices may act as a mode of expression through which people can address hopes for the future (Sanders & Stappers, 2013, p. 24).

2.6.3 Digesting design outcomes: Reflecting on participatory modes

The research produced diverse design artefacts as 'data' from both solo work and participatory events, reflection on which continued throughout the research project with the purpose of refining new iterations. My approach to qualitative analysis was reflexive and ongoing from a position deeply inside the project (Coffey & Atkinson, 1996, pp. 6–11). My individual practice included photographs, copy, public projection events with animated graphics, and the reflections and observations I garnered, as well as written reflections and conversations. At the same time, I generated collaborative public events around climate-change issues with others. Through various modes, I reflected on the relational potential in the trails left by these

design assemblies, striving to retain curiosity and openness to unexpected turns. I used my material outcomes to find further ways forward. My sensitivity to connection, exchange and emergence allowed for the richness and complexity of working with others to lead the project's development.

The design workshops I staged in the later part of the research generated material to reflect upon, including: observations, participant feedback, photographic documentation, and participant designs. Observations were recorded in the form of my own notes, and later formatted into longer, written documentation (see appendices for documentation). I made audio recordings to support my recollection of participant interaction and collected separate participant feedback forms. To maintain the flow of workshops, photographic documentation was kept to a minimum. Design work generated during workshops was collected at the end of the session via email, or saved directly onto devices loaned to participants.

To begin with, my approach to reflecting on participant design work was akin to a form of applied thematic analysis, in that I focused on "identifying and describing both implicit and explicit ideas within the data, that is, themes" (Guest et al., 2012, p. 10). Laying out printed material and grouping according to patterns and themes arising from designs, I sought common threads to connect common tendencies. Initially, I looked to participants' design works for associations implicit in wording, image selection or font-choice combinations. As outlined by Guest et. al. this process was exploratory as it was "context driven" (2012, p. 7); I looked to the materials to inform a way forward. Unexpectedly, considering designed outcomes in this way acted more as a prompt, reminding me of what different participants expressed while discussing their designs in workshops. Thus, as the project developed, I became more focused on the value of design as an ecopolitical activity and interested in the collective political weight of these designs than in their value as 'data', as they were positioned in my original thinking and ethics application process.

Reflection on the workshops often took the form of journaling. By writing in the informal format of a journal, I explored concepts in, and developed clarity on, research directions in a 'safe' space. The research journal provided safety, due to its private nature – where the contents are only available for review once shared. To this end I could capture thoughts and decide whether to share the documentation at a later stage. I also wrote reflectively outside of my dedicated research journal, on loose-leaf or large-format paper – a less linear way of addressing specific problems, when trying to articulate new ideas or make connections between areas. I found it liberating to write in a larger format, without line restrictions or having to turn a page to separate ideas: 'big paper for big ideas'. I could spread loose pages out, gaining an overview of iterations and connections (figure 13). Something about the ephemerality of these pages encouraged a freedom of thinking; I was not committing thoughts to an 'official' book and I could throw papers away if I wished, without leaving a hole in my journal.

I also used other journaling methods, for instance, Newbury's "scribbling down little things" for later expansion while engaging in field work (2001, p. 2). For me, snippets, ideas and breakthroughs often occurred when I was not sitting at a desk writing – captured on scraps of paper, in the 'notes' application

on my phone, or even on the back of my hand (figure 14-15). Seemingly banal, this process served me well. It fitted into and merged with the busy reality of my lived experience; I was able to capture important moments of reflection and transfer them to my main written journal at a later stage. My smartphone often served as a journaling device, as I could record thoughts in diverse formats (written, audio, visual) that offered distinctive qualities. At times, I used a transcript application to 'talk' my notes onto my phone, finding that moving and speaking would result in a different texture to my notes.

As well as describing an event in writing and reflecting on methods, I collected photographic records of the workshops. Visually evaluating these images allowed me to think through the characteristics of the setting, my role as host, the level of participant comfort, and the task unfolding. Thinking and making-with was thus recorded in a visual form that accessed intangible qualities less available in verbal or written processes (Ings, 2014a, p. 2.8). Documenting in this way was unexpectedly helpful since it forced me not only to consider my photographs, notes and findings, but to make these considerations comprehensible to others. This process of articulation clarified ideas and questions and benefitted the planning of each workshop or research phase in turn.

Figure 13: Large notes, L. Waldner, (2018).   Figure 14: Hand scribbles, L. Waldner, (2018).
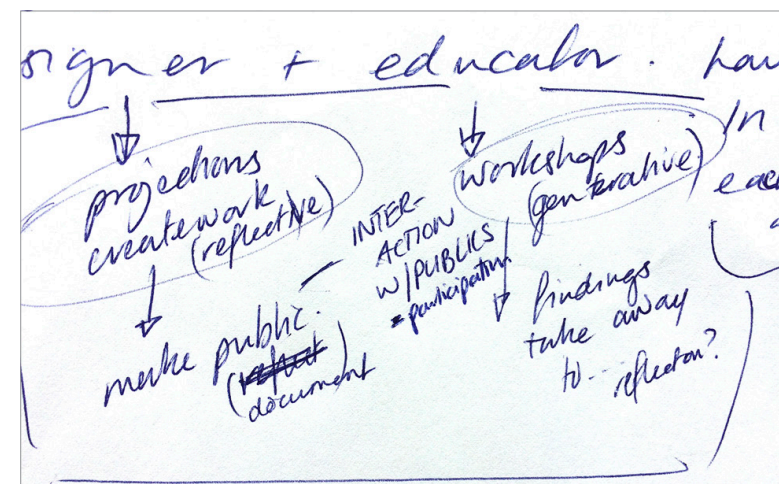
Figure 15: Looking for connections, detail from notebook, L. Waldner, (2017).

Conceptually, my approach to evaluating workshop methods was also informed by a 'design things' outlook, which I detail further in the next chapter. Working in this way, I attended to the different actors in my design assemblies to reveal new openings. This allowed me to grasp the potential within communication design processes (as opposed to solely focusing on design outcomes) when considering participants' design work and while reviewing my observations of processes to plan improvements to further workshops. I became attuned to considering workshop data in terms of relationships, rather than hierarchies and outputs, and to conceive of the agency of design. Although I did not interview participants, my observations, written and photographic documentation material (figure 16), participants' designs, and simple feedback forms provided important clues to peoples experience of designing. A methodological shift took place towards using communication design as a means of engaging with communities: opening a dialogue through the sharing of design skills. By employing communication-design processes and a networked approach, I found I could draw out both surface (what participants could easily verbalise) and deeper knowledge (unconscious or tacit knowing), in the form of observable practices and artefacts generated by these practices (see Sanders & Stappers, 2013).

Figure 16: Documentation of workshop *How to Talk to an Elephant IV* , L. Waldner, (2017).

2.7 Summary of ways-of-doing

The Design of Study, or methodology, used in this thesis required a focus on the capacity of communication design to engage people with the entanglements that arise in the Anthropocene. My methods reflected my own experience of designing visual artefacts, along with the conditions to foster design as a collective activity in participatory workshops, and whether this second approach was more useful for generating ecosocial change. Participatory and independent areas of this research have utilised communication design to interact with publics in different configurations. Reflection, ideation and iteration, used as modes to advance and evolve research, were complemented by practice-led design methods exploring and distilling imagination and emotion, from joy to grief, for our current condition. My research methods evolved iteratively, mirroring design movements, as I tested new approaches, reflected on outcomes, and generated modified versions to test again. Supported by design-based researchers and practitioners, this chapter related ways a design-based methodological paradigm was employed, explaining methods used to adjust my approach from outcome oriented to process oriented (Ahlberg, 2016; Ambrose, 2019; Haslem, 2011; Markussen, 2017; Vaughan, 2017a). As I will discuss in Chapter Four, workshops would become the central focus of the research, as I was able to test methods in 'real time' and gained faster insights into their potential. First, though, I had to participate in designing myself.

Leaning on methodologies from social sciences including: insider positionality (Greene, 2014), researcher as instrument (Brodsky, 2008), and situated knowledge (Haraway, 1988) I have foregrounded my own 'situatedness' in this section. I combined designerly approaches with feminist paradigms of knowledge production to contextualise ways I make use of resources particular to my life-world (Bierut, 2019; Haraway, 1988; Harding, 2004; Martin, 2020; Vaughan, 2017a). I operated within my means, using techniques that worked within the boundaries of limited time, energy, and physical resources available. This parallels

what is already required on a global scale, given the consistent over-reaching of extractivist practices that have culminated in precisely the precarious climatic position we now find ourselves in (Davis, 2015).

To deepen the interrogation of design as a generative eco-political practice, in the next chapter I delve further into the co-relational concepts 'design-things', sympoiesis, and post-anthropocentric theory introduced here. A relational outlook on design, combined with community-based methods, locates communication design as more than a process undertaken solely by professional designers that ends in the production of a specific, novel artefact. Instead design conditions such as ideation, reflection, and iteration can help lay-people distil and stay-with their own feelings about climate change, in order to imagine our biophysical reality otherwise. Accordingly, emergent theories, re-envisioning design through participatory and generative practices, will also be explored in the context of workshops, as well as in my reflection on articulated outcomes.

Chapter. 3

Chapter 3.
Design-things in context: A review of knowledge

In keeping with the conceptual foundation of the thesis on relational design processes as design-things, or socio material assemblies, I drew on a range of materials from books, climate initiatives, design projects, and conversations. Each topic was considered in terms of the relations, connections and trails between design theories and specific contemporary design practices. In this chapter, I elucidate the literature, design practice examples and conversational research sources that provided me with the impetus for the community events I designed, as embodiments of a particular politics (Fry, 2010). I consider in greater detail the relational theories interwoven through the thesis, building on the introduced in previous chapters. I begin with an overview of the concept of 'design-things' followed by a discussion of the potential use of this notion in relation to lay-design practices to shift cultural norms. To signal this relationality, I continue to deploy the word 'thing' in an expansive manner, in each heading in this chapter. In the section *Other ways of seeing things*, Tim Ingold's concepts of trails and lines are considered. Then, using the notion of digestion, I apply aspects of Haraway's sympoiesis to communication design as a participatory method. Next, I examine theories regarding the potential of communication design as a participatory practice, as well as applied precedents in the area. In doing so, I reflect on the contexts in which communication design-things operate, and what they may look like in practice. Concentrating on local examples that influenced the project, I follow with Climate things: examples of public-facing efforts to creatively engage people with anthropogenic conditions. I concentrate on creative practitioners whom I see operating in a design-things sense, towards an expanded generative role for the designers. The final two sections consider how communication design-things may be constructed via discussion of neighbouring communities of creative practice and focus on different qualities of participation.

3.1 'Design-things' as 'socio material assemblies'

The term 'design-thing', founded in relational, object-oriented thinking, describes the elements of design projects as constituents in 'socio material assemblies' (see Atelier 2011; Björgvinsson, Ehn, & Hillgren, 2012). Design theorists Harold Nelson and Erik Stolterman utilise similar terms, describing how design "pulls a variety of elements into relationships with one another that are then formed into functional assemblies" (2014, p. 21). To approach design as a design-thing shifts the focus onto exchanges between elements in a project, and looks to these exchanges as potentially generative; it is a means of comprehending the entangled nature of human and non-human entities. The relations between designers, participants, design processes, tools, materials – and even social politics – can then inform the direction of a project. Although any design project could be viewed through a relational lens, when projects are founded on this premise, discoveries can extend beyond the limits of a singular project: design-things ultimately aim to produce knowledge (Atelier, 2011, p. 159).

Members of Atelier, the collective that developed design-things, see design-based assemblages as participatory, collaborative undertakings we can gather around to address complex issues. Design itself becomes an interactive process through which collective problems, like climate change, can be tackled. This involves a reconsideration of the etymology of the word thing. In ancient Nordic and Germanic societies, it designated public assemblies that addressed matters of concern (Björgvinsson et al., 2012, p. 102, citing Latour). The challenge laid down for designers today is to move from using design to produce things (designed objects) towards producing design-things (participatory socio material assemblies) and to open up different ways of thinking and behaving. Boehnert emphasises designers' potential beyond standard roles servicing capitalist economics, that fuel "the Great Acceleration" and subsequent planet warming – instead presenting design as a facilitator of ecosocial transformation (2018, pp. 79-80).

3.2 Transformative things: How notions of design can shift cultural norms

Projects framed as design-things aim for transformation by structurally inviting participation in matters-of-concern. In Scandinavian traditions of participatory design, people are regarded as experts of their own experience, and participation as democratic (Atelier, 2011, p. 188). Object-orientated aspects of this framework extend democratic participation to other-than-human entities, to ensure that the contributions of all those affected by an issue are valued and used. To be sure, humans in this context are often speaking for non-humans. However, my intention is to operate in the spirit of post-anthropocentric scholar Eileen Crist, and develop more-than-anthropocentric ways being (2014). For me, a designer's task in design-things is to generate situations where listening to human/non-human interaction becomes possible.

Ursula Le Guin's poem (figure 17) acted as a touchstone during the research; an example of a creative plea to hear the unheard stories in nature. Design practices can also enable us to listen in ways that reveal our ecological connections and attempt to shift our thinking. As theorists Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt note, sensitivity to the Anthropocene begins with listening, a type of noticing that "attunes us to worlds otherwise" (2017, p. G10). In addition, Boehnert argues the "unique cognitive and perceptual habits fostered by communication design" allow it to be harnessed for social causes (p. 119), particularly the call to respond to ecological crises (p. 2).

Relational approaches show that our existence is interconnected with the natural world. Participation in eco-political collaborative projects can actively mitigate feelings of futility in the face of climate emergency, while people in isolation may feel detachment and hopelessness in the face of daunting issues and become apathetic or frozen (see Corner, 2012; Marshall, 2014; Stoknes, 2015). Governments are not responding fast enough to the climate crisis, so people take matters into their own hands, protesting outside of traditional democratic structures

The Marrow by Ursula K Le Guin

There was a word inside a stone
I tried to pry it clear
Mallet and chisel, pick and gad
Until the stone was dropping blood
But still I could not hear
the word the stone had said.
I threw it down beside the road
Among a thousand stones
And as I turned away it cried
The word aloud within my ear
And the marrow of my bones
Heard, and replied

Figure 17: Typographic arrangement of *The Marrow,* by Ursula K Le Guin. in. *Hard words, and other poems* (p. 10, 1981)

to implore the powerful to act, as in the 2019 global school climate strikes.[40] As bottom-up social change with a particular politics, confronts a prevailing 'business as usual' approach to life in affluent countries, we need to generate as many creative openings as possible for people to participate in a dialogue about the fragility of our earth systems. The turn toward design-things in this research reflects multitudinous ways of working together to assemble and create transformations in the context of the climate crisis.

40. Global school strike-action reached New Zealand in the form of synchronised protests across the country on 15 March 2019.

Design, as a mode of inquiry, has the capacity to grapple with complex, multifarious real-world issues. Design theorist Horst Rittel's widely-adopted definition named such problems 'wicked' (as opposed to 'tame') problems (1972). Such problems have multiple explanations, every problem being a symptom of another problem, and there are no one-shot solutions (Nelson & Stolterman, 2014, p. 17). Lacklustre public engagement with climate change can be considered as a wicked problem, insofar as it cannot be simply 'solved' with a single neat answer or solution. People have varied and complex reasons for not engaging with climate issues, from apathy to outright denial, and there are often psychological and ideological factors at play (for more on this see Climate things later in this section. Accordingly, I approached the complexity of climate engagement via design inquiry by utilising design conditions to generate multiple possible approaches, rather than aiming for a one-size-fits-all outcome. Instead of relying solely on analysis, I drew on my intuitive and reflective capabilities, as Nelson and Stolterman suggest, to compose and connect material articulating a variety of responses (2014, p. 21). In practice, this meant remaining open to what arose from my design-based tests; the final outcome was in a continual state of emergence over the course of the project. I had to stay-with uncertainty as I continued to iterate, imagine and reflect my way forward: I designed-with my research question.

The design-things lens expanded my design-ways-of-doing as I turned attention towards interactions between constituents of the project. This led me to look past the design outcomes produced by myself and the participants, and towards the capacity of communication design as a process. I realised that people can engage with the Anthropocene, creatively and on their own terms, undertaking their own 'mini' design inquiries, generating their own communication design to envisage the world differently. As Anna Tsing and collaborators assert, engaging with the complex human responsibility of living in the Anthropocene requires many diverse, creative, and cross-disciplinary approaches to noticing the "worlds around us" (2017, p. M7).

Design has the intention to change situations at its core: the reason why we design is to alter matters from their existing state to a preferred one (Simon, 2008, p. 111). Fry views design as "profoundly political as it gives material form and directionality to the ideological embodiment of particular politics" (2010, p. 6). The ways in which design in general can facilitate social transformation have received considerable attention in recent years (see Berman, 2009; Fry, 2010; Mau et al., 2004; Nelson & Stolterman, 2014; Shea & Drenttel, 2012). Offerings range from detailed accounts of specific projects to speculations concerning the ways a design culture may represent "a new way of looking at the human condition with a purpose to create change" (Nelson & Stolterman, 2014, p. 22). Some authors concentrate on how designers, and publics, can use design for activist purposes (DeVore, 2012; Fuad-Luke, 2009; G. Julier, 2011; Markussen, 2012; Thorpe, 2014), while others focus on the capacity of communication design in the social change realm (Frascara, 1997; Shea & Drenttel, 2012; Soar, 2002). The common assertion in these texts is that many areas of design have underutilised potential for enabling societal change and that there is such a thing as 'design for good'. While I agree with design and cultural theorist Audrey Bennett that the criteria of "good design" can and should include consideration of whether design outcomes have a "positive or negative impact on society" (2012, p. 77), my own research is more concerned with design as a mode of inquiry that communities may engage in, rather than with material design outcomes. For the purposes of this thesis, design's often-untapped potential for socio-political change resides in the actions of publics engaging in, and through, communication design. Thus, the agency of communication design in an eco-political context comes into focus – and with it, the usefulness of the condition of emergence in design processes introduced in the previous chapter.

As artefacts come into being, this state of emergence provides a space wherein new ways of being can be conceived and played out.[41] Engaging our imagination is an important part of envisioning new approaches to the climate crisis, and design has the capacity for reimagining both present and future, and for reconfiguring our relations to the physical world (Escobar, 2018; Fry, 2008, 2010; Nelson & Stolterman, 2014). I concur with the Atelier group, that the ability to "imagine change" is a necessary component of designing, and I extend this idea to lay-design practices (2011, p. 90). The emergence of a material 'something' within a design process often evokes strong emotions, which professional designers alternately describe as discomfort or excitement. In lay-design contexts, these affective states can strengthen our ability to stay with the unknown and intuit new ways forward. States of becoming, or emergence, are also important to my positioning of design processes in this research – as sites where new relations to the other-than-human may be imagined, if only momentarily.

In a similar vein, Anderson's argument for speculative design-based responses also suggests that we; "allow spaces for envisioning radical futures" (2015, p. 346). With reference to the participatory online work, *Dear Climate* (Chaudhuri et al., 2012), where people wrote letters to climate change, Anderson entreats designers to create open-ended works that revitalise critical thinking of our current ways of being (figure 18). Like in my own work, the relational proposition of talking to a complex non-human entity in Una Chaudhuri, Fritz Ertl, Oliver Kellhammer, and Marina Zurkow's work offers a direct line of connection to the inconceivably large hyper-object of global warming (see Morton, 2010, 2013). Given recent advances in smart-device and wireless technology, participation in online projects is increasingly viable for wider audiences, and expanding on relational, user-driven experiences can offer new forms of democratic participation. This is a significant shift, where the current public interest in doing design can be technologically supported.

Figure 18: Screenshot of contribution to *Dear Climate* project, (2019).

In *When everyone designs* (2015), Ezio Manzini recommends applying the notion of Small, Local, Open and Connected (SLOC) (2011, pp. 103–104) to ensure that "bottom-up" (Cheru, 2005) socio-ecological change initiatives are viable and effective in the widest sense. This social innovation perspective acknowledges the importance of enacting change on a small, manageable, community scale first, but it also holds that openness and sharing, made possible by technology, ensure that projects can be widely influential. New forms of connectivity mean that there is increased potential to inspire and connect with other projects, eventually generating larger, systemic change. But, first, communities must gather together, as creative activities "cannot be performed in any universal sense as 'design from nowhere', but as 'politics and epistemology of location, positioning and situating'" (Björgvinsson, Ehn, & Hillgren, 2012, p. 109, citing Haraway). Recognition of context is important here, as it reflects, and celebrates, our reliance on the systems around us; an urgent fact to recognise when living in the Anthropocene.

Working from the local context of Waiheke Island, accessible from the largest city in New Zealand, offers an ideal testing ground for these notions. The island has a history of activism and of people choosing to live differently.[42] Waiheke exists on the world stage as a 'must visit',[43] but its island conditions also

41. This space of becoming was a condition that could be amplified and examined in my research as I functioned outside of commercial design practices.

42. Peace activists, Greenpeace members, and many crew members from the original Rainbow Warrior reside here, plus an active community interested in ecological issues.

43. In 2018, Waiheke was named in fifth place in Travel and Leisure's *Best Island in the World* category (NZ Herald, 2018).

provide a unique opportunity to experiment with ecologically interested initiatives.[44] It may be the perfect place for expert and lay-designers to collaborate in, producing nothing less than new value systems that will form the foundations of a new society (Manzini, 2015, p. 1).

3.3 Other ways of seeing things: Ingold's trails

Of course, there are other ways to comprehend how the varied constituents of design, and design processes, may interact. Tim Ingold presents compelling arguments that challenge an uncritiqued use of Actor Network Theory (2008a) He argues that lines or trails may be a more fruitful metaphor for understanding interactions in the world, for humans and non-humans alike. The British anthropologist rails against referring to organisms as objects, asserting "life is not contained in things" but movement itself (Ingold, 2008b, p. 1804). Interestingly, researcher in the Atelier group use similar phrasing in a design context, describing design as a movement towards the final artefact (2011, p. 95). Following philosopher Keith Ansell Pearson, Ingold explains that a trail is a "line of becoming"; it exists between points, but its path is not determined by what it connects (2008a, p. 1805). The notion of trails suggests a nuanced and particular mark left behind (rather than a pre-determined route from A to B) that may be studied afterwards for clues and possible leads, rather than in terms of the shortest distance travelled. Alternatively, a trail is tracing a Deleuzean "'line of flight' that pulls away from both" entities (Ingold, 2008a, p. 1805), hinting at a constant state of emergence; the trail is always coming into being, in different ways, dependent on conditions. According to Ingold, trails created by life's movements disclose relations between organisms, and life is lived along these trails (2006, p. 13). The combination and weaving of these lines form the meshworks that make up existence. The process or emergent 'path' a designer generates while working towards a final version is best understood after the fact. In my work, designing alone and with others, I found that these trails reveal something of how their creator personally digested the matter at hand. Choices – away from and towards particular visual materials – are visual articulations of a design's line of becoming. In my participatory workshops, the habit of regularly asking lay-designers to save 'unfinished' versions of their work proved useful: it created a visual talking point through which people could further articulate and understand the emergence of their own meaning. The study of trails between materials, devices, spaces, designer(s), and even design concepts and ecopolitics, offered another way of understanding the agency of design in specific conditions.

3.4 Digesting things: Haraway's 'Sympoesis'

Ingold's arguments complement Haraway's assertion that our current task is "to make lines of inventive connection as a practice of learning to live and die well with each other in a thick present" (Haraway, 2016, p. 1). Haraway's Staying with the Trouble considers living and dying (well) in the Anthropocene.[45] Numerous concepts from this text helped me connect diverse areas of my practice, and these connections can be found throughout the thesis. Above all, Haraway's speculative application of the term sympoiesis, which in scientific terms (to add to the definition in the previous chapter) is a description of cellular collaborative evolution – helped me grasp participatory communication-design practices. Put simply, in the context of creative activity, Haraway's version of sympoiesis describes collective ways of 'making-with' that evolves those involved in ecological assemblages, as they "partially digest and partially assimilate one another" (2016, p. 58). I used these descriptions to comprehend relations between designers and the concepts they work with during design processes and considered how people could make-with design in ways that evolved ecological thinking.

Drawing on my own experience of designing, I reasoned that designers take in and metabolise at least elements of a concept before producing their understanding of it through visual media. Extending this to my participatory methods, I realised that this

44. There are many local initiatives including Straw Free Waiheke, Plastic Free Waiheke, Carbon Neutral Waiheke, and Electric Island who advocate for 100% electric vehicles on the island by 2030.

45. Haraway argues for renaming this the Chthulucene to better reflect new beginnings and necessary, earthly ways of being in present, troubled times (2016, p. 2).

can be a valuable condition of lay-design practices: as people considered (digested) their relationship to the sea before and while generating designs. For me, digestion is a component of the design process that is intertwined with ideation and intuitive reflection: a concept is first grasped, then processed through my frame of reference, before I materialise my understanding, via iterations, towards a final designed work. From my experience hosting workshops, I reason that lay-designers' personal frames of reference may be more present in their designed outcomes than is the case for trained designers, as laypersons are neither accustomed, nor required, to design for a target audience.[46] Participants in my workshops primarily aimed to generate something that communicated their own conception of the brief. These notions suggest that concepts and designers (expert and non-expert) enfold and evolve together in intimate ways.

Academic research into the experience of lay-designing is an underdeveloped area (Campbell, 2017). Usually, a cognitive perspective is deployed for an understanding of the activities of trained designers working alone (Atelier, 2011, p. 108). For me, however, many design processes operate outside of the cognitive; namely as forms of embodied and experiential knowing. Nelson and Stolterman argue that design produces knowledge by combining inquiry with action, and that design knowing is "inseparable from the knower" (2014, p. 39), as it is informed by personal experience and judgment. The authors list the of types of knowledge that design-knowing draws on: conscious, unconscious and subconscious knowledges, as well as "conscious not-knowing" (Nelson & Stolterman, 2014, p. 39). Performance theory, too, connects experiential and expressive functions of design, describing it as a practical, involved action in the world, which works to produce knowledge via participation (Atelier, 2011, p. 123). Sanders and Stappers define design processes as forms of making, useful for accessing submerged or tacit forms of knowing (2013, p. 67). These concepts all suggest that knowledge is accessed, gained, and/or furthered through the action of design, that there is a connection between

the experience of designing itself and the outcome the designer is designing towards. Furthermore, design-knowing exceeds the cognitive; it has been metabolised and become part of the knower on varying levels of embodiment. The socio-political conditions in which we design also shape design artefacts and processes.

Since the consequences of ignoring global warming have been broadcast loudly and clearly for decades with little impact on levels of consumption or mass behavioural change – hence a corresponding lack of political action – we urgently require methods to engage with the Anthropocene that build alternative paths to intellectual, fact-based reasoning in tandem with embodied knowing. Emergent and inclusive design methods, then, could prove valuable in developing alternative pathways and motivating public climate-action where former methods have failed.

3.5 Communication design-things

I further developed the notion of communication design-things through relational and design-based design experiments. These collaborative undertakings use participatory visual-communication practices, and a relational outlook, to addresses matters of socio-ecological concern. This section considers how we may build a more specific context for communication design-things. As little literature exists on this exact topic (see Taffe, 2018; Taffe & Barnes, 2010), I draw on related areas that have developed the research and describe specific qualities that communication design brings to the concept of design-things. I refer to examples of participatory communication design, and to writing on lay-design (user-generated) design practices. Before proceeding, though, it is worth noting what lies outside the scope of this research. Communication design has a rich, varied history of serving environmental and social causes, professionally and via citizen-initiated activisms, and these practices have been comprehensively covered elsewhere.[47] Rather than

46. For a more in-depth discussion of workshop observations, see Chapters Four and Five.

47. For contextualisation and comprehensive catalogue of communication design in these areas see the work of design educator Liz McQuiston (1995, 2004, 2015, 2019).

mapping these areas as already done by design scholar Liz McQuiston, the focus here is on the agency of communication design in a facilitated setting. While I gleaned insights from local participatory climate-art practices (see *Climate things*) I situate this project primarily as design-based research and focus on a practical method of social change addressing ecological concerns, specifically works that support an understanding of what communication design-things may look like.

In addition, there are wide-ranging arguments in existing literature for creative, speculative, and critical ways of engaging publics with climate change (see Abrahams et al., 2016; Anderson, 2015; McKibben, 2005; Mouffe, 2007). Communication design's role as a social and cultural mediator (Barnard, 2005; Bennett, 2012; Frascara, 2004) means it is well positioned for this task. Boehnert developed the notion that communication design can be a catalyst for more relational ways of perceiving and being in the Ecocene. She asserts that "action emerges from perception and conceptualizations (…) – based on ways of seeing and knowing" (p. 79).

However, there are limited examples of literature that addresses participatory communication design practices, and little that specifically tackles climate issues. The closest reference to practices neighbouring my own is the book *Participate: Designing with user-generated content* by design educators Helen Armstrong & Zvezdana Stojmirovic (2011b). The authors consider how communication designers and artists can utilise content generated by people outside of the design profession. In several community-minded projects outlined (pp. 17–33), input from non-designers is generally limited to a very contained section of the design process, with the final 'design' left to the professionals. Design professor Simone Taffe describes an expanded version of this approach in her case study of two participatory research projects, where designers (postgraduate design students) worked with 'end-users' (staff) at a childcare centre and an asthma awareness programme (2018). Taffe facilitated co-design processes between staff and designers, yet employees' input was solely during phases of exploration and evaluation: participants were invited to generate and evaluate ideas, not to design communications.

The nearest design example to the facilitated lay-design process I developed is the applied work of visual-culture researcher Audrey Bennett and multi-disciplinary team Ron Englash, Mukka Krishnamoorthy, and Maria Rarieya (2006).[48] In 2003, Bennett and associates carried out a research project with communities affected by HIV/AIDS in Kenya with the aim of developing a participatory graphic-design process. Graduate student Maria Rarieya taught Kenyan participants design using a model developed by Bennett during her time as an educator in the United States. Participants worked with Rarieya locally, and together, via internet video technology, were observed and advised by a team of professional designers in the United States. The participants were designers and communication designers were their consultants. Working to design locally specific posters about HIV/AIDS in Kenya, involved training community members to become empowered and upskilled at designing themselves, receiving knowledge on par with university-level design students. Participants engaged in all areas of the research and design of posters aiming to shift local attitudes to HIV/AIDS, keeping detailed research journals incorporating audience analysis, hypothesis generation, thumbnail sketches, copy writing, and creation of supporting graphic materials. This in-depth involvement of community members highlights lay-people as an invested audience capable of producing relevant materials for 'end-users.' Significantly, lay-design is demonstrated as a source of empowerment for a marginalised community. Bennett's research, alongside Taffe's analysis, are important examples of participation in communication-design processes, therefore I return to the work of both later in the chapter, as a reference point for the construction of communication design-things.

As noted, there are few theoretical examples of communication design as a participatory method to engage lay-designers with ecological issues, but Johanna Boehnert draws together communication design, ecology, and democratic participation in her book *Design, ecology, politics: Towards the Ecocene* (2018). Boehnert argues that communication design is a uniquely

48. An additional example is the project undertaken by researchers Siriporn Peters, Christine Hudson and Laurene Vaughan with members of the Samutprakran Disabled Persons Association in Thailand (2009). The authors refer to "participatory communication design" as a methodological tool in their project but do not describe or critique design methods employed in any detail.

situated cultural influencer, primed to address environmental concerns, and that visual communications should "encourage active participation in processes of learning and change-making" (2018, p. 150). Boehnert re-works McCandless' *A Hierarchy of Visual Understanding*, suggesting that emergent design practices should be associated with wisdom as a form of "embodied and embedded knowledge" (Boehnert, 2018, p. 176). Anderson points to a shift in speculative art and design towards "object-oriented and vital-materialist thinking" (p. 338) appropriate to the conditions of the Anthropocene. Following Morton, she argues for "[p]rojects that open up discourse about particular issues of the Anthropocene", that invite "hesitation, uncertainty, irony, and thoughtfulness" (p. 340). Non-experts' designing of visual media may be a way for publics to process such an overwhelming issue on their own terms. Importantly, both Boehnert and Anderson promote design as a means through which we can shift current and destructive anthropocentric human-nature relations.

Lack of theorisation around practical and speculative examples of lay-communication design likely indicates a disciplinary reluctance to fully embrace participatory practices, even though several theorists have speculated on the potential of communication design outside of commercial modalities (Bennett, 2012; Bennett et al., 2006; Frascara, 1997; Shea & Drenttel, 2012).[49] This does not mean that untrained designers are sitting idle – quite the opposite; generating, and sharing, communication design is a pastime undertaken enthusiastically by varied publics.[50] Design theorist Ellen Lupton (in Armstrong & Stojmirovic, 2011) notes that audiences engage daily with visual communications, "both actively and passively, uploading as well as downloading media, authoring content as well as consuming it" (p. 7). It is difficult to ascertain the breadth of public communication-design practices, other than by deducing from the popularity of visual design applications: one way of measuring lay-design practices may be to examine downloads of smartphone applications able to create social-media graphics. However, this would still not register the use of software

Figure 19: Facebook's inbuilt status design functionality. L. Waldner (2019).
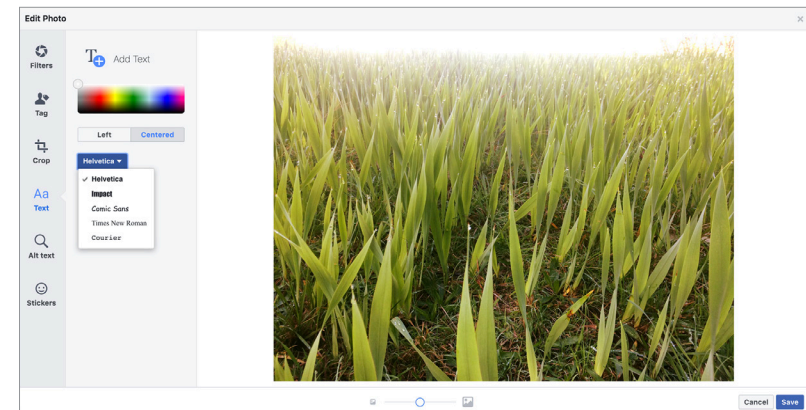
Figure 20: Screen shot of Facebook's inbuilt photo-editing with type functions. L. Waldner (2019).

accessed on desktop computers, or features built into popular social-media applications such as Facebook and Instagram. It is significant that Facebook, the largest social network worldwide, with "2.41 billion monthly active users as of the second quarter of 2019", offers people simple ways to communicate visually how they are feeling or what they are doing (Clement, 2019). People can literally 'design' their status (see figures 19-20). Add to this Lupton's assertion of a burgeoning interest in design, witnessed in posts that encourage publics to "embrace the mind-set rather than the skill set of design professionals" (Armstrong & Stojmirovic, 2011a) on Flickr (to which I would add Pinterest) and a picture emerges of the widespread popularity of lay-designing.

49. While usually related to design practice in general, the term 'social design' is worth noting here as it "highlights design-based practices towards collective and social ends, rather than predominantly commercial or consumer-oriented objectives" (Armstrong et al., 2014). For more on social design, see Julier (2014), Kimbell and Julier (2012) and Shea (2012).

50. Evidenced by availability and popularity of a wide range of free design applications such as Typorama, PicLab, OverGram and Canva, to name a few.

The type of media sharing described above, made possible by the advent of web 2.0,[51] is classified as either User Generated Media (UGM) (Shao, 2009)or User Generated Content (UGC) (van Dijck, 2009).[52] These general headings cover many different types of content. Here, like Angus Campbell (2017), I use my own term: lay-communication design. While some authors address the phenomenon and potential of people generating their own content as a social practice (Devisch et al., 2019; Löwgren & Reimer, 2013; Manzini, 2015) the literature about lay-communication design is limited and non-academic, usually treating it solely as a marketing tool (Siu, 2015; Woods, 2008). Thus far, I have found no attempts to ascertain directly how communication design operates in the UGM space – let alone its potential as a participatory visual method.[53] The scarcity of practical examples and critical theory regarding lay-communication design belies the fact that this is a flourishing mode of communication among many communities. This may identify the area as an emergent, under-utilised social-change practice with considerable potential. As mentioned earlier, Fry classifies situated design responses founded on a "solid critical and conceptual base" as "redirective practices" (2010, pp. 76–77) outside of commercial interests. Clearly, the popularity of lay-communication design demonstrates people's desire to communicate visually with one another. Therefore, I argue, existing modes of lay-design can be redirected to address ecological concerns via facilitated community-based events.

So, what is specific to a 'communication design-thing'? A primary feature would be lay-designers participating in a communication-design task; but what other constituents – material entities, humans and non-humans, processes – might be particular to this approach, and what do they contribute? First, we need to consider what communication design is. Barnard, working from an intersection of historic definitions, explains it as a process of communication that uses words and images to convey an idea (2005, p. 11).[54] He notes that this process requires thought and reflection – both value-laden activities (p. 10). Mapping the functions of communication design, Barnard lists the following features: information (imparts new knowledge or intelligence), persuasion (to affect changes in thought or behaviour), decoration (induces enjoyment or pleasure), magic (makes present something that is absent or distant) (pp. 15–16).

These features also explain why lay-designers generate design; why communication is an attractive social-change practice for publics; but also, why and how it may connect us with the non-human. The question of how participatory communication design may influence new ways of knowing and affect behaviour has been covered already in Chapter Two. Just as Barnard notes that the decorative function of communication design is pleasurable and enjoyable, media professor Gusong Shao reasons that people generate content for their own gratification (2009, p. 17). The pleasure involved in designing communications may be an incentive for encouraging public participation, as theorist Yochai Benkler asserts (2007, p. 98). However, the transformative function Barnard describes as "magic" may be the most significant here: communication design makes present what is absent. Following Pedersen, the Atelier cohort describe this as presenting or "enrolling the participating non-human actors" in ways that can be experienced (2011, p. 104).

In this research project, the sea became present as an entity to be conversed with in many ways. Envisaging a conversation with the sea means accepting – if only momentarily – that the other-than-human has (or deserves) a voice. It supports an engagement with the idea of a relational existence, to imagine a world where this is possible, because our relations to the natural world are valued in terms usually reserved for humans of equal status. To converse with another implies curiosity about the other and a willingness

51. Web 2.0 was coined by Darcy DiNucci and popularised by Tim O'Reilly (Aced, 2013). The term describes the 'second generation' of the world wide web whereby, due to technological advances, websites could increasingly allow users to collaborate and interact with one another other through dialogue on social media and the creation and upload of virtual user-generated content.

52. The terms describe all types of content created and uploaded by users to the internet including, but not limited to, still images, moving image, music, and communication design.

53. An exception is the work of Simone Taffe, who suggests communication design as a participatory process to inform design outcomes; she includes 'end-users' in the development stages of graphic design in not-for-profit settings (Taffe, 2018; Taffe & Barnes, 2010).

54. The text uses the term graphic design, previously widely used to classify the discipline now more commonly known as communication design.

to engage on equal terms. There is an element of talking to express oneself, but also an element of listening to another usuallu deemed as silent. Significantly, by talking to the entity so central to climatic events, we make present our entanglements as humans with this non-human other, the opposite of denial as a process of making something absent.

What then would a communication design-thing look like? There is no single formula but rather a set of conditions; amongst them that communication design is the primary participatory method through which assembled constituents interact. This research suggests that to forge a communication design-thing a trained designer would be present to act as the design-host, facilitate the design task and remain sensitive to the potential latent in interactions amongst actors in the socio material assembly (i.e., how are people reacting to images and text when trying to communicate meaning?). The task would relate to a complex issue in which participants have a stake (such as climate change). Necessary elements include imagery and text – either as physical or virtual elements – and potentially a device with design software. Also, the physical space and a safe atmosphere are important to foster creativity and learning – they depend on the type of space; the way in which the designer/facilitator presents the guidelines on design; the interaction with and between participants; and the task itself. Ideally, an assistant or fellow researcher would be present who captures possibilities as they arise, especially those outside of the design-host's range of notice. Interactions may take place between all the constituents: participants, devices, design brief or task, design processes (from concept generation to design thinking, reflection, design improvements), the space, and/or the design-host. For a communication design-thing to produce useful knowledge beyond the event, interactions would be noticed and recorded: design-things would be reported to avoid tumbling into themselves (Atelier, 2011).

3.6 Climate things: Matters of climatic concern in contemporary art and design

When describing 'climate things', I foreground projects through which diverse publics can become present to the conditions of the Anthropocene via participation. Here I draw on theory from related fields and examples from neighbouring communities of practice (culture, art, and design) that aim to bring local communities into relationship with life in the Anthropocene.

That many traditional communication-design outcomes fail to engage us with climate issues, or even encourage climate-change mitigating behaviour, cannot be laid solely at the feet of the communication-design profession. Much has to do with how people process news about climate issues. Complex communications switch audiences off, blame-based messages produce guilt and recoil; climate communicator Susan Hassol attributes public inertia partly to the inadequacy of conventional, overly scientific modes of climate communication (Hassol, 2019; Somerville & Hassol, 2011). Visual theorist Nicholas Mirzoeff argues that the iconic lone polar bear on an ice floe, "metonymic" of climate issues (2011, p. 1190), is both trite and counterproductive – inhibiting rather than instigating action. Insofar as such imagery puts the effects of climate change at a distance from the everyday reality of many citizens, nature becomes something separate, compartmentalised, and an object to be pitied and 'saved'.[55] Spatial and temporal distance from climate issues yields inertia (Mirzoeff, 2011; Shome et al., 2009; Somerville & Hassol, 2011; Stoknes, 2015) When these factors combine with appeals to individual responsibility, the impact can be overwhelming: even with all the right lifestyle and political choices, who can save the world alone? To place agency in the hands of communities, we need approaches that help people to engage with climate change through their own lenses; that make space for the complex feelings related to this crisis, so that they can be engaged and made visible.

55. Also see Latour on Whitehead's 'bifurcation of nature' (2005).

The call for engaging responses to climate change is not new. In 2005, Bill McKibben, founder of climate organisation 350.org, implored creatives to generate works to help climate change "register in our gut"; a turn of phrase that alludes to embodied knowing (2005). CLIMARTE, is an Australian organisation that deploys the arts to engage publics; art-activists produce a complementary response to McKibben's call. Since 2015, CLIMARTE has produced a biannual Melbourne-based festival *Art+Climate=Change*, featuring city-wide exhibitions and events (Abrahams et al., 2016; Climarte, n.d.). There is clear desire to see works of this nature, as well as an abundance of climate-interested pieces. °TEMP 2017 was a West-Auckland based iteration, where artists and scientists collaborated to generate "installations and sensory science experiments in which everyone can get involved" (TEMP, n.d.). Also in 2017, Aucklanders were exposed to Joseph Michael's projection-mapping installation *Antarctica – While you were sleeping* which dramatically transformed the Auckland War Memorial Museum through the projection of an iceberg (on to its exterior (Michael, 2017). I visited both these local examples during the course of my research and reflected on my experience as an engaged member of the public (and as a researcher).

Attracting over 20,000 visitors, *Antarctica* was remarkable in scale and reach. Michael's projection mapped live-action footage of an iceberg, shifting and changing, onto all sides of the Auckland Museum, a large, well-known and highly accessible public landmark (figure 21). The inclusion of a specialised soundtrack, replete with ice creaking and crashing, made the work experiential and immersive. The spectacular aspect of the work was both a drawcard and its potential setback. The awe-inspiring visual spectacle drew people to its strangeness and beauty; yet, it was out of place – and it may have placed the events at a distance in a similar way as the iconic polar bear images do. The aesthetic appeal of the magnificent projection seemed in many cases to have trumped the content, and it is an open question whether the experience of this brand of spectacle would engender action.[56] Laudable for its ambition and public

Figure 21: Crowd viewing *Antarctica* projection at Auckland museum. L. Waldner (2017).

accessibility, Antarctica was a site-specific, large-scale piece that cannot be easily reproduced elsewhere – not only because of its operational costs but also because of its energy consumption and related emissions.[57] And, while it was public, participation in *Antarctica* was limited to collective onlooking and taking photographs – very different in that respect from Rafael Lozano-Hemmer's interactive projection works such as *Zoom Pavilion* (Lozano & Wodiczko, 2015). That said, I was nevertheless affected by Antarctica, and experienced a sense of collectivity as I gathered with strangers in silence to witness this display.

By contrast, the °TEMP 2017 festival offered a programme of public arts engagement at two main hubs: Corban Art Estate and Te Uru Gallery, both in West Auckland. The programme's diversity, including works that dealt with air, shelter, weather, water and food, allowed publics to engage with differing climate considerations on several levels. *O-Tū-Kapua* ('what clouds see'), a generative, participatory exhibition, was a collaboration between F4 art collective, NIWA scientists, technology designers

56. There were tents set up nearby where people could view Antarctic-associated materials from Antarctic Heritage Trust and New Zealand Deep South Science Challenge.

57. If electricity is drawn from a mains supply in New Zealand, related emissions are not as much of a concern as they might be in other countries, as 82% of our power is produced from renewable sources (Ministry of Business, Innovation, and Employment, 2018).
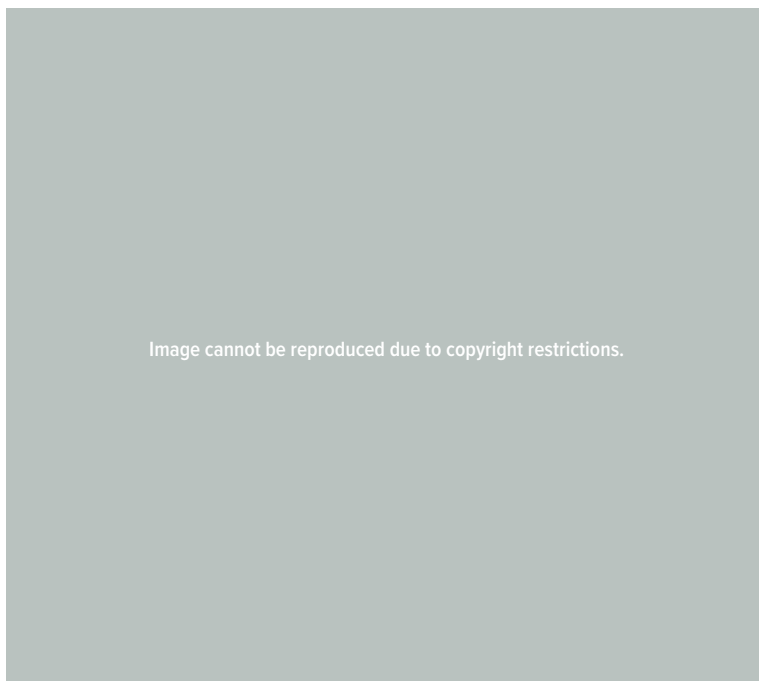
Figure 22: Screen shot *O-Tū-Kapua* augmented reality application. L. Waldner (2019).

and children from local Māori immersion schools. The project culminated in an augmented-reality installation at Te Uru that used a speicially design app to link weather data-sets to prop-like sculptures of trees and animals within the gallery (see figures 22-23). Visitors could view the influence on the 'forest' of weather conditions and air pollutants. They could also participate in O-Tū-Kapua via art practices, and create pieces that became part of the forest installation. These gallery-based experiences were just one level of a layered, cumulative project. It was developed over a number of years of sustained engagement with members of local communities whose voices are not always valued in the climate conversation: children. Projects like these democratise climate action because they make scientific information accessible, tangible and meaningful to those who will be most affected by the altered biosphere. *O-Tū-Kapua* was playful, science-based and deeply participatory, and thus offers a model for climate-things to aim for.

Figure 23: *O-Tū-Kapua* installation at Te Uru Gallery. L. Waldner (2017).

There are currently several other creative practitioners working in New Zealand in areas of climate engagement. For example, Gabby O'Connor is an installation artist, educator, science communicator, and Antarctic researcher who utilises her diverse skill-set to create large-scale sculptural artworks in public and semi-public spaces such as libraries, museums, galleries, and streets (see overleaf, figure 24). As part of her ongoing collaboration with oceanographer Dr Craig Stevens, in 2014 O'Connor combined participation with education aims to work with primary-school children in Wellington and build geometric representations of birthing ice platelets (O'Connor & Stevens, 2015; 2018). Using dyed tissue-paper, O'Connor and Stevens worked with small groups of school children to construct

Figure 24: Gabby O'Connor's installation *Inland Ice,* Christchurch, image Triebels photography, (2015).
Figure 25: Detail of Gabby O'Connor's *Cleave,* Wellington, image Virginia Woods-Jack, (2015).
Figure 26: Street view of Gabby O'Connor's *Cleave,* Wellington, image Virginia Woods-Jack, (2015).

subsections of an eventual sculpture; students joined sections together with others in their class to form larger components that connected with the work of other classes in that school, then with work from other local schools. O'Connor facilitated workshops with over 650 students over three schools; the sub-elements children generated culminated to form an artistic representation of the underside of an iceberg (figure 25). The resulting artwork, *Cleave*, was then displayed in a vacant shop for participants and community members to view (figure 26).[58] Using creative methods, O'Connor's engages young participants with climate systems, thus valuing their capacity as future decision-makers. She takes this transdisciplinary approach forward into her participatory PhD collaboration with NIWA[59] and the Sustainable Seas National Science Challenge,[60] to work with 1500 school students in the Nelson-Tasman area.

There are several local festivals and platforms addressing how to creatively engage with environmental issues. The Common Ground Hutt Public Arts Festival deploys participatory creative events, to engage local Hutt Valley communities in matters of common concern, such as fresh water. Amy Howden-Chapman is an artist and writer who founded, together with Abby Cunnane, The Distance Plan – an initiative that "brings together artists, writers and designers to promote discussion of climate change within the arts" (The Distance Plan, n.d. para 4). Operating across public forums, exhibitions, and the Distance Plan Press (which produces a publication of the same name), this initiative aims to demonstrate the necessity of conceptualising the seemingly distant effects of climate change (The Distance Plan, n.d.). A further, encouraging sign in Aotearoa is the recent establishment of TrackZero, a New Zealand organisation dedicated to motivating climate action though arts initiatives. TrackZero appears well funded and organised, with a capacity to build and promote cross-disciplinary climate engagements and hopefully will assist a burgeoning of local creative examples.

58. The space was brokered through the Urban Dream Brokerage (UDB), an initiative that connects property managers with artists, individuals and community groups. UDB negotiates temporary use of public, commercial, empty or underutilised spaces for innovative projects, toward urban revitalisation.

59. NIWA is the commonly used acronym for National Institute of Water and Atmospheric Research, a New Zealand-based Crown Research Institute established in 1992.

60. https://www.sustainableseaschallenge.co.nz/

Also in New Zealand, the influential youth-led organisation Generation Zero utilises communication design to facilitate direct action by citizens. Generation Zero use clear, playful graphics with contemporary styling to encourage action on specific issues, such as petitioning for bike lanes; participating in local government elections; and understanding the need for a zero-carbon policy (Figures 27-28). Consistent visuals are backed up by relevant calls to action and embedded in social media strategies, exemplifying that Generation Zero is well organised and professional.

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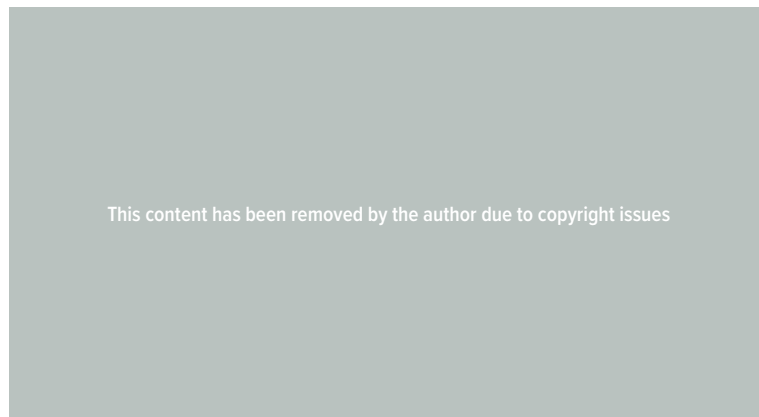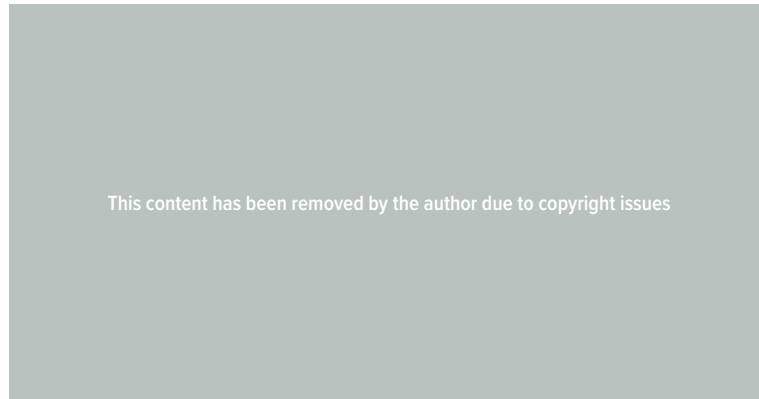
Figure 27: Social media graphic for Generation Zero's *Local election score card* (2016).
Figure 28: Social media graphic for Generation Zero's *Skypath* campaign (2016).

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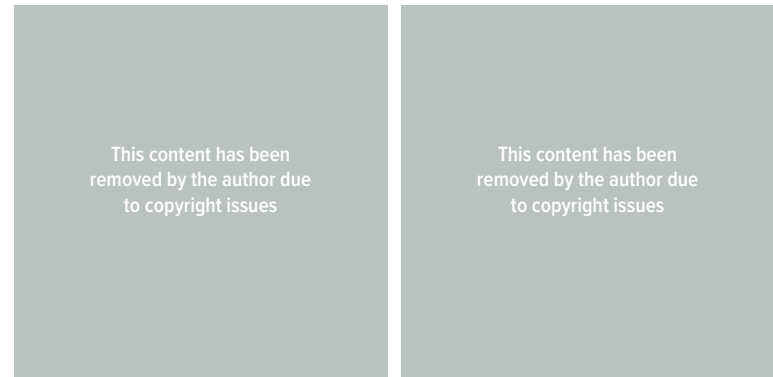
Figure 29: Social media graphic for Greenpeace NZ *Save the forest* campaign (August, 2019).
Figure 30: Greenpeace NZ social media graphic (December, 2018).

In the wider area of climate engagement, communication design is more traditionally deployed; as a means to impart new knowledge and/or to affect changes in thought or behaviour (Barnard, 2005). Guides, both on and offline, provide advice to communication designers on how to generate more effective climate communications (Corner, 2012; 2016; Climate Outreach, n.d.; Hassol, 2019; Shome et al., 2009). Communication design is central to the media generated by non-profit organisations dealing with climate issues,[61] in which communication design features as a key element to encourage publics to participate in climate-related issues, especially in social-media practices[62] now essential to successful campaign strategies (Svensson et al., 2015). Across websites, social media and activist practices, Greenpeace uses communication design to lend impact, consistency and professionalism to its campaigns (Figures 29-30). Climate advocacy group 350.org uses type/image arrangements in their social-media posts and even offer "Artivist" resources on their website, encouraging creative forms of resistance (350.org, n.d.).

61. Even the most cursory of reviews finds most visual communications are designed to a professional level, including printed material, websites, merchandise, information graphics and social-media graphics.
62. Particularly used on Twitter and Facebook.

However, none of these examples involves non-experts generating their own design. To find a New Zealand example of this, I looked to the past, to the work of Wellington Media Collective (WMC). This collective operated from 1978 to 1998 and empowered local grassroots organisations to create their own media, hence their byline, "we will work with you not for you" (O'Connor, 2013, p. 84). The collective, made up of graphic designers, illustrators, writers and activists, instructed publics involved with social-change issues on how to get their messages across visually. The collective offered to teach "skills for screenprinting, photography, layout and design and typing, as well as printing" making clear that this was a co-operative operation and skill sharing was welcome (Derby et al., 2013, p. 2). The WMC is a unique and practical example of communication design as a method of participation; or of citizen activists undertaking design activities to get their message 'out there'. For this reason, I went on to feature a selection of environmentally-related posters generated at the WMC in the 'splash zone' outside my participatory test space *The Intertidal Zone*. What a wonderful thing it would be to see such local and effective initiatives spring up again.

Design practices offer certain conditions that may make eco-related social change more possible, for example, imaginative spaces, or the capacity for digestion, to shift public opinion. Lay communication-design is offered here as a method of engaging with "non-human narratives" and to acknowledge the webs or meshworks to which our lives belong (Ingold, 2011, p. 70). This is part of the art of noticing and of being present to this crucial moment. Haraway describes it as a way of staying with the trouble, which "requires learning to be truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures, but as mortal critters entwined in myriad unfinished configurations of places, times, matter, meanings" (Haraway, 2016, p. 2).

3.7 Making things:
Engaging communities through design processes

For communication designers interested in constructing communication design-things, there are few case studies to follow, therefore it is worth comparing exemplars from research and commercial contexts: to learn what different approaches to participation yield. As previously stated, existing examples, almost always, demonstrate lay-people as invited to contribute to defined aspects of the design process rather than being enabled to complete their own communications. Levels of participation, and how that interaction is utilised, differ between projects according to intended outcomes of communication objects. To reflect on differing qualities of participation it is worthwhile to consider participatory design as a spectrum of control over the design process, as described by Bennett et al. (2006, p. 198). At one end, the audience is a consultant, there to provide information; at the other extreme, the audience is independent and active: they are the designer. Accordingly, I compare examples of limited design-participation to the fully engaged approach outlined by Bennett, Englash, Krishnamoorthy and Rarieya (2006), who enabled lay-designers in Kenya to research and design posters addressing HIV/AIDS (discussed earlier in this chapter).

In research projects described by Taffe, participants used generative toolkits towards communication-design ends (2018). In 2007, childcare staff in Melbourne made three-dimensional mascot prototypes to inform the "sustainable cleaning symbols" designed by Masters students (Taffe, 2018, p. 363). In a later project, employees at an asthma-awareness programme worked with designers and collaged existing communication materials into context posters that aimed to uncover the foundation's key issues. Here we see participants acting more as consultants, even though, in the second example at least, the method appears to be applied communication design. In comparison, Bennett's team invited Kenyan community members affected by HIV/AIDS into all phases of a university-sanctioned design process, from exploration to producing final design outcomes. The audience

was involved to such degree that participants left the process sufficiently skilled to establish themselves as local designers, plus they gained control over design materials entering their communities and shaping shared ideals. Both approaches engaged with and seemingly altered the viewpoints of lay-people to develop relevant designs and increase the likelihood of effective communications. However, Taffe's example does not investigate the capacity of lay-people to generate pertinent designs, while Bennett et al. uncover the potential to further engage the agency of participants through ownership, and values participants' capacity to deploy specific cultural codes. These examples focus on visual communication as a tool to provide information and alter behaviour, yet there are other functions to the practice: to induce enjoyment and to make present what is absent or distant (Barnard, 2006).

In instances of 'real world' participatory communication design, participation is again limited to adding to a design or completing it – forms of interaction that make use of the assertion that people generate content for their own enjoyment. One example is the poster campaign OSOEX30 by MendeDesign for Southern Exposure Art Gallery. Subscribers to the gallery were sent invites that doubled as stencils, included were locations of posters for invitees to finish (Armstrong & Stojmirovic, 2011, p. 56). Participation was used to engage the creativity of the invitee, reinforcing artistic notions of a gallery, while stencils and street-based locations of posters were 'edgy', alluding to street-art practices like graffiti. Invitees stencilling on posters may have worked to attract attention of passers-by, as would any variance in the final posters. However, creativity here was defined by the stencil, and constraints of the poster. Also, many people may have felt uncomfortable carrying out such a task in public where rules around defacing advertising could exist. A further example of participatory modes employed in public space, and with subculture undertones, is the campaign to launch a mobile phone company Working Assets by advertising firm ss + k. Here, participants texted contributions to display inside speech bubbles of a political cartoon featuring right-wing

leaders George W. Bush and Dick Cheney that was projected onto buildings in San Francisco. While participants may have felt momentarily empowered to speak for one of these influential figures, this display of apparent political subversion ultimately functioned to foster perceptions of the mobile company as socially responsible, not to engage political agency (Armstrong & Stojmirovic, 2011, p. 26). Here designers utilised the aspect of pleasure to encourage participation, providing containers for participants to place content into, but creativity is limited to dictated parameters and in the service of promoting goods. The audiences were contributors, but only to a specified degree, whereas in the example of Kenyan poster design, the audience became the designer: they gained increased control over what communications entered their communities and thereby influenced their lives (Bennett et al., 2006, p. 198).

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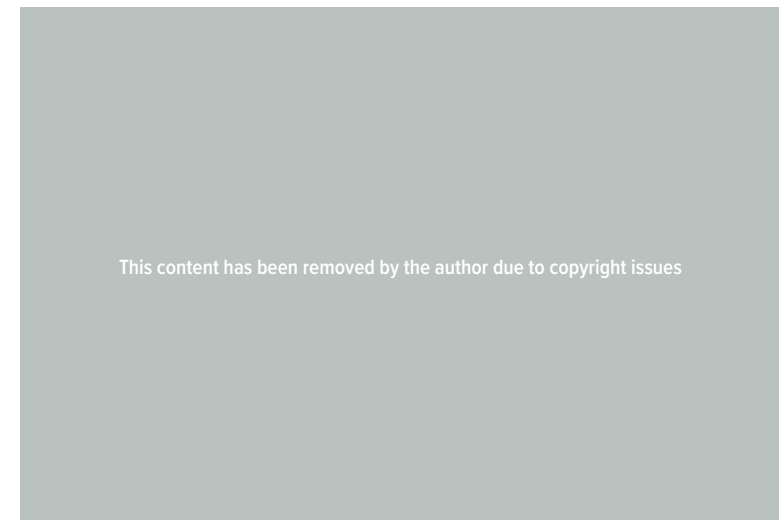
Figure 31: Productive posters project by Projectproject (May, 2015).

Productive Posters, an interactive system of posters, highlighted the work of community development and design non-profit Kounkuey Design Initiative (KDI) during an exhibition at the Van Alen Institute, in New York, 2008 (figure 31). Designed for inexpensive printing on standard office paper, poster modules

featured information related to public participation and invited audience members to contribute their own words or drawings in response to printed questions. The work grew and developed over time as contributions were added, the display methods underscoring participants' contribution to the collective whole. Participation was both subject matter and a means to engage people. When compared with the Kenyan HIV/AIDS poster project, there are parallels in the participatory intentions behind Productive Posters, in that the voices of everyday people are important. However, there is no 'carry through' on the contributions made by participants: beyond growing the display and expressing thoughts to others, what happened to the content produced? The aim seems to be to promote the value of participation, and provide a small experience of it, without utilising people's contributions towards a larger goal. Contrasted with the work of Bennett et al., Productive Posters lacks depth in its participation, which ultimately undermines the participatory aims and working methods of KDI it intended to highlight.

The approaches above produced interaction and, at times, content for use in further design outcomes. However, when compared to Bennett's comprehensive approach to participatory communication design, the promise of lay-design practices to engage and enable communities appears underdeveloped in many instances. This is why Bennett and her team have identified that there is "historically untapped potential" of participatory communication-design as a tool for social change (2006, p. 180).

3.8 Reflecting on things

Considering the enormity and future implications of climate change, methods of engaging people with its effects require meaningful and manageable scales that promote other ways of imagining the world. Lay-design practices offer one such route. I respond to Helen Armstrong's call to make "use of the participatory spirit" (in Armstrong & Stojmirovic, 2011, p. 12) and embrace burgeoning lay-design practices, folding these notions into social-design attitudes[63] and the repositioning of the role of communication designers. Beyond Armstrong's request for designers to transform and distribute user-generated content, I build on her notion of designers as enablers, drawing on examples of participatory communication-design in practice. Audrey Bennett and her team demonstrate how lay-design can engender agency in communities in Kenya, while Simone Taffe highlights the advantage of involving end-users in ideation and evaluation of communication materials (Bennett et al., 2006; Taffe, 2018). I have absorbed how artists working with climate themes create public experiences: Joseph Michael for his projection spectacle of an urban iceberg, which acted to attract so many thousand visitors, and Gabby O'Connor for her use of workshops to engage students in creative art-science practices (Michael, 2017; O'Connor & Stevens, 2015). Local platforms and festivals, such as Generation Zero, The Distance Plan, Track Zero, and Common Ground arts festival, encourage diverse forms of participation, ranging from public submissions on local issues to creative responses to climate awareness, showing that creative climate-action is a growing field where the public can engage with climate concerns.

Finally, in this chapter I have suggested that communication design is a form of knowing, or movement towards knowing, characterised by action and inquiry through complex relations that assemble around design-things. I have learned to remain open to the unknown and generate multiple solutions together with coalitions of others, rather than one 'right' answer, an approach supported by Ingold's notions of trails as a line of becoming (2008a). The climate emergency places us into a space of becoming, an emergent space in which many of us are ready to imagine new ways of being. Concepts such as Haraway's sympoiesis help us understand design as a digestive or ingestive process. As we make-with constituents of a design project, we comprehend the matter at hand through our own lens, yet we can still share our insights collectively.

63. Professor of Design and Culture Guy Julier, together with his co-researchers, notes social design may be "carried out by people who think of themselves as designers or who studied at design schools, or it might be an activity of designing that takes place involving people who are not professional designers" (Armstrong et al., 2014, p. 15).

Eco-political issues need time to be ingested and digested, even if only partially, before we can make them communicable to someone else as a form of socio-ecological evolution. All these ways of understanding design point to something happening on levels beyond the cognitive. Design-knowing is something that also exists both cerebrally and through embodied experience, it is something that occurs, and potentially shifts, on subconscious or even unconscious levels not usually available to us.

These considerations are critical, given that information-based communications about climate change generated over the last 30-plus years have proved insufficient in swaying political will to change. In other words, many of us hear the facts but we do not know or understand them on a deeper level. We need different methods of shifting political will and the values of multinational businesses, along with local efforts, which work outside of the purely cognitive. Design can also be a form of experiential or embodied knowledge, with design processes allowing the designer to step into imaginary space. To imagine things differently is crucially important at this ecological moment. Many people in developed countries are fortunate at this moment to have the technological means to generate visual communications simply through accessible web-based applications, yet there are also just as many without this access. With the aspiration that technological agency will one day be shared more equitably, this review of knowledge has focused on what design can do for lay-designers, sometimes by analogue means, and not just aimed at a design elite. As the Atelier collective suggest, "it is not enough to achieve meaning for oneself, as an experience is never truly completed until it is intelligently communicated to others, in other words, it is expressed" (Atelier, 2011, pp. 109–110).

Look.
I'm sorry.

Chapter. 4

Chapter 4.
Conversing with the sea: Sites, events and processes

This chapter describes a series of design-based experiments that led toward the major thesis project *The Intertidal Zone*. I concentrate on significant moments in the research process that inflected the thesis direction, explicating my application of methods and theoretical frames, highlighting how particular sites, events and processes informed the direction of research, rather than on every detail I tested. I explain and reflect on how the research trajectory evolved from outcome-focused to process-oriented, through the design of moving-image works with text and video, community-based design experiments and forms of workshopping on climate change, using the tools of communication design. In this chapter I cover the period between 2015 and 2018, when I generated kinetic-typography works, using lens-based methods to ideate and reflect upon my interrelationship with the sea. During this time, I designed and tested typographic and image projections at three locations on Waiheke, one in Auckland and one in Rarotonga. Each public-facing video projection or community-based design event I understand as a 'digestion' of anthropogenic entanglements. I sympoietically made-with Waiheke-based networks (see section *Designing with others*, this chapter), collaborating with other environmentally concerned mothers to progress my design work and create ecologies of support. I sought out opportunistic alignments with local events, like Waitalks, where I screened an animation. Grafting on to existing communities of concern, I worked with sustainability initiative Plastic Free Waiheke and tested participatory design methods at their visioning workshop, a market day, and in a follow-on workshop session.

Over the course of the research, periods of independent designing, planning and reflecting progressed, intertwined, and overlapped with collaborative exchanges with others.[64] I moved back and forth between participatory and autonomous methods, and successive iterations of the principal question: how can communication design connect communities with climate change? In creative reply to this question, further questions arose, including how the conditions afforded by communication design could be utilised outside professional design practices? My response was formed by my particular set of circumstances, my situated knowledge (Haraway, 1988; Karhumaa, 2019) – as a designer, design educator, parent, insider member of a small island community, and, crucially, a person trying to navigate life in the Anthropocene. Creative works can also be considered a form of dialogic utterance, after Bakhtin, in this case visual and linguistic responses to the particular set of ecologically and socially precarious conditions associated with the climate crisis (1981, p. 272).

Acknowledging participatory and independent methods developed simultaneously, for clarity's sake, the chapter is arranged according to the main areas of research: my own design practice (animated design for public projection and social media) and collaborations with others (the workshops and community design events). Beginning with the development of kinetic-typography animations, the Designing alone section relates how I employed my island positionality to commune with the sea via lens-based activities and how a sensitivity to emotion supported the emergence of this core theme. I then move on to the conversational role of reflection and iteration in my design practice and categorise moving-image outcomes as visually hybrid. With reference to particular design works, I provide examples of how reflective self-dialogue through design facilitated articulation of my own embodied understanding of the climate crisis, a premise I would later examine in lay-design practices. After this, I cover projection events and initial moves towards collaborating with others, outlining learnings garnered

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64. It is worth noting that because this chapter focusses on development of research prior to *The Intertidal Zone*, certain methods and findings that emerged from dedicated Intertidal events, including roleplay and the value of design interactions, are covered in Chapter five.

while designing for specific events the Oceanic Performance Biennial and Waitalks. I then discuss trialling specific sites and projection methods applying the method of making-with life-defining parameters. This section finishes with a specific discussion of how personal emotional conditions were utilised in design works as a means of connecting to a lived experience of the climate crisis. The following section, Designing with others, describes how a networked, localised approach facilitated opportunistic configurations, such as those with community facilities like the Waiheke library and sustainability centre. Here I cover domestic forms of collaboration with local mothers, the first workshop events titled *How to Talk to an Elephant*, and describe my approach to reflecting on workshops before explaining my involvement in a series of interactive events with Plastic Free Waiheke.

4.1 Designing alone:
Creating typographic moving-image works

My early attempts to visually connect publics to climate change, replicated relatively traditional communication-design procedures: I designed communications and tested them in various ways, including uploading work online; seeking advice from supervisors and friends; and projecting into public spaces. I was the author and my viewers the audience. I borrowed from design activist practices (see Fuad-Luke, 2009; Markussen, 2012; Thorpe, 2014) and generated kinetic-typography works as "visual culture jams" to mimic existing marketing visuals (Darts, 2004). Over time designs began to feature footage collected from my life on Waiheke – morphing into more situated, visual responses to climate change (see figures 32-34 for examples of island-based footage). I moved from making appeals for publics to engage in climate dialogue to designing from a very personal positioning of grief, utilising my emotional state as a generative space. All the while, I reflected on how design conditions connected me to climate change, and how this might work for others.

Figure 32: Looking north from Oneroa Beach, Waiheke, L. Waldner (2018).
Figure 33: Boat on dry at Blackpool Beach, Waiheke, L. Waldner (2017).
Figure 34: My son looking at table sunk into sand at Palm Beach, Waiheke, L. Waldner (2017).

Figure 35: Montage of Waiheke-related images, L. Waldner (2017/18).

Looking back, design-based visual exploration brought me into relationship with the far-reaching issue of climate emergency. I came to understand design experiments as sense-making activities; they helped me metabolise aspects of the crisis by making climate change (and my relationship to it) visible to myself. Thus, while my independent design practice was the initial focus of the research it became less pivotal as I reflected and learned though designing and grasped the generative potential of lay-communication design and working with others as acts of "meaning discovery" (Haslem, 2011, p. 9). It was the concerted deployment of iterative design-based methods that informed this direction, starting with creative methods of coming into relationship with the sea.

4.1.1 Talking to things

The urge to converse with the sea arose out of my move to Waiheke Island, six months prior to starting the research. While surrounded by the sea, I became sensitised to it (Latour, 2016). From this position, I speculated on whether in the future, an island would be a secure location or a precarious one, depending on how climate-related geopolitics and localised resilience efforts unfold.[65] The sea could bind our community together in new ways, or motivate many of us to leave. Working with these speculations and sensitivities, I began to see the sea in a new light and reconsidered my interaction with this other-than-human. Reflective questions arose like, "What does it mean to consider the non-human?", "If non-humans could speak what would they say?". The sea emerged as part of non-human nature that people may relate to, and that also relates to climate change.[66] My line of inquiry intermingled with aspects of Latour's Actor Network Theory (ANT) (2005) to generate the concept of a conversation with the sea. Turning towards the non-human arguably at the centre of climate change, I began an imaginary dialogue inspired by professor of science and technology Eileen Crist's (2014) confrontation of anthropocentrism. I attempted to view my relationship with the sea in a more-than-anthropocentric way, connecting and listening to this non-human other through

65. One example is the island community's reliance upon corporate-run, fossil-fuelled transport infrastructure: without reliable and affordable access to public ferry and cargo transport, island supply-lines and work opportunities would be severely affected – factors that would significantly alter the way life is lived on Waiheke.

66. I refer to New Zealanders, as this is the practical setting I developed the research from.

photographic and embodied practices. The idea of a sea conversation turned into the overall provocation for the thesis both from a practical design perspective and as a participatory tool in workshops.

One way I came to understand my relation to the sea was through lens-based practices. Design practitioner David Sinfield discusses the process of exploring the world photographically as "reflective photographic documentation" (2016, p. 34). This differs from a planned shoot: outcomes are not assumed and the photographer works intuitively, exploring the subject, in my case the Waiheke, coastline through my lens. The resulting images document my thinking, while the process itself involves reflection and ideation. To that end, I utilised my professional digital single-lens reflex camera (SLR) where possible, as it captures high-resolution still images and video. However, it is a cumbersome piece of equipment and, as I worked within my life parameters, I often used my lighter and ever-present smartphone.

When photographing and videoing local seascapes, I engaged in internal conversation, moving back and forth between intuitive framing and reframing, reflecting on what I was drawn to and why, comparing choices with research aims. Thus, lens-based

Figure 36: Collection of similarly framed images, L. Waldner (2017/18).
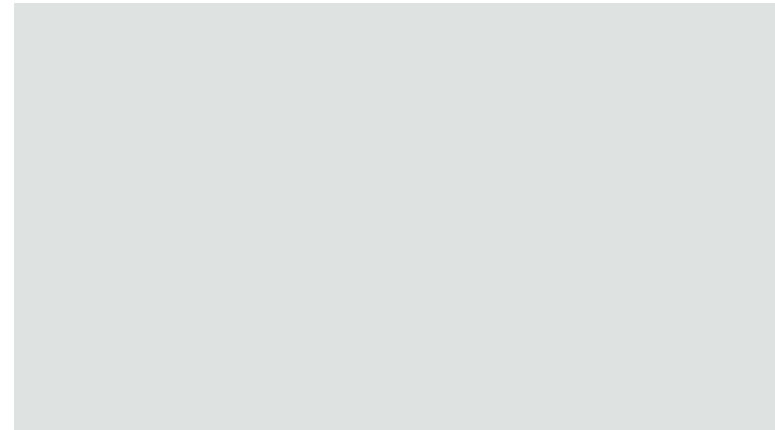
Figure 37: Experimental typographic animation *You make me feel funny*, L. Waldner (2017).

practices helped me work out creative problems, much like traditional forms of sketching can act as ideation methods (Ings, 2014a, p. 2.1). Reviewing this imagery later also sparked ideation and reflection; I sorted, selected, and grouped into themes, looking for patterns, meaning and inspiration within the results (Collier & Collier, 1986). I looked for trails (Ingold, 2008a, p. 1805) within my design work and catalogues of visual material, and noticed repetition in composition and content (figure 36). For example, I was drawn to imagery without people; seemingly I longed for a direct conversation with the sea. Design objects and concepts emerged from and were refined in this generative visual-discursive approach.

Being on Waiheke, I could dwell near the sea and consider research questions in an embodied way; I was present to the sea. Being physically near to the sea enabled me to enact future scenarios and 'fully feel' my response, particularly when compared with working in an office space in the city. The strong emotions arising from these embodied encounters came to form the basis of later experimental (figure 37) and more fully realised works. I reflected on how I could best communicate these intense reactions to others and whether this type of interaction would be available to others. Literature on effective climate-crisis communication from climate psychology (Marshall, 2014;

Norgaard, 2011; Stoknes, 2015) and climate communication (see Corner, 2015; 2016; Shome et al., 2009; Somerville & Hassol, 2011) asserts that communications should avoid simple data reproduction; a sense of hope should be balanced with concern; triggering fear was to be avoided since this could lead to apathy or denial. Ecologically minded psychologist and economist Per Espen Stokes argues, however, it will not do to apply these guidelines formulaically. Above all, humans relate most to the heartfelt stories and sentiments of others (2015, p. 134) and, as Haraway reminds us, it matters what stories we use to shape new narratives about ourselves in the world (2016, p. 12). To connect with our non-human kin, we need stories that reveal our messy, kind, scared and vulnerable selves: narratives of a humanity that deeply cares about the ongoing-ness of all, themes I uncovered through design practice.

4.1.2 Talking to / with myself

The visual complexity and time-based nature of my chosen medium offered many opportunities to engage in a self-conversation with my emergent design work. Accordingly, the inter-reliance between reflection and iteration became apparent in my independent design practices, as I engaged in an internal dialogue with myself. To generate further iterations of visual materials (photographs, live-action video, kinetic typography, workshop advertising) I listened to myself, reflected through creative practices and questioned my choices during periods of reflection. When creating visual media, I continually asked myself, "What else does this tell me about what I'm trying to communicate?"; I researched and reflected through design practice.

My design work combines animated typography with live action video; as such it is visually hybrid (Manovich, 2007). All elements are self-generated, including concept, brief, copy, typographic arrangement, video and photographic material. Typography moves in my pieces, meaning they may be classified as kinetic or spatio-temporal or kinetic-typography (Brownie, 2007, p. 2). This subcategory of communication design can be traced back

to Saul Bass's opening credits for Hitchcock's 1959 film North by Northwest (Forlizzi et al., 2002) and endures today in advertising, title sequences, and music videos such as Taylor Swift's lyric video for *You need to calm down* (2019) (See figures 38-39). Combining moving type with video footage – a visual hybrid – is a form of visual language that has become ubiquitous since the release of Adobe After Effects in 1993 (Manovich, 2007, p. 67). I felt that the ubiquity of this style would work to my advantage as publics, accustomed to such graphics, may be more inclined to view it than if it were suspected as an activist piece from the outset. Having worked in this medium since 2012, I appreciate its emotive potential, narrative qualities and its ability to convey aspects of a conversation (Forlizzi et al., 2002; Woolman, 2005).

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Figure 38: Still from title sequence for *North by Northwest*, Saul Bass, (1959).
Figure 39: Still from *You need to calm down (lyric video)*, designer unknown, (2019).
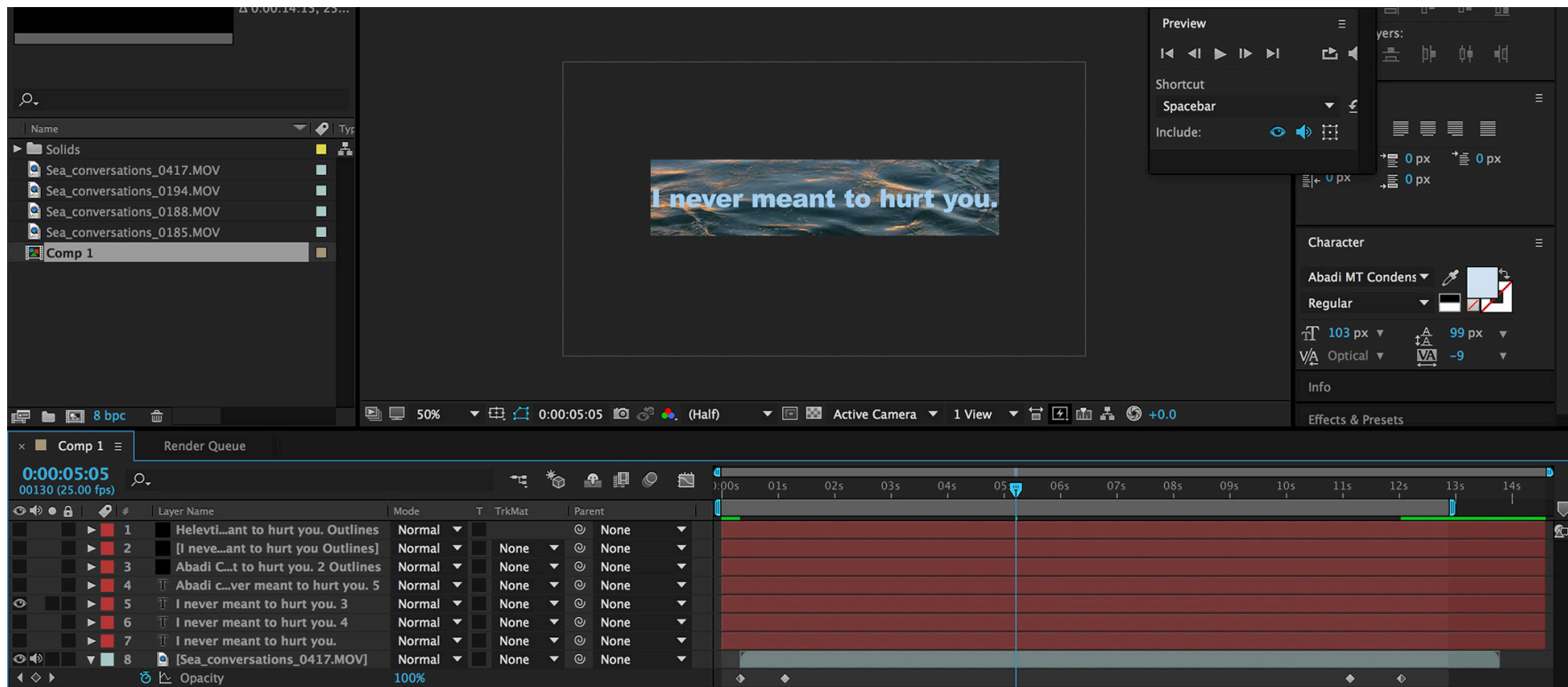
Figure 40: Screen shot of animation experiment work in progress in Abobe After Effects, L.Waldner (2017).

While my work emerged from my own deeply felt response to the climate emergency, the processes of visual communication design provided a highly reflective practice. Design processes produced knowledge that was related directly to my personal frame of reference through a reflective process of self-dialogue, an example of both reflection-during and research-through design (Downton, 2003). Working experimentally with my camera or attending to relationships between animated text and image in kinetic typography, a design brief developed and emerged over time, through a constant back-and-forth checking-in with myself as to whether elements felt 'right'. I observed how font and imagery selection, scale and spatial arrangement could tell me about the meaning and affective qualities of the design piece, a mode of operation which I later began to pass on to others. By reflecting on my choices, I was able better to articulate the meaning of the work and drive it forward. Reflecting on my creative decisions often helped me identify the tone I needed to refine in the design. For example, while designing *One Day* (figure 41 overleaf) and *I'm Sorry* (see later in chapter) it became apparent I was animating the text to emulate the textural qualities of speech, through timing, transitions, scale, and position. Working in After Effects, I noticed how closely I concentrated on cueing words to match the emphasis of a 'natural' dialogue (figure 40 above). The work needed to embody the experience of a conversation, this clarified that I was trying to convey an affecting human/non-human dialogue. Working in this reflective, intuitive manner enabled self-dialogue and brought my tacit and latent knowledge to the surface (Sanders & Stappers, 2013, p. 58).
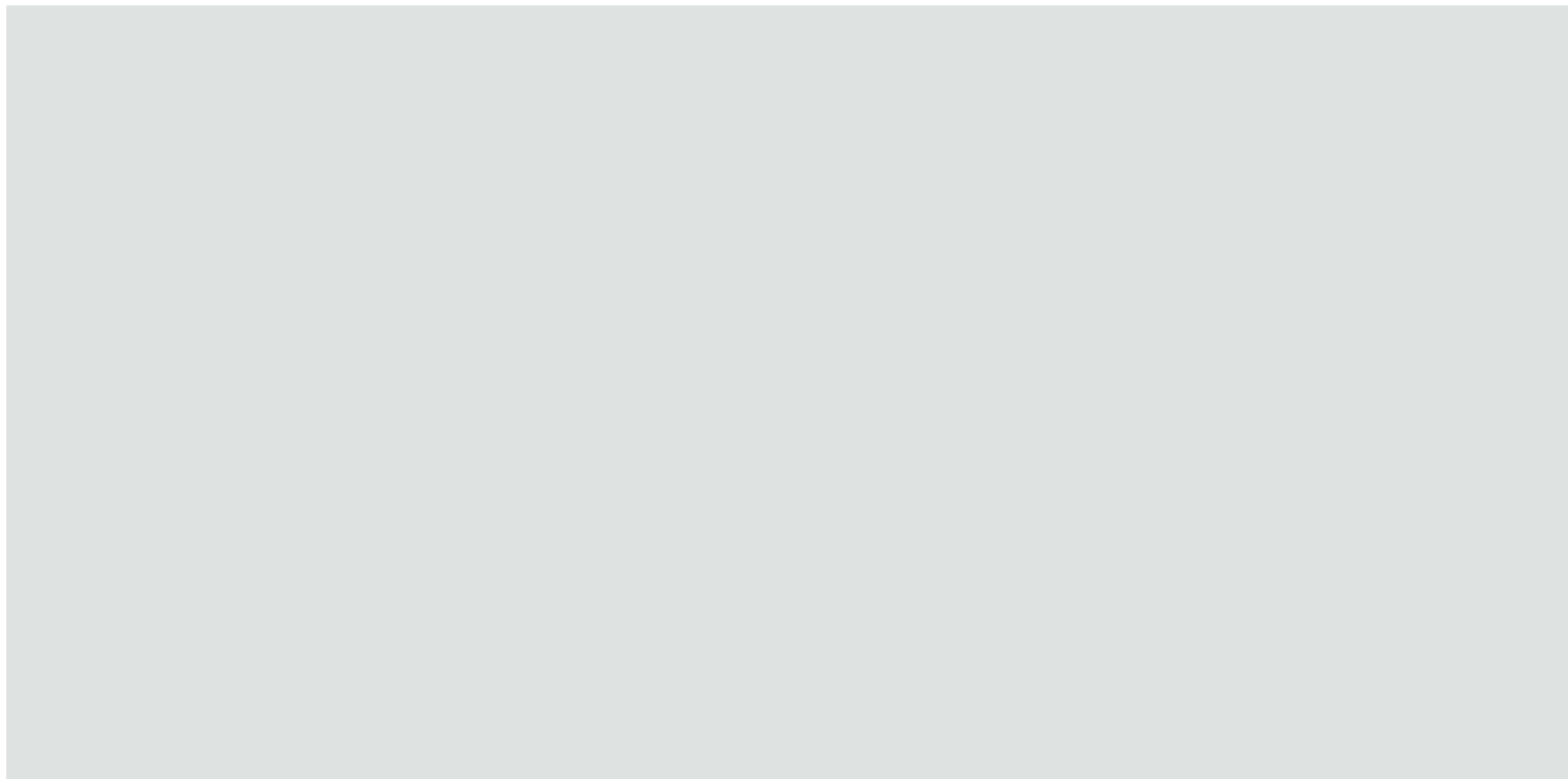
Figure 41: *One day* hybrid kinetic typography animation, L. Waldner (2015).

The development of the moving image work *One Day* (above) provides is an example the generative potential of reflection-during-design to draw out a specific emotion. Early on in my practice, I created a video featuring my elder son at our local beach. While designing with this footage, I reflected on the cheeky playfulness embodied in my son's actions. This triggered a deep sadness and thoughts of what he would ask me about climate change in the future, themes I then articulated in the work. This work emerged from my fear of the questions my children will ask me in an awful future where many earth systems have collapsed. It was a direct response to the carefree joy my son exudes in the video footage. The boy is clearly speaking yet there is no audio of his voice, instead he typographically speaks the viewer raising the question of why we cannot hear him, are we, the adult audience, choosing not to listen or respond? Reflecting on the informal language and style in which I integrated the typography with live action,[67] I see that I was attempting to replicate my son's 'voice', to engage the viewer with his energetic childishness. He directs questions, seemingly trying his best, more than once, obtain a response from the viewer who cannot seem to hear him. This child-like tone sets up the impact of the seriousness of the ending: "One day, I'm gonna ask you something…what did you do about climate change?"

67. Blending type into a live-action scene is technically difficult, and can easily look unprofessional, as the human eye picks up on a mismatch to live action. This process required care and attention.

4.1.3 Projecting change: Initial public testing of typographic works - online and onsite

In the beginning stages of my PhD research, I required sites to disseminate my design works and test their effectiveness. I utilised avenues available through High Water, a creative project I ran with my former design colleague Damon Keen. Established in 2014, the High Water project was set up as a platform for creatives wanting to express their views about climate change. The project ran several events, helped publish a graphic novel, and had its own social-media networks – this gave me access to public-facing spaces, physical and virtual, to test moving-image works. I uploaded several pieces created for my PhD to High Water's social-media platforms, documented the numbers of people reached and their comments. These existing social networks formed an important initial research platform that gave me access to feedback in formats not easily available otherwise, although I developed the content as a solo practitioner.

High Water also hosted the launch for a climate-change graphic novel, also named *High Water* (Keen, 2015), which provided my first opportunity to project my designs in public at a large scale. The site was outside Kelly Tarlton's Sea Life Aquarium on Auckland's busy Tamaki Drive during rush hour. The most important finding concerned the relationship between the effort required to generate a public projection and resulting impact. The first public projection was a milestone, but the work it took to construct the screen, transport gear, organise onsite help and childcare seemed disproportionate to the amount of attention the work gained from passers-by. Pregnant at the time, I realised that organising and delivering similar projection events would only become more difficult with another child. I therefore started looking for opportunities within the parameters of my reality, reducing my involvement in High Water I began to test projection work locally and establish interactive workshops. I had begun to make-with my situation.
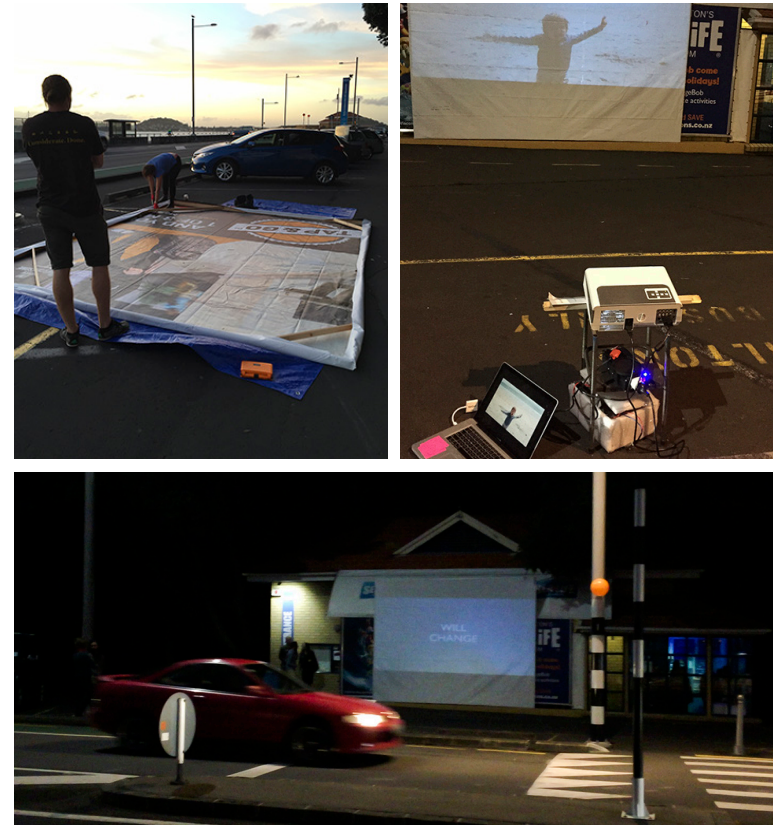
Figure 42: Constructing projection screen onsite, Tamaki Drive, Auckland, L. Waldner (2015).
Figure 43: Portable projection rig in action, Tamaki Drive, Auckland, L. Waldner (2015).
Figure 44: Projection outside Kelly Tarltons, Tamaki Drive, Auckland, L. Waldner (2015).

4.1.4 Talking to others

After the High Water collaboration, I looked closer to home for people to work with. I sought feedback from local writer Susan Wills, whom I met through parenting networks on the island. Both mothers, we shared environmental interests and worked with and around our domestic circumstances, Susan sharing her background and expertise in editorial writing, copy-editing, and marketing. Having children close in age, collaboration was straightforward: we could work while the children played.
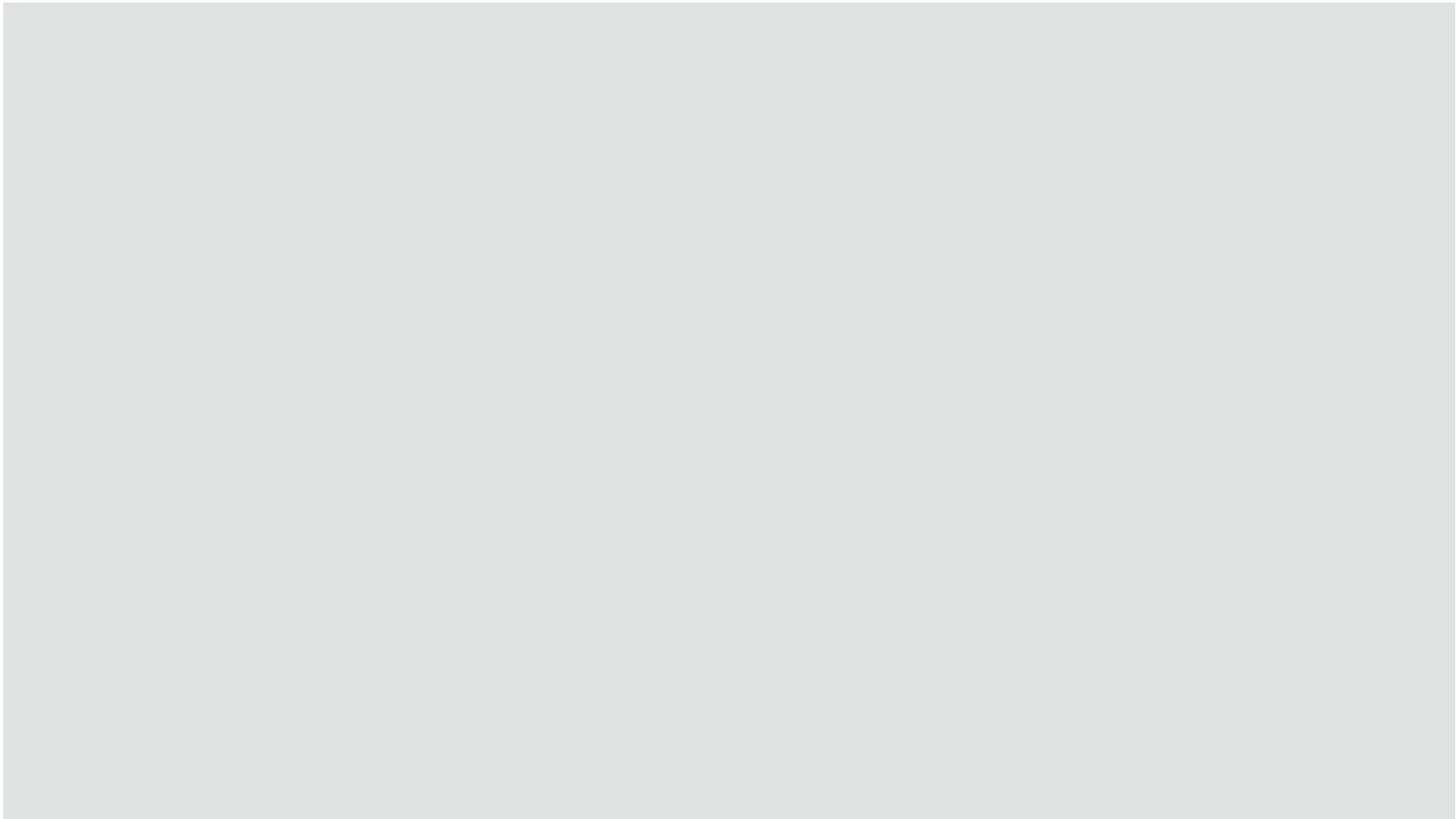
Figure 45: *Everything you know,* hybrid kinetic typography animation, L. Waldner (2015).

Susan provided feedback on an early iteration for a generic climate change animation I was developing (figure 45). The work was a form of culture jamming, aiming to emulate existing design trends in order to blend in with current advertising. Susan's feedback made clear I was missing elements essential to successful marketing and activist practices: my works did not include a call to action or relevant links/hashtag to follow. Testing this iteration clarified the project required a wider, more comprehensive social-media strategy to operate in a similar way to a commercial piece of communication design and therefore blend in with contemporary public marketing. This feedback enabled me to test ideas with more rigour and to refine visual and written language. Collaborating with Susan helped me realise that, if I wanted to achieve the level of public reach I was after, I would need to work with a team of experts; an approach, outside the scope of my research.

Following the design of experimental works testing my own conceptualisation of a sea conversation I turned to others for their interpretation on the theme Frustrated by the limitations of my singular perspective I looked to others for how they might respond. In this first, loosely participatory, experiment I questioned friends via text message, "If you could talk to the sea, what would you say?". Answers ranged from poetic to curious to humorous (see figure 46), provided rich material for design experiments, and some insight into the viability of using this question as a creative device. While the question did not ask directly about climate change, the responses related a very personal sense of loss, grief and gratitude – all relevant sentiments for those living in the Anthropocene. It became crucial for me to give the voice of each speaker presence in the work. When incorporating my friends' responses into design work, I noticed an urge to convey the tone of each comment typographically, via font selection and animation (figures 56–58). Imagery was important, but secondary, sometimes mirroring the tone implied by typography, sometimes contrasting it. This first attempt at getting others' words 'out there' was a success, as both responses and the resulting creative work confirmed the potency of the concept.
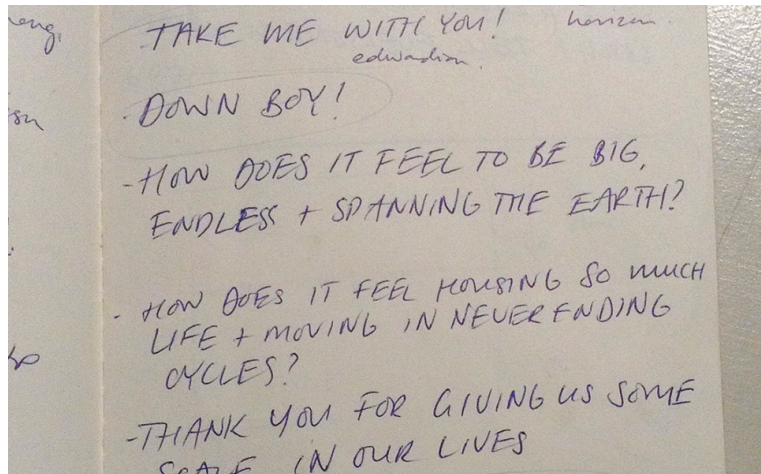
Figure 46: Journal entry of friends' statements to the sea, L. Waldner (2015).

Figure 47: *One long sorry,* hybrid kinetic typography animation, L. Waldner (2015).

Figure 48: *Down boy!,* hybrid kinetic typography animation, L. Waldner (2015).

Figure 49: *Take me with you,* hybrid kinetic typography animation, L. Waldner (2015).

4.1.5 Making with specific spaces and emotions

Knowing the specific location for a design work can stimulate ideation by offering a theme or site to respond to. As a trained designer, accustomed to working with such information, I was at ease with this parameter as a starting point. An example is a moving-image work created for the student section of the Oceanic Performance Biennial (OPB) in Rarotonga in mid-2015 (figure 50). To comment on Rarotonga as a holiday destination I used a postcard theme and played the contrast of medium and content. The initial, script-like font is angled to imply a handwritten message but the words are not in keeping with typical holiday accounts. "Climate change" is set in Cooper Black and surrounded by outlines of black, orange and yellow to infer a sentimental mood; a nod to the out-datedness of sending postcards and the luxury of cheap air travel that makes such messaging possible. irculating 'lights' appear around the type arrangement, referring to the Las Vegas-like spectacle of discount holiday packages to Pacific Islands, responding to the paradox of first-world citizens visiting 'paradise' – all the while contributing to its demise through both lifestyles and transport to Eden.[68] In a wider sense, I refer to the inequalities embedded in the climate crisis: developing countries will be the hardest hit by a situation predominantly caused by first-world nations, who became rich and stable thanks to fossil fuels, their wealth accumulated via past colonial projects.

Exemplifying use of emotion as generative design practice, this piece was a concerted effort to utilise the discomfort of climate crisis. Expecting my second child, my children's future weighed heavily on my mind as did the guilt of adding another first-world human to an overburdened planet. The tension in the work emerged from the constant friction I felt, between my life and what I knew about climate change. I was aware that my ongoing comfortable existence was based on the industrialisation responsible for our precarious environmental situation yet looking around, every seemed OK. A business-as-usual reality prevailed in direct opposition to urgent pleas from

68. Air travel, to 'holiday' destination such as the Pacific Islands, has very high emissions (Bows-Larkin, Mander, Traut, Anderson, & Wood, 2016).
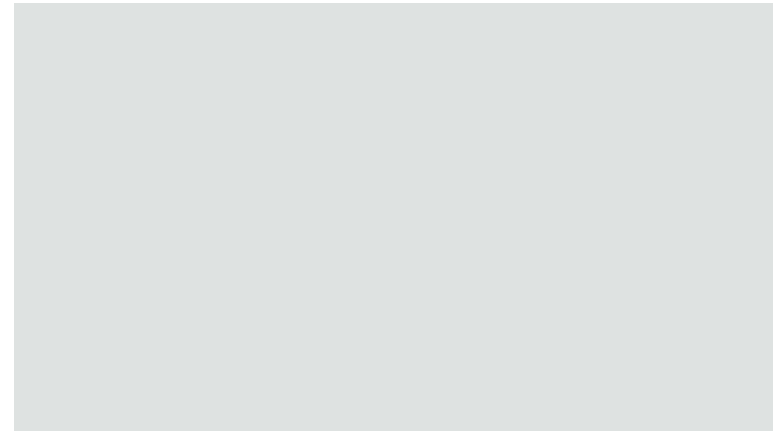
Figure 50: *Wish you weren't here,* hybrid kinetic typography animation, L. Waldner (2015).

climate scientists. Design visuals play to a sense of unease here, footage features silhouetted children running along a beach the scene is sunlit but also misty and stormy making for a confusing image. The location is as unclear as the reason why the children are running: are they playfully scampering, running away from something, or towards it? There are no adults in shot, raising the questions regarding whether the children alone or not? Paired with the climate related text, questions are implied regarding the uncertain future for children as global temperatures continue to soar. The tension generated by juxtaposition of type and content, setting and weather condition echoes tension inherent to life in the Anthropocene: our children frolic and play, while our actions belie how close we are to the climatic crisis. Creating this work clarified for me the complexity of accepting anthropogenic conditions. In the developed world, climate change challenges comfortable existences, what we 'expect' from life, often triggering feelings of guilt: it is difficult to digest. The complexity of reconciling these factors often leads to cognitive dissonances wherein our minds rationalise environmentally destructive choices, such as taking cheap overseas holidays, and facilitate a lack of individual climate action (Stoknes, 2015, p. 63). I explored how design prompts might provide spaces for people to sit with this discomfort and begin to come to terms with the reality of the crisis.

In the OPB project, I was unfamiliar with the sites my work would be projected, and unable to be present for the screenings in Rarotonga, an unusual way for me to work. Proud that my work would feature in such an event, and that I hadn't shied away from responding frankly to the location, I felt disconnected from staging the outcome as a projection. Reflection resulting from making the work was valuable; whereas handing over a disc containing the work to my supervisor, then hearing about the projection event afterwards served to clarify the import of being present for projection tests and garnering insights of events firsthand.

Consequently, in an experiment of making-with my local community ecologies, I designed a piece to screen at a high-end Waiheke speaking event, Waitalks in late 2016 the theme of which was Imagination. I approached event organiser Kirsten Simmons with a proposal to show a design piece between talks. The setting and predefined topic were challenging parameters; creating something not too jarring for the context but still related to climate change a tricky balance that resonates with the discomfort of broaching climate change in social contexts. Reflection on these parameters invoked the question: how to engage people with the reality of the climate emergency without turning them away?

The Waitalks experiment put methods of making-do and -with to the test. I made-with the multifaceted social and physical environment of this ticketed event, within the boundaries of family life. Held early evening in December, at an affluent restaurant, ambient light was a major consideration for the projection (figure 51). Waitalks coincided with an extremely difficult time in my personal life. Therefore, rather than starting from scratch, I produced a compilation of designs generated in earlier experiments to suit the theme of imagination (see figure 52 for video). Again, I made-with my circumstances and existing material but, this time, I was dissatisfied with the finish of my design work; my personal circumstances had impacted my ability to work to my anticipated standards. While it was motivating to design for a guaranteed, captive audience, Waitalks exposed me to the complexities of working for a specific event without clear connection to ecological themes, revealing the thin line climate communications must tread to engage audiences. This balancing act I took forward into the development of workshops, in particular into the design of recruitment advertising for the first workshop session, which I will discuss later in this chapter. Ultimately, the experiment directed me to find events better aligned to the themes of my practice: local collaborations with associated environmental themes. Importantly, it was a reminder to work-with my personal capacity.

Figure 51: Interior of Tantalus restaurant site for *Waitalks* event, Waiheke. L. Waldner (2016).
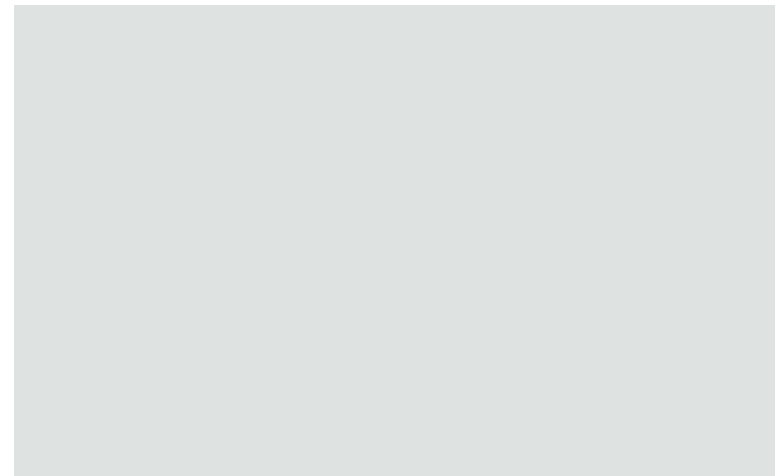
Figure 52: *Waitalks compilation,* hybrid kinetic typography animation, L. Waldner (2016).
**See appendices for video file
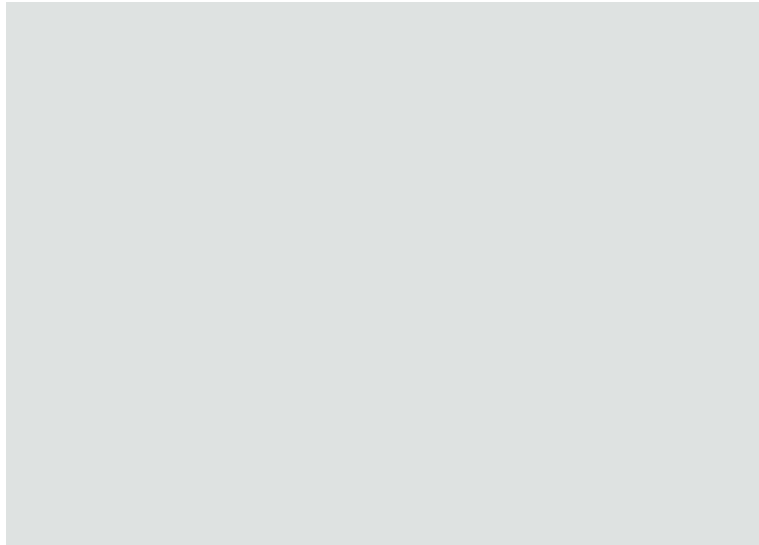
Figure 53: *The future doesn't care,* hybrid kinetic typography animation, L. Waldner (2015).

I also trialled designing for specific online spaces, using time as a specific parameter. Working with time as a constraint, I noticed that design processes force, under certain conditions, a refinement and clarification of ideas. An example of this is the animation work *The future doesn't care about politics* (see figure 53). Completed in only two hours, the aim of the piece was to encourage urgent online submissions to the government regarding future emissions targets, about which consultation was due to close within two days. The call to action embedded in the work asked viewers for an immediate response. A condensed timeframe forced me to employ cycles of ideation, reflection and iteration in quick succession, resulting in a stacking and overlapping of the cycles. The concept for the work arose from a related reading arguing that climate change has become a left/right political issue (Klein, 2014). Later reflection on my emphatic response to the reading made clear that climate change is everyone's issue, rather than a matter of politics, as noted by Latour (2018). I decided that my practice, wherever it led, must be able to cross left/right value systems. Design experiments like this led to a consideration of whether reflection is present at all stages of design, and how designing might

itself be a useful reflective process. Does design practice help designers, amateur or professional, to make sense of issues they design about? This line of inquiry later matured into the metaphor of designers sympoietically digesting themes they design with, a notion further developed during participatory workshops. Meanwhile, I developed practical methods to work with my locational parameters and test how animated design projections functioned in conversation with built environments on Waiheke.

4.1.6 Testing the waters: Experimenting with projection sites

Projection tests formed iterations for me to reflect upon, provided opportunity for ideation for future work and redirected design practice accordingly (see appendices for full documentation of projection tests). Design works I generated were intended for dissemination into public and semi-public spaces, therefore I often, I assessed design experiments in situ, by projecting multiple design iterations onto different exteriors in the same location Repositioning the projector while projecting was a simple, informative and time-saving way to ascertain how different surfaces 'conversed' with the aesthetics and content of each design. I could easily assess practical considerations, such as the flow of foot traffic or impact of ambient lighting. For this 'test' approach, I generated multiple, short iterations of concepts, a quick fire method that mitigated the previously identified risk of producing a final, fully realised work, only to discover that the concept did not translate well into a projection. It also provided the opportunity to gain public feedback on work in progress.

During such tests in late 2017, I noticed that once design works were projected into public spaces the pieces were activated in ways I could not have anticipated working on a computer. For instance, the Waiheke Community Library, is a building with a unique exterior located in a hub of a community theatre, cinema and art gallery, which offered diverse surfaces to project onto. Tests at this site helped me appreciate that a dialogue can

be generated between architecture, locale and the work. For example, the texture of the library building became part of some pieces but wildly distorted others (figure 54), whereas awnings and architectural features served as eye-catching surfaces, causing a viewer to look up (figure 55). Experimenting with non-standard surfaces, prompted consideration of the edges and shapes of my work; for instance, screen-like rectangles were difficult to integrate with architecture without becoming too misshapen. Typography on a black background proved more versatile on buildings, as it can run over different forms, distorted yet legible; specifically when white type was on a black background, words assimilated into the projection surface. Locations can add layers of meaning to the work; sites have their own stories and physical features to converse with the projection. Projecting onto the entrance of Artworks Community Theatre, for example, the exterior lights added a theatrical element and ambiguity to the work implying there was perhaps there a show called Climate change? (figure 56)

In another context, projecting at Matiatia Wharf, the main passenger-ferry terminal on Waiheke, contributed layers of meaning due to its proximity to the water, combined with the fact that viewers were likely to have either recently travelled across the water or were about to. Testing projection work in transit zones, such as the Matiatia ferry terminal, my aim was to make use of the flow of foot traffic of a guaranteed local audience, as people returned home from working in the city. Due to council health and safety regulations, this was challenging to organise and carry out, but the findings from these tests were useful. I was able to observe which projections had more impact ("Wow, Mum look at that"), and how many people looked up at the projections (rather than at me with my unusual projection rig). The timing associated with this type of work, however, imposed significant limits on a practice I intended to be sustainable. At this wharf, peak commuter foot-traffic correlates with standard work hours, and the bulk of people return from town between 5 and 8pm. Yet, in summer, it only becomes dark after 9pm. Only in winter could I find a time with optimal lighting conditions – precisely the time

Figure 54: Projection surface test onto Waiheke Library exterior, Waiheke. L. Waldner (2017).
Figure 55: Projection on to awning of Waiheke Library, Waiheke. L. Waldner (2017).
Figure 56: Projection test onto Waiheke theatre Artworks, Waiheke. L. Waldner (2017).
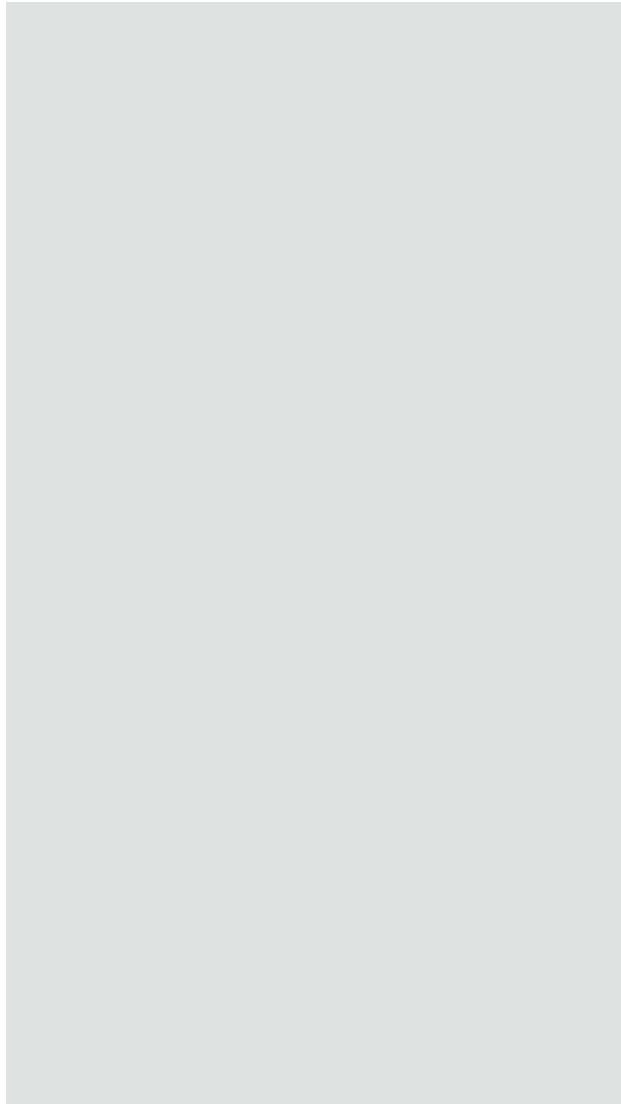
Figure 57: Projection test on canopy, Matiatia Wharf, Waiheke. L. Waldner (2017).

when people tend to rush to get out of bad weather conditions.[69] Combined with my status as a full-time single parent, made public projection unfeasible: I turned towards activities like running workshops during the day, that could evolve-within my altered parameters.

69. In summer, projecting at this time is not viable as the sun sets later, and works would not be visible.

4.1.7 Talking about myself:
Personal conditions as design material

Utilising my emotional conditions as material for design pieces, made apparent that the inclusion of my personal experience worked to lend substance to design works. The piece that best exemplifies this is *I'm sorry*. This typographic work was created in response to several factors: first, a realisation that some early pieces read like love letters from a romantic relationship, a theme I sought to test further and relate to my experience of human relationships (figure 58) Second, the idea of a truly interactive dialogue with the sea: if I spoke to the sea what might it say back to me? Last, a very personal response to the breakdown of my marriage. There were parallels between my bone-deep grief over our rapidly warming world and the despair at the end of my marriage: both dealt with the loss of a supposedly certain future.

Figure 58: *You are so beautiful,* social media graphic experiment, L. Waldner (2017).

While making *I'm sorry,* I imagined the sea betrayed and deeply hurt by humans (figure 59, overleaf). However, all is not lost because the human part in the conversation is open and longing to reconcile and connect. Even though the conversation turns hopeful, it is evident that it will take work to get back to where the two once were. Throughout most of the exchange, nothing reveals that this is anything but a conversation between two people in a relationship, which lends impact to the ending ("What would you say to the sea?"). Here, emotion sparked imagination which, in turn, contributed a certain authenticity to the work; a process that I alluded to earlier in Chapter Two.
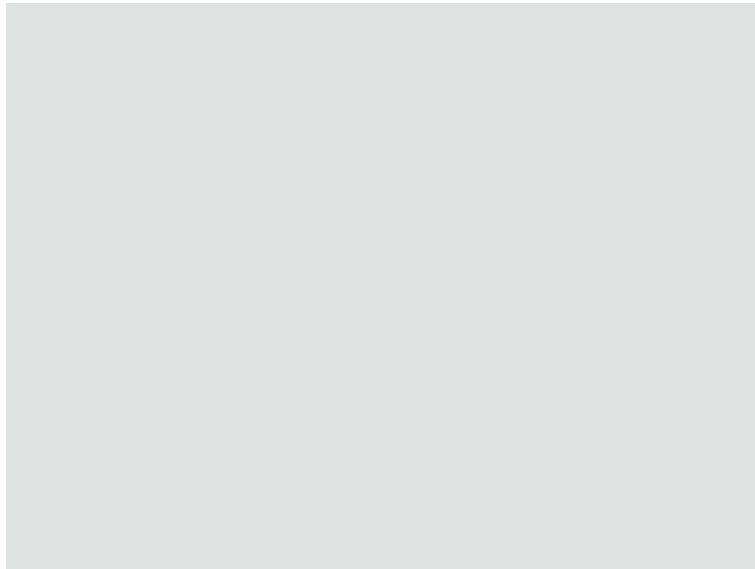
Figure 59: *I'm sorry,* hybrid kinetic typography animation, L. Waldner (2017).

Reflecting on this work, and others' reactions to it, I understood that utilising raw emotion in climate communications can work to connect people to their unspoken feelings about the emergency. This emotional intelligence could also act as a bridge to intellectual acceptance of the depth of the climate crisis. Boehnert cites literature on the function of emotional intelligence in regards to intellectual cognition; emotions serve an important function in an effective rational mind (2018, p. 65). As the design process surfaced the depth of my own mourning and will to act, I wondered if this would be the case for lay-designers, too. Vulnerability, heartache and grief are but a few of the reactions we may have to current and predicted impacts of climate change. As discussed in previous chapters, engaging in genuine mourning can be a means of staying-with the complexity of being human the Anthropocene. One way of personally digesting this grief is to work together with those around us and articulate it. Communication design provides a method to gather around climate change and make our feelings visible to ourselves and one another. Increasingly, the focus of my practice veered more towards these collective ways of working: since we face the climate crisis together, I wanted to see how others were feeling.

4.2 Designing with others: Journey to a workshop model

Akin to the dialogue I had with my natural surroundings to develop design concepts, I entered into forms of conversation with my community; I worked in creative synergy with others, always looking for local, ecologically based opportunities to test interactive design methods. With reference to Stuart Hall's theories of difference, Haslem employs Bakhtin's dialogic exchange to describe the role of the "other" in design practice, asserting that meaning is "constructed in dialogue with the 'other'" and that "meaning doesn't belong to one speaker" (2011, p. 9). Similarly, I used my insider position as Waiheke community member with affiliation to different groups to work with others and enable processes of "meaning discovery" (Greene, 2014; Haslem, 2011, p. 9). In a community setting, this was an effective starting point; it helped me realise the value of collaborating with existing, like-minded organisations, movements and groups such as Plastic Free Waiheke. In the same vein, Ingold suggests people and organisms are connected in terms of meshworks: we are "knots in a tissue of knots" that are further tied to other knots (2011, p. 70). I made use of my bindings and formed coalitions with nearby community infrastructures, such as the Waiheke library, to develop design workshops. This proved fruitful, allowing me to test methods in related contexts and, importantly, eased the pressure of generating, and recruiting for, standalone events. My increasing interest in community agency in design processes would later open up the scope of pedagogical methods for workshops: from instructional facilitation towards a participant-orientated design process in *The Intertidal Zone* (see following chapter).

4.2.1 Making while mothering

Informal methods of making-with my community networks were among the steps towards developing collaborative workshop methods. Operating within the constraints of a life with young children, I worked with other like-minded mothers in a process I titled 'making-do'. To return to the feminist perspective that I introduced in Chapter Two, this works with female lived experience and acknowledges women's knowledge as important and valuable

(Haraway, 2016; Harding, 2004; Martin, 2020). I formed fruitful, ongoing relationships with politically active women in my community, including Lucy Stewart (who works in global disarmament), Anna Dawson (founder of Plastic Free Pantry, Plastic Free Waiheke member) and Susan Wills (copy-editor, Plastic Free Waiheke member), all of whom helped sustain my research practices.

In local, child-friendly places, while our children played, we discussed the direction of my research and shared tips on readings or creative practitioners (figures 60-61). These relationships fostered ecologies of support that extended beyond my own project. We encouraged each other's endeavours and provided practical assistance like childcare and feedback on work – organising meeting times that worked for small children. This collective approach echoes significant female and parent-led climate initiatives such as: the Million Mom Movement, Mothers Out Front, One Million Women, and Australian Parents for Climate Action. Phillipe Pignarre and Isabelle Stengers endorse "on-the-ground collectives capable of inventing new practices of imagination, resistance, revolt, repair, and mourning, and of living and dying well" (cited in Haraway, 2016, p. 51). On Waiheke, we worked together within our capacities, we made-do, and maximised our 'down time' while mothering by discussing how to generate a better world for our children.

Figure 60: Small person helping during Plastic Free July planning, Waiheke. L. Waldner (2018).
Figure 61: Working at Susan's alongside children, Waiheke. L. Waldner (2018).

4.2.2 Designing change: The birth of design workshops

After publicly testing animated projections discussed above, I explored more interactive ways in which communication design could be used to engage others. This desire was prompted by my situated knowledge as an educator, and would allow me to interact more directly with people than I had felt able to during projection tests. For me, teaching offers immediate feedback and communal energy as people grasp new skills. When compared to displaying projected visuals to people in public spaces, I imagined more effective interaction was possible with my community through dedicated design events. People could attend workshops voluntarily and receive skills I had to share with them in exchange for their time and participation. My experience designing with clients and teaching demonstrated that people are enthusiastic to engage in creative visual practice. Utilising my insider position in my community, alongside a situated understanding of the practical appeal of design activity, I planned a series of workshops to scope how lay-designers would respond the open-ended ecological theme of talking to the sea.

The initial iteration of workshops at a local level proved complicated. I had originally planned a series of workshops with three different groups: primary-school children, high-school students and adults to gauge how differing groups would engage with the concept. This plan required the Auckland University of Technology Ethics Committee's (AUTEC) approval. Research involving children, particularly, is governed by strict guidelines, and the mix of age groups made it difficult to assert my research purpose as purely exploratory or define the exact output for data when this was a scoping exercise. A reduced recruitment group involving high-school students only, was successfully applied for but the timing did not fit with the local school's examination programming.[70] I reflected on whether my research required the involvement of children and young adults. I had an interest in championing those without a democratic voice: children will be most affected by climate change in their futures. Ultimately,

70. School policy determined that a teacher needed to be present whenever I was with students on school grounds.

I decided this was not the primary focus and ran these first workshops for adults only, for whom the recruitment and consenting rules were far more straightforward.

4.2.3 Talking to an elephant: Early iterations of workshops

After gaining ethics approval for the workshops, considerations of how best to recruit participants arose, including: How prominent should climate change be in advertising? What was I offering in return for participants' time?[71] I reflected on how to remain faithful to the intention of the research while attracting enough people to attend. As Haslem describes, the emergence of a designed object can act as an 'other' enabling dialogue between object and practitioner, "the design artefact [is] externalised and materialised by designers in order to refine (and create) their knowledge" (2011, p. 9). Designing the recruitment communications helped me articulate these concerns and clarified my objective: to get people talking about the elephant in the room – climate change. I began with the name of the workshop series: *How to Talk to an Elephant*, a direct, yet sufficiently ambiguous reference to this crisis.

In recruitment advertising material and workshop presentation media, I again used the typeface Cooper Black for titles as it is rounded and friendly, with a nostalgic feel due to a prolific usage in children's books of the 1970s and 80s. Basil Temple Blackwood's hand-drawn elephant illustrations, from The Bad Child's Book of Beasts (Belloc & B. T. B. (Basil Temple Blackwood), 1918) created a playful mood.[72] While mentioned on the posters and Facebook advertising, 'climate' was not the focus of attention. Instead, I emphasised the opportunity of 'learning' and 'free graphic design' skills. To differentiate sessions and maintain local interest, I developed different iterations of advertisements for each workshop. On reflection, a welcoming and friendly tone was generated to pre-empt potential negative associations of the climate-related content of the workshop. Emphasis

71. I sought advice from the manager of Waiheke Community Library, where I held most of the workshops. She told me that offering people a skill would likely ensure successful recruiting.

72. The illustrations are covered by creative commons license.
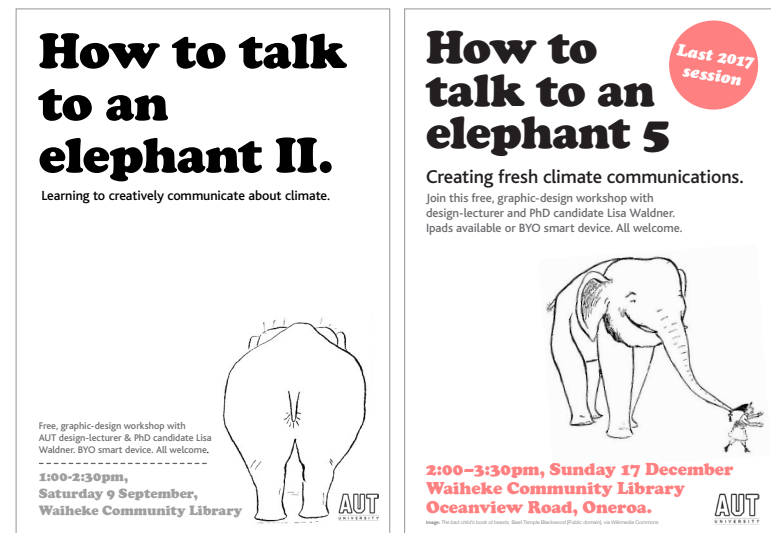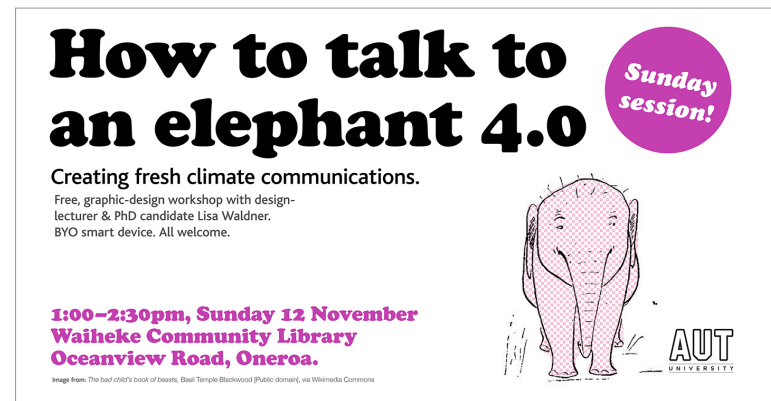
Figure 62: *How to Talk to an Elephant 4.0* Facebook event graphic, L. Waldner (2017).
Figure 63: *How to Talk to an Elephant II* poster advertising, L. Waldner (2017).
Figure 64: *How to Talk to an Elephant 5* poster advertising, L. Waldner (2017).

on skills participants would come away with highlighted the requirement for the sessions to be based on a model of exchange. I would gain data but participants would enhance their creative abilities. Significantly, it was the distillation of these factors, through design, that made my aims for workshops clearer to me. Returning to Haslem, knowledge of my intentions became more available to me through a dialogic exchange of designing.

Between August and December 2017, I facilitated three workshop sessions at two different locations: the Waiheke Sustainability Centre and the Waiheke Community Library.[73] Workshops were lively, interactive learning spaces, which attendees said they gained a lot from (see appendices for informal feedback forms). The information I gathered from these events included: my observations of the sessions, photographs of workshop activities, participant feedback forms and the design work created by attendees.

As described in chapter two, within the *Generative change* section, initial workshops were devised along the lines of studio-based communication-design classes I had taught at tertiary institutes.[74] At the outset, participants were asked to write responses to the question: "If you could talk to the sea, what would you say?" With writing set aside for later use, attendees were provided instruction on design fundamentals prior to generating their own design works which were then discussed in a group setting. Participants were asked to utilise what they had learned, together with written responses they generated earlier, to design a social-media graphic. Communication design was deployed as a maketool (see also Chapter Two *Generative change* section) through which participants could explore their understanding of a conversation with the sea. As such, designed outcomes formed a common visual language though which participants could access and express their thoughts and feelings regarding their relationship to the theme (Sanders & Stappers, 2013, p. 4)

We worked with free design application Typorama,[75] preloaded onto supplied devices or downloaded by participants onto their own smart device. It is worth noting that Typorama first requires

Figure 65: Participants designing at *How to Talk to an Elephant II*, Waiheke, L. Waldner (2017).

participants to select an image before entering their copy, meaning design decisions are from the outset heavily weighted towards a defining photographic image. During initial workshops, options for imagery were limited to searchable stock available 'in app' or, if a participant was using their own device, an image from the participant's photo roll. Once copy was entered, the software displayed the words in a variety of typographic templates, which participants could adapt in terms of scale, colour and effects (shadows and glow). Various filters and effects could eventually be added to the whole composition.

Once designing was underway, there was an observable 'buzz' in the atmosphere as participants found enjoyment applying new design skills. I too was energised by the interaction with participants, which was in sharp contrast to observing passers-by looking at projections. I could relate to the sense of participation and enthusiasm from my teaching experience, and I now had access to a feedback loop with the public; I could tell if somebody was grasping a concept and, if not, adjust my approach accordingly.

73. The Waiheke Sustainability Centre was formerly known as The Waiheke Resources Trust (WRT), hence reference to WRT on documentation and advertising material.

74. Sessions initially ran for one and a half hours and later, in response to participant feedback, shifted to two hours in duration. Participant numbers ranged from three to six, with participants recruited via poster and Facebook advertising as well as through my personal networks.

75. The reasoning for using free, consumer-level software, at least initially, is to allow for the possibility of participants' continued use of the same software on their own devices outside of the workshop, thus encouraging generation of more creative work. First, I used Typorama, then trialled Canva.

Figure 66: Reviewing participant design work, Waiheke, L. Waldner (2017).

4.2.4 Considering outcomes:
Findings from the first workshops

Reflecting on results from initial workshops was a fluid, flexible process and led to a turning point in the thesis, at which the process of designing became more significant than the designed outcomes. This realisation occurred over time, as I considered sessions through written reflections and visual analysis of participants' design works. In a Word file, I collated observations, noted suggestions for future events, alongside images taken during the session (see appendices for documentation). The process of 'writing up' each session was a form of journaling that helped me synthesise my workshop experiences, interactions with participants, and observations of how attendees engaged with processes. Photographs helped jog my memory, as did audio recordings I made for my own reference. Using a relational, design-things outlook described in previous chapters, I aimed to eschew pre-empting results or privileging one set of outcomes over another. Nonetheless, when viewing participants' designs, I found myself analysing their design ability and questioning whether I had 'taught them well enough'. This signalled I was

still considering workshops primarily in terms of 'successfully designed outcomes' rather than from the perspective of participant experience and that I needed to reframe the traditional way of teaching to a pedagogical approach based on emergence.

In a process akin to thematic analysis of 'workshop data', I grouped print outs of participant designs into categories or themes. Using a "context driven" approach, I looked to participant design materials to inform groupings rather than using predefined classifications (Guest et al., 2012, p. 10). Initially, I arranged the lay-designers' graphic outcomes according to how closely designs adhered to the idea of conversing with the sea, on a spectrum moving from directly conversing (left) to not at all (right) (see figure 67). I then ranked the work according to how effectively participants had employed the design skills I showed them. After a few rounds of such evaluations, I realised that, in order to identify multiple common tendencies present in the same work, I required a different system. Consequently, I moved to InDesign and created categories related to mood, content of imagery and wording, placing virtual copies of design works into as many categories as they fitted. Again, I worked with a spectrum from most to least. I remained responsive while reviewing participants' work, and arranging results spatially, both on and off the computer, allowed me to look for patterns, differences and commonalties, as suggested by Sander and Stappers (2013). Although this thematic visual analysis was not a process I took forward, this method of considering outcomes allowed me to apprehend relationships between categories that emerged from the design artefacts themselves, thus supporting a relational understanding of them.

Using this grouping method (figure 66), I realised many participants had overlooked the concept of speaking directly to the sea and instead spoke about it (see figure 67 overleaf). This prompted me to alter the generative question at the beginning of the workshop from "If you could talk to the sea, what would you say?" to "If you could converse with the sea, what would you say?" and encourage participants to consider what the sea might say in reply. One participant, Kirsten, responded enthusiastically

STORMY, serene, SPARKLING, SUN-KISSED

made with TYPORAMA

say goodbye

made with TYPORAMA

FIGHT OR FLIGHT

made with TYPORAMA

scribing a conversation between her climate-sceptic father and the ocean. Kirsten's imaginary sea conversation demonstrates the potential of enacting a dialogue as a supporting method, an idea that was later developed into a role-play method in *The Intertidal Zone*.

Grouping methods also revealed many designs had a sad, dramatic, nostalgic and/or poetic tone. People seemed to be grieving, angry or wistful in their communications: the method was bringing up strong emotions.(see figure 68) Many design works I labelled as dramatic were severe, emphatic pieces that utilised imperatives to draw attention to ecological concerns (for example see figure 69). Workshops seemed to provide an outlet for some participants' fears. Also revealing was the number of messages that could be labelled as 'positive' (13) was almost equal to those as those in the 'sad' category (12). Participants were celebrating and grieving in almost equal measure; their designs a form of dialogic utterance, responding to currents of both denial and recognition that the sea is in demise (Bakhtin, 1981). This mix of strong, emotional responses demonstrated the value of the workshop methods; the potential of communication-design processes was becoming clearer.

Once I started facilitating the design work of others, direct interaction and feedback complemented my skill sets of design practitioner and educator, I felt was more effective in this setting. My confidence was buoyed through workshop successes; people appeared to enjoy learning about communication design and engaging with the topic conceptually. I could observe people's reactions to engaging in these processes. Watching people's enthusiasm for design processes was a breakthrough: I could now see the agency of communication design at work, as a way to attract and engage people with climate change. Curious to test these methods in other sites, I began to seek further opportunistic alignments with community events.

From top to bottom -
Figure 67: *Stormy, serene, sparkling*, participant design work, (2017).
Figure 68: *Say goodbye*, participant design work, (2017).
Figure 69: *Fight or flight*, participant design work, (2017).

4.2.5 Envisaging a plastic free Waiheke:
The second phase of workshopping

The realisation that participatory methods were applicable outside of workshops was a further turning point that arose out of my involvement with a 'plastic-free Waiheke' visioning session in 2017 (see appendices for documentation). Invited by organiser Kim Hill, a local member of Earth Optimism,[76] to run design activities to support the session aims. The goal of the workshop was to generate local conversation about a plastic-free Waiheke and to recruit people to a working team that could carry out the resulting activities. During initial conversations, it became clear that the 'visioning' process Kim referred to did not include any applied visual methods (see figure 70 for pre-designed poster).

76. From Facebook page of local Earth Optimism faction, 23 April 2018: "Earth Optimism is a global initiative from The Smithsonian that celebrates a change in focus from problem to solution, from a sense of loss to one of hope, in the dialogue about conservation".

Instead, the main group activity called for written responses to the proposition: "Imagine opening the newspaper in 20 years, what positive news would you like to read about regarding plastic free Waiheke?" Newspapers, a recognisable product of communication design, offered a viable way to convert this into a visual communication task.

As a test site for my research practice, this workshop required adaptability and openness. There were numerous unknowns, including: the number of participants, their technical skill levels and willingness to engage in a design activity, reliability of internet connection, and a question mark over whether sufficient devices would be available – all had bearing on how the activities would unfold. Therefore, I had to remain flexible in my planning and in running the activities themselves. I prepared contingencies, gathering and testing devices from friends, organising offline activities using print-outs, paper and pens. I tested the online design application Canva and found several magazine templates that could be used instead of a newspaper format. Building on my workshop experience, where people enjoyed using their own images, I uploaded images of Waiheke generated over the course of my research to Canva, I expected these photos to hold relevance for the local participants engaging in a localised process. Finally, I was bolstered by not being the sole 'owner' of the event; the pressure was not solely on me to make this succeed, instead working in full collaboration with others.

The workshop was well attended, with at least 20 participants varying in age, expectation and technical ability. A relaxed attitude, facilitated by the collaborative orgainisation of the workshop, enhanced my ability to improvise, which in turn served the varied needs of participants. Working in groups of four to six, participants were given paper, pens and print-outs of my Waiheke images as their starting pointw. Their task was to lay out a magazine spread that included at least one image, a headline, subhead, and caption. Together, these elements act as a starting point to describe speculations on future good news about a plastic-free Waiheke encapsulate the group's vision. This
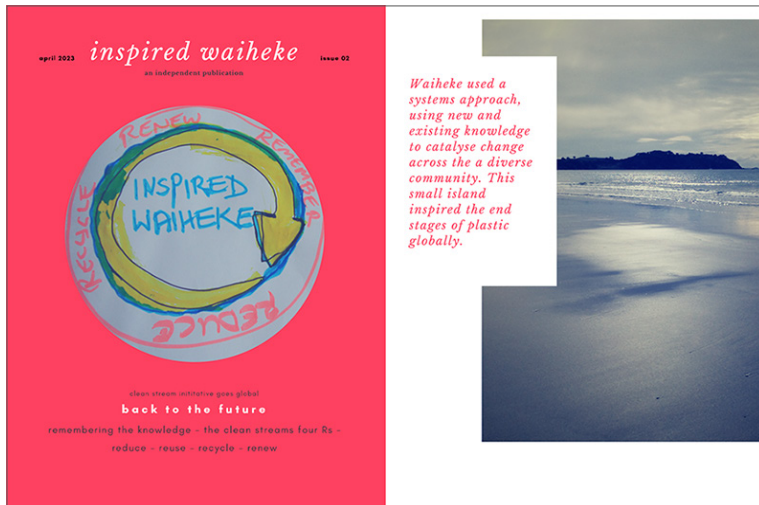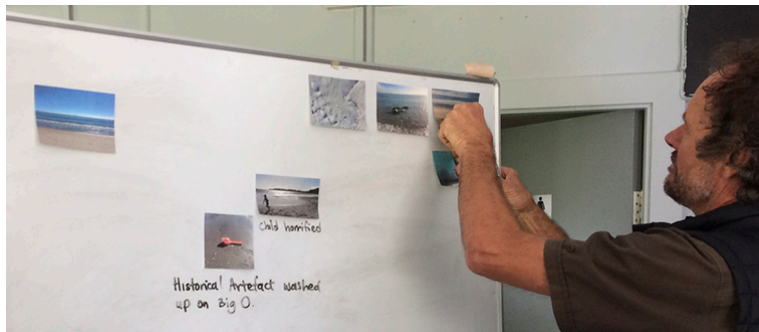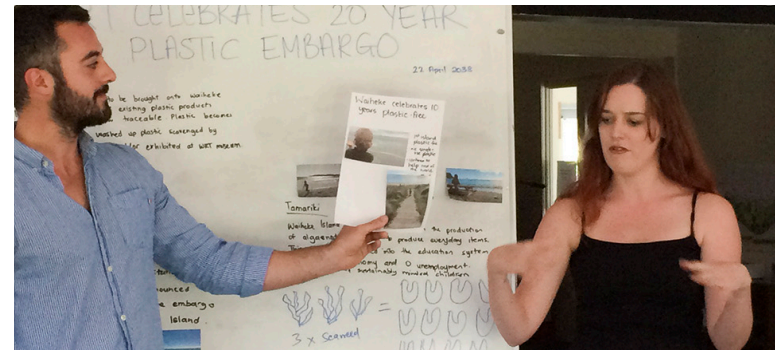
generally worked well as participants had physical elements in front of them to collaborate around, photographic print-outs acted as talking points and items people could categorise and analyse to assist with articulating their collective concept. Some groups ran with the process, quickly developing ideas, (figure 71) others struggled to understand the point of the exercise (figure 72). Interestingly, it was design methods that worked to unlock stalemates in two separate groups. Creating mock-up designs for different ideas in the group, or diagramming a group vision, freed participants up and moved them away from wrong/right dualisms alleviating tension in the groups. Design allowed for multiple solutions to the same question, a useful attribute when attempting to imagine new futures. Another finding from this event was the high levels of engagement and enthusiasm for design tasks; participants verbal feedback during and post session on the design portion of the visioning session was overwhelmingly positive. I observed communication-design processes help people realise their thoughts on a topic in diverse ways while working in groups. Both participants and organisers responded positively to seeing the visions put into a final designed format (for example figure 73), verbalising how good it felt to have 'made' something tangible rather than solely talking, writing and listening to speakers. Final designs also provided organisers with a visual artefact to use as they move forward in their own development processes (see appendices). Such findings point to communication design as a potentially rich generative visual tool for dealing with a range of topics.

4.2.6 Visualising promises: Designing plastic-free promises

A further external testing ground for participatory design methods was the market day for the launch of Plastic Free July 2018 on Waiheke (see appendices for full documentation). Following my involvement in plastic-free Waiheke visioning, I ran a 'Design-a-pledge' stall at the market day where market visitors could generate a shareable graphic to outline their promise to fulfill for Plastic Free July (see figures 75-76). Using Canva software with my help, participants could select a format of either a social-media graphic (to share online) or a poster (that I printed out for them to share). The stall also acted as recruitment for the Graphic Activism workshop I facilitated later in the month. The stall was well patronised, participants were highly engaged with the process, which involved sharing their reasons with me for wanting to reduce plastic use. The one-on-one format allowed for very focused conversations with participants, however, interaction was very time-consuming and tiring for me.

Participants without a clear pledge in mind, used the design-based conversation to crystallise their thoughts on why they were participating in Plastic Free July. Communication design helped people distil and articulate their thoughts: defined design outcomes of poster or social-media graphic meant pledges and sentiments had to be edited down to the kernel of an idea. To quote Halsem again, our collaboration over a design artefact enabled "dialogic 'meaning discovery' and artefact refinement during the design activity" (2011, p. 9). Once the lay-designers could clarify what they wished to express, they further engaged with their sustainability commitment through a visual means to share these promises. This event alerted me to the potential of working more directly with participants, a significant finding that I went on to test further in impromtu design exchanges in *The Intertidal Zone*.
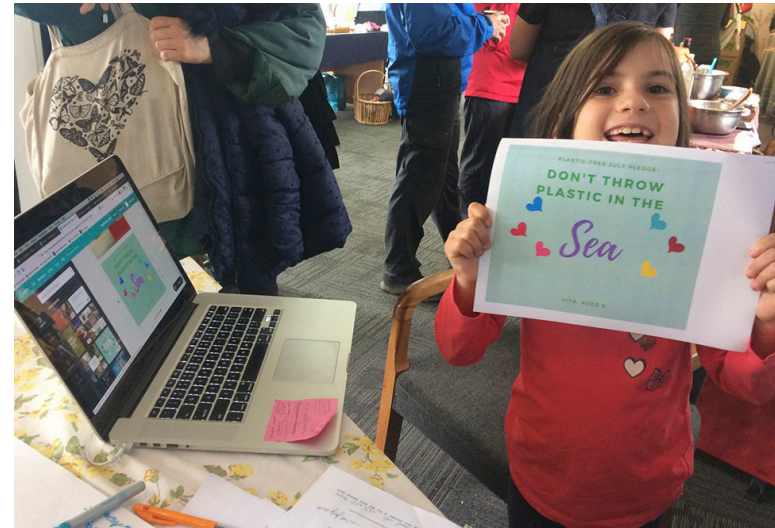
Figure 75: Participant with her design Plastic Free July market day, L. Waldner (2018).
Figure 76: Participant at Plastic Free July market day stall, L. Waldner (2018).

4.3 Reflection

This chapter traced the development of the thesis through successive research events, involving different sites, events and processes. I explained in greater detail how methods related in chapter two were applied and how certain sites and events shaped research direction. Casting the sea as an entity we can converse with has been central to many areas of the research, driving theory and practice towards an anthrodecentric approach, to return to Anderson. This is part of the framing of porous and relational 'design-things' that informed my methods and enhanced my ability to adapt to requirements and opportunities as they arose. Over this phase of my research, I found that design processes became equally as important as the outcome. Over time, through varied design-based outputs, I became less wedded to final design outcomes, such as creating the strongest 'message', and more able to grasp the agency of communication design as an emergent practice available to lay people. This fostered flexibility and openness to what arises during design processes. Rather than hindering me, acceptance of my particular situation now furthered the research; I looked for localised collaborations that allowed me to test methods in workable ways. This resulted in opportunistic alignments with sustainability initiatives and community facilities.

Through animated typographic projections, social-media interactions and early phases of workshops, I experimented with communication design to engage communities in specific sites. On reflection, the communication design pieces I designed myself helped me to understand the wider aims of the research. Through testing the agency of communication design in a more participatory setting, I shifted my idea of myself as the expert designer, able to orchestrate communications that would move people's behaviour and understanding of climate change, towards being an enabler.

Whereas generating design works for video projection was a independent and solitary affair in many ways, workshop environments were vibrant and interactive events, where I drew on both my 'insider' position as an islander and my experience as a designer. The feedback loops in the workshop spaces were more immediate forms of interaction with my community. In collaborative modes, communication design's capacity to connect people with, and help them articulate their emotions emerged as significant. I tested participatory methods with like-minded environmental initiatives and observed participants become energised and inspired while working to communicate and develop their ideas visually. Working with others helped me realise the potential of synergies. This shift in emphasis of the research led to me contact Waiheke Community Art Gallery and to development *The Intertidal Zone* concept, which built on the workshop model described in this chapter.

Chapter. 5

Chapter 5.
Reflections on *The Intertidal Zone*

She asked the sea: "Can my sorrow heal you?"
And the sea responded: "Our salt is the same." [77]

This chapter reflects upon my experience of running *The Intertidal Zone*, a participatory communication-design space inside Waiheke Community Art Gallery – Te Whare Taonga o Waiheke. *The Intertidal Zone* was established to implement iterations of the lay-design workshop model and further test how communication design can be used with community groups as a sympoietic process of making-with. The cultural and physical position of The Waiheke Community Art Gallery – Te Whare Taonga o Waiheke within the community enabled me to trial my relational, design-based methods with a variety of community groups.[78] *The Intertidal Zone* also served as a space to display communication designs generated by visitors and my own kinetic-typography projections. Over a six-week period in 2019, this community setting was a 'live' test space for the practical culmination of the project.

In *The Intertidal Zone*, I set out to explore how involvement in participatory communication design processes can increase or reveal peoples' sensitivity to ecological concerns. Once again, in a different context, I 'thought-with' and 'made-with' Haraway's theories on sympoiesis to frame and analyse the design activities I hosted. Initially, I asked myself: How, and under which conditions, can lay-communication design help people digest their relationships with the ocean? Over time, this morphed into: How can communication design support people to become-with their own knowledge about the climate emergency? In interactions through workshops and interpersonal design

exchanges, I saw people reimagine, or evolve-with the non-human via design methods. I watched communication design distil, and bring to the surface, the participants' relationships to the sea and, importantly, make this knowledge visible to them.

The design-based interactions I hosted in *The Intertidal Zone* included both informal design-exchanges and four formal, public, design workshops on Sunday afternoons. Satellite events took place outside of the gallery: tailored workshop sessions to suit local interest groups such as the teen photography club, the Waiheke Adult Learning literacy group, and a children's school-holiday workshop at the Waiheke library. During my time at *The Intertidal Zone*, I developed supplementary, interactive activities complementing and supporting the participatory workshops, including anonymous writing activities, roleplay and dialogue with gallery visitors.

As there were many kinds of activities in *The Intertidal Zone*, I divide this chapter into sections addressing these aspects, while noting that the actions discussed did not unfold in the chronological order presented here. In the first section of this chapter, I describe the setting for the Intertidal Zone as a biome then outline the different types of design exchanges including informal design-interactions and visitors' written contributions. In the sections Sunday sailings and Working with local ecologies, I detail seven group workshops I facilitated, alongside and the changes I made to each iteration. I begin with the four consecutive Sundays sessions, then move on to the three satellite workshops I ran outside the gallery. In the final section, Eddies, currents and surfacing, I critically examine the main currents, challenges and discoveries made during *The Intertidal Zone*, grouping my reflections into four main areas: enacting dialogue with the ocean through roleplay; surfacing tacit knowing through design; strengthening kinship with the non-human through creative practice; and ways design acted conversationally for lay-design participants and as a spatial configuration of *The Intertidal Zone*.

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77. Words taken from a design work generated by participant Sam during *The Intertidal Zone,* see appendices for a full catalogue of designs.

78. Te Whare Taonga o Waiheke is located in Oneroa, the main village on Waiheke. It is located close to the ferry terminal, meaning that it is frequented by New Zealand and overseas visitors, as well as the local community.
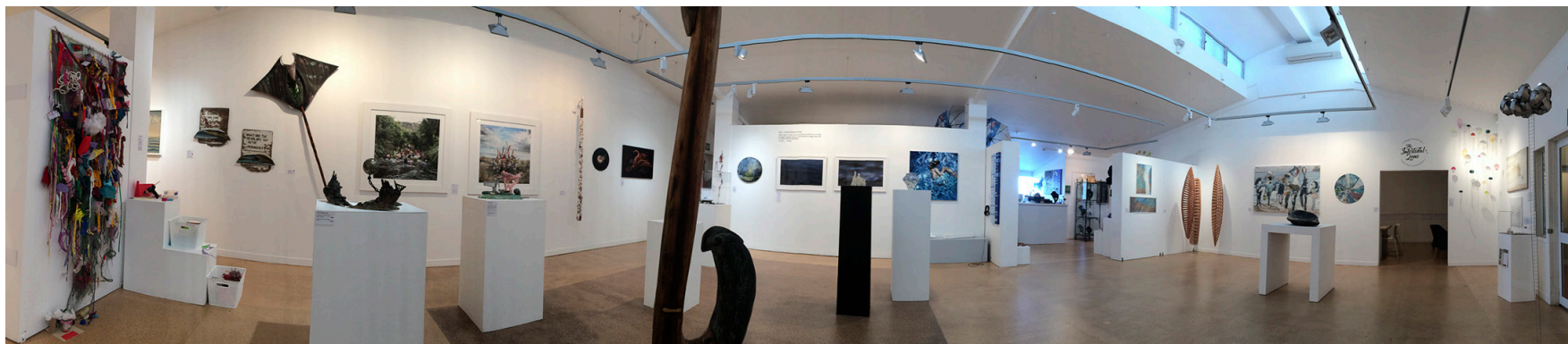
5.1 The intertidal biome and its supporting habitat

The intertidal zone is a section of the seashore that is submerged during high tide and exposed at low tide. It is an area of constant change and fluctuating conditions, home to a biome shaped by movement, exchange, ebb and flow.[79] *The Intertidal Zone* as a site for workshops was similarly shaped by change and exchange, comings and goings, as the participants and I engaged with climate change, specifically through our ontological connection to the sea. The intertidal stands for biodiversity, as well as human encounter with the sea, and signals an ethos of collaborative exchange.

At Te Whare Taonga o Waiheke, sited inside a room called 'the annex', *The Intertidal Zone,* was one of three component parts of the overall *Sea Conversations* event (see far right in figure 77). *Sea Conversations* aimed to address different modes of human-sea relationships through a gallery-curated, contemporary visual arts exhibition; an underwater Virtual Reality (VR) installation, *Ontogeny*; and through *The Intertidal Zone*. The three sections, investigating the nature of our connection to the sea, formed ecological relationships; each part made-with the others, albeit in different creative modalities. Before entering *The Intertidal Zone,* visitors could move through the diverse, sea-themed exhibition

Sea Conversations, which 'primed' them for a dialogue with the sea (Sanders & Stappers, 2013, pp. 51–52). They were also primed in an embodied sense: they were all on an island, many having arrived recently by ferry across the water, a condition that, with any luck, already sensitised them to the ocean.

Sea Conversations and *The Intertidal Zone* both evolved from the ecology of the Waiheke community. In a type of "complex, dynamic, responsive, situated" worlding-with my local community *The Intertidal Zone* was made possible through my insider positionality on Waiheke (Haraway, 2016, p. 58; Greene, 2014). The *Sea Conversations* exhibition and Intertidal participatory space grew out of, and with, each other, made viable by the conditions of my local community, the gallery's standing and my own position within that ecology. The gallery is truly a community space, run with the help of a local volunteer network. With the public library, an adult learning centre, a community-operated cinema and the local theatre space, it forms part of a hub rather than simply displaying artworks. Frequent exhibitions, attended by locals and tourists alike, feature both Waiheke and New Zealand creative practitioners. The gallery is an established, well-utilised local space near other community facilities, a creative space priming visitors for imaginative activities – a fitting place for testing my participatory methods.

79. In the natural sciences, biome refers to the "ecological community type" ("Biome," n.d.). Here, it names the set of conditions generated by The Intertidal Zone.

I had initially approached Waiheke Community Art Gallery director Linda Chalmers with a proposal to collaborate with the gallery by attaching my participatory workshop space to an ecologically-themed exhibition in the future. Instead, Linda and artist liaison Katie Trinket-Legge suggested an entire exhibition based on the concept of talking to the sea. Linda and Katie invited me also to assist with the curatorial concept, and so *Sea Conversations* was born.[80] Early on, Linda proposed the VR installation *Ontogeny* as part of the show, as it deals in similar themes and uses visual experience to connect humans to the sea.[81] The inclusion of *Ontogeny* and *The Intertidal Zone* offered levels of interactivity not seen before at Te Whare Taonga o Waiheke. The gallery became-with *Sea Conversations*, deploying increasingly more technology-based, participatory visual practices.

5.2 Intertidal exchanges: How people participated

As noted above, *The Intertidal Zone* offered different ways of entering into a dialogue with the sea. People could attend scheduled workshops or, as a gallery visitor, they could take part in an impromptu design-session with me. Alternatively, visitors could write down their missive to the sea or dwelling in the space and view other participants' designs or projections on the walls. Thus, the physical space of *The Intertidal Zone* changed over time, as people came and went, leaving different trails behind them. Some marks left behind were physical (design work, writing, drawings) others less tangible (conversations, interactions, creative processes). People often paused to reflect on participants' handwritten notes and design works displayed on the walls, or watched the projected loop of my own animated design works There were chairs and bean bags for those who wished to stay, and two entrances/exits for those who wished to pass through (figure 78). The table in the workshop was a key

object around which visitors gathered. I interacted with people either in impromptu design exchanges (where I invited people directly to participate) or in Sunday workshops (scheduled public design sessions). Each mode of exchange offered different conditions, advantages and challenges, and I outline these next.

Figure 78: Entrance to *The Intertidal Zone*, L. Waldner (2019).
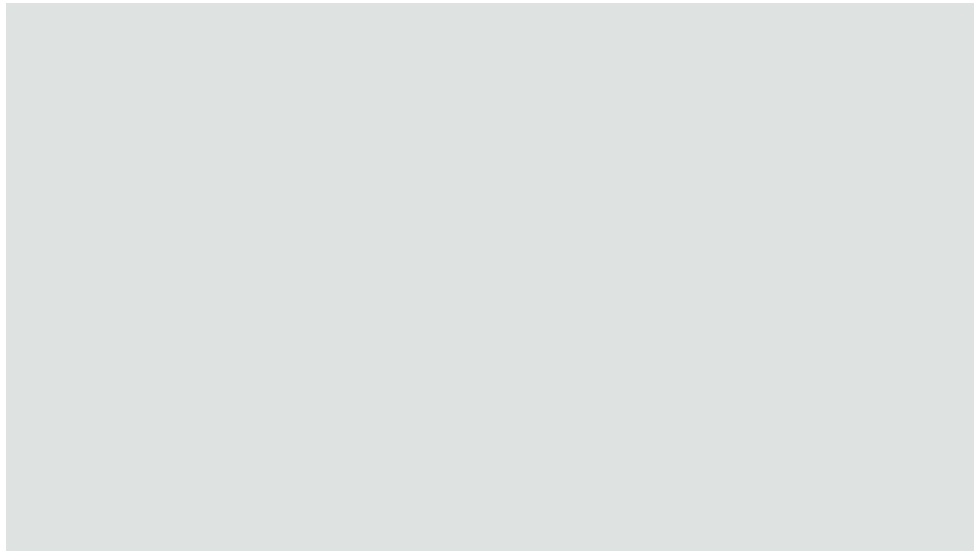
Figure 79: Video of interior of *The Intertidal Zone*, L. Waldner (2019).

Figure 80: Written contribution to *The Intertidal Zone*, (2019).

5.2.1 Projections

A moving-image loop of animated messages (see Chapter Four) was projected on the rear wall of *The Intertidal Zone* at times when I was not physically present in the gallery running design workshops or more informal exchanges (figure 79). During the workshops the projections were switched off to allow the participants to focus on their own design process. The projected loop would visually call people into the space with animated movement and text. Although I designed the looped projections at an earlier phase of the research, rather than collaboratively with others, they belonged as part of the conversation with the visitors' designs, which accumulated on the surrounding walls. The projections are less a mark of my graphic authorship or a model for participants to follow than a way to stand in solidarity with the graphic statements of others. In addition, outside of the workshop inhabitation of *The Intertidal Zone*, visitors could use the paper worksheets to respond to the conditions of exchange that the video projections helped establish.

5.2.2 Inscriptions

As a way of offering participation outside of design workshops, visitors were invited to write down their conversation with the sea on a worksheet. Pens, pencils and paper were available on a work table inside *The Intertidal Zone*, sheets of paper were headed with the question "What would you say to the sea?" (see figure 80). There were two ways this form of write participation usually unfolded: via direct my invitation or as a solitary self-initiated activity. When I asked people if they would like to create a design, many preferred the written option; it appeared to be the safer route ("I'm not creative") or a less time-intensive option ("we are on our way to the ferry"). Interestingly, this activity was most popular when I was not in the gallery: I often returned to find a stack of new responses. I think this was because the task was a familiar and private way of participating: most people are accustomed to writing out their thoughts. Without me there (and with the bonus of anonymity), people likely felt freer to choose

What would you say to the sea?

You look salty

What would you say to the sea?

Forgive us......
We will do better

What would you say to the sea?

What would you say to the sea?

小狗 狗 我是儿子
小猫 大猫 我
我是女儿
我是女儿
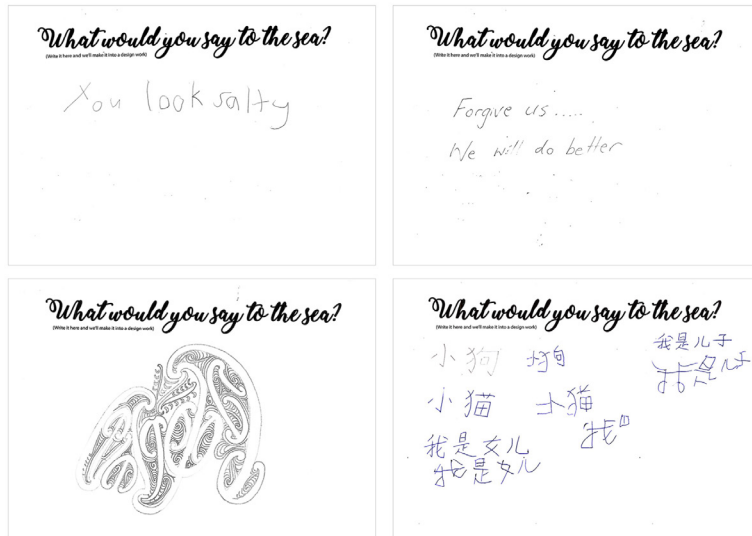
Figure 81: Sample of anonymous written contributions to *The Intertidal Zone*, (2019).

whether to participate. I displayed written responses on walls alongside design works, the space becoming fuller over time. I watched visitors read words of others: many were visibly moved, often writing their own immediately afterwards.

This began as a supplementary method, however participants' written sentiments became a strong current in *The Intertidal Zone*. The variety and number of responses visitors left behind was surprising. Judging by the handwriting, respondents ranged from young children through to the elderly. Some people wrote pages, some just a few words, while others drew pictures or wrote sentiments in their mother tongue (see figure 81). Funny, poetic, angry, despondent: almost every entry was personal and poignant. At first I intended to generate design work using words people inscribed and left. However, later I found that I wished to retain the handwritten qualities of these private conversations, as the marks evoke something of the writer that would be lost when typographically set. The popularity of this task underscores the potency of creative, relational approaches: people had so much to say to the sea, something that I experienced en masse when leading workshops.

5.2.3 A quick dip: Impromptu design interactions

Some of the most illuminating experiences of *The Intertidal Zone*, were the design-based interactions with visitors, that occurred outside of scheduled workshop sessions. These exchanges demonstrated to me that a participant-led approach can engage people in a sea conversation particularly effectively; the attentiveness made possible by working with just one to two people at a time allowed me to be more present to participant experience. By closely observing peoples' design choices, body language and degree of engagement, I could detect the moments when communication design surfaced people's tacit understanding of the sea. Importantly, I watched how this tacit knowledge became more available to participants themselves and their reaction to this process. Without a predetermined structure, I could be more relaxed and responsive, and therefore able to interact in ways less accessible in workshops. In what follows, I outline the general format I employed during such exchanges and describe three selected interactions in more detail to explain defining moments using this process.

Impromptu design interactions began with an invitation: I asked people to show me, through design, what they would say to the sea. I extended this invitation directly to gallery visitors while I was in *The Intertidal Zone* and arranged specific times to work with friends, neighbours and artist contributors to *Sea Conversations*.[82] Sessions followed a loose format that evolved over time. The interpersonal nature of these interactions compelled me to shift away from a teaching model towards a generative support of people's designing. I describe below the format I eventually developed and provide examples of some formative design-exchanges.

At times, conversations with gallery visitors led to improvised design-sessions, the length of which was decided by the participants themselves – anything between 20 minutes and two hours. Working with participants' timeframes, I had to be flexible and go with the pace others worked at; participants began to lead

82. Outside of workshops, I was at *The Intertidal Zone* from 10am to 2pm, Tuesday to Friday.

the sessions. Generally, I began by asking participants to write out their sea conversation. Once people had noted words or drawings, I asked them to identify a mood or feeling they wanted to convey and to consider this when designing. After briefly demonstrating either Canva or Typorama software applications, I provided participants with an iPad and requested they design a social-media graphic based on their notes. I remained nearby to provide support and feedback. Apart from responding to direct requests from participants, one regular intervention was to ask participants to save versions of their work as they moved towards their final design. This served a dual purpose: it created trails of design decision-making, and the examples also served as items through which we could discuss communication design fundamentals.

Flexibility was key to these interactions as was an openness to how people wished to participate: I needed to listen to people's requests and respond accordingly. During my brief session with MJ, a visitor to Waiheke, I learned the advantage of relinquishing control as the participant emerged as expert of her own requirements. MJ asked if she could work in her mother tongue (Korean) since she could express herself better that way. I had not yet considered that participants may wish to work with alphabets other than English, and was unsure how to facilitate this. I wanted MJ to be able to participate in a way that worked for her, so I turned to her, as expert of her own experience, and asked if she knew of a solution. MJ knew how to resolve the issue and showed me how to change keyboard languages on an iPad. Once designing, we discovered that Typorama offered limited font choices in Korean, another hurdle MJ resolved herself by sketching her own typographic arrangements (see figures 82-83). By letting MJ lead, and being open to unanticipated directions, I gained a new tactic to offer future participants and, importantly, understood that visitors may wish to participate in ways I could not foresee. So, rather than expertly direct like an during interactions, I began learning to remain open to what unfolded.
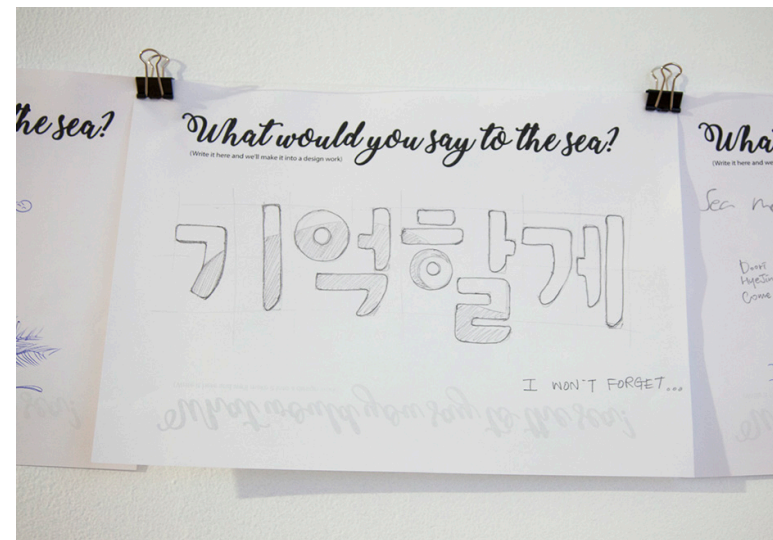
Figure 82: *I won't forget*, MJ's final design work, (2019).
Figure 83: MJ's Hand drawn typography for *I won't forget*, (2019).
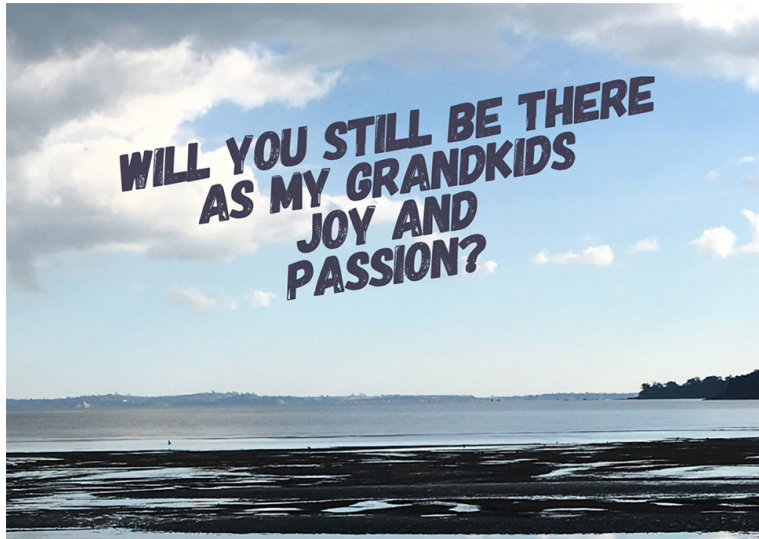
Figure 84: *Will you still..?*, participant design work, (2019).

Figure 85 *You shouldn't...*, Rick's different design iterations, (2019).

As I listened to participants relate stories behind their graphics, I observed tacit knowing surfacing through the telling of personal narrative. Participant's designed object acted as the 'other' through which could collectively discover meaning (Haslem, 2011). Working with married couple Judy and Rick, I observed two distinct approaches to communicating meaning.

Judy concentrated on the exact wording of her content; creating copy concise enough to fit the design format required her to distil the phrases that were central to her meaning. For instance, she emphasised that the word 'still' "needed to stay" as it "connected past and future". This was significant for Judy, who was trying to communicate her sense of an ongoing connection to the same sea she hoped her grandchildren would experience (see figure 84). On the other hand, Rick quickly generated a poetic missive to the sea but then struggled to find suitable typeface and arrangement to express his feelings (figure 85). He explained his final choice to me in this way:

> "This is when you're on the bus and the windows are all steamed up. You turn a corner and suddenly, there is the sea, and this is what you write with your finger on the window."

Both Rick and Judy's differing approaches demonstrated how communication-design activity can connect participants with what they know and feel on a deeper level.

Sanders and Stappers (2013, p. 67) assert a link between visual making processes and the revelation of tacit knowing, and they promote creative activities as ways to disclose the maker's feelings. Visual material generated in such processes is generally used by a designer to inform the development of a system or product. When a designer's sentiment has to be communicable to someone else, parameters of visual communication can concentrate it. I recognise this process of distillation in my own design practice and can therefore comprehend it in participants' processes, too. In this different context, I witnessed how feelings participants could not usually articulate or were not even consciously aware of became visible to them ("I didn't realise I felt that way"). People could measure their meaning against visual elements, typography and photographs ("yes, that looks right" or "no, that image is totally wrong").

Processes of distillation and emergence functioned differently for other participants as they worked to articulate their particular utterances of human/sea relations. Intertidal Zone participant Maria comprehensively demonstrated this process of distillation en route to her final design work. Working together for almost two hours, Maria tirelessly moved towards expressing her understanding of the sea as an entity we should engage with authentically and on equal terms. When stock photos in Typorama did not suffice, we searched the internet for images that would show the sea as a being (see figures 86-87). Maria had a sense of what she wanted to communicate ("she has to have a face") and consistently knew when something did not fit ("it's not quite right"). This eventually led her to a clear articulation of 'Maria's sea'; a submerged woman, looking directly at the viewer and asking them, "What you're doing to me, would you do it to your girl?" (see figure 88). The final type selection mirrors the feminine image in shape and colour, which lends further impact to Maria's words that demand a consideration of the sea as equal to humans.

The flexibility of interpersonal design exchanges made it possible for me to help Maria stay-with her idea of the sea as it emerged. Months after attending a design session, Maria could articulate to me clearly that she needed to personify the sea so that viewers might grasp the ocean as a being worthy of authentic human dialogue. She stated that the processes of generating her design helped her to understand how she felt about the sea. According to Bakhtin, language or languages are characteristically human ways; "of sensing and seeing the world   [...] one of many possible ways to hypothesize meaning" (Bakhtin, 1981, p. 370). In *The Intertidal Zone* dialogue between participants and sea was made possible through a form of visual language that, in turn, offered another possible way of sensing and seeing the world, another way to hypothesise meaning. This was an instance of a participant's self-knowledge rising to the surface through design, as a kind of 'surfacing', and later as part of a journey to self-understanding that I will discuss in further detail below.

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Figure 86: Internet search result featuring 'Mother of the sea' from film *Ponyo* (2008).
Figure 87: Internet search result for submerged woman (2019).
Figure 88: *What you're doing to me*, Maria's final design work, (2019).

5.3 Sunday sailings: Toward participant-led workshops

Scheduled community workshops in *The Intertidal Zone* were a generative counterpoint to interpersonal exchanges with gallery visitors. I hosted four consecutive Sunday afternoon sessions with the intent of testing iterations of workshop structure and content. The Sunday sessions were interspersed by informal design interactions described above and satellite workshops that I will describe further on. As these processes occurred concurrently, I brought together findings from all the participatory sites and implemented changes to iterations of the workshops. Accordingly, Sunday workshops evolved from lesson-like PowerPoint presentations to becoming increasingly participant-driven, with whiteboard-based exchanges and role-playing dialogue. Below I sketch out and evaluate each of the four Sunday workshops chronologically to reveal how they developed iteratively.

5.3.1 Sunday Workshop 1 (14.4.2019)

The first Sunday workshop was a scoping exercise to trial existing workshop structure as a base from which to test a few factors: the gallery as a location, and a different software. I was interested in how *The Intertidal Zone,* its configuration and context inside a gallery, would function as a workshop space and how the gallery, as a tourist destination and community facility, would facilitate recruitment. I also wanted to trial the application Canva, as an alternative to Typorama, in a workshop setting. As previously mentioned in Chapter Four, I had used Canva at Plastic Free Waiheke events in 2018 and noted its additional functionality and template selection. In response to previous participant requests, I was looking for a free software with more design functions than Typorama, that could work across a range of operating systems.[83]

The tide was out for this workshop, participant numbers were low, exposing the limits of the gallery's networks as recruitment avenues. I used the same workshop format as in the *How to*

Talk to an Elephant series described in Chapter Four. Similar to a design lesson; I presented formal aspects of communication design via PowerPoint presentation then I invited participants to generate their designs (see appendices for presentation slides). My presentation had just two points of interaction: at the beginning, when I asked participants to write down what they would say to the sea and, later on, when I invited them to feed back on design examples I presented on screen. The presentation component lasted 30 to 45 minutes and the design stage about 30 minutes, after which we selected design works as a group and out participants' favoured designs to display then take home.

Once we started designing it became apparent that one participant was much less technologically capable (picking up an iPad: "I've never touched one of these before"). Typorama

Figure 89: Participant design iterations for *How will you remember us?*, (2019).

may have been better suited here as it is a more straightforward user experience, with predefined type arrangements. Canva, on the other hand, has an abundance of templates under multiple themes. I observed participants become overwhelmed by the variety, taking a long time to choose the 'right' one. When all design elements were pre-determined (colourway, font, layout, imagery) participants seemed more constrained than in Typorama. Instead of working to get their particular message across, they became more concerned with selecting designs with themes or images of the sea, or creating copy to fill prearranged text boxes. Though all design elements can be altered in Canva, participants appeared to feel as though they had to stick to what was already there. Participants creativity appeared to be more inhibited than when I had observed others, using Typorama. They also required more technological guidance to deal with the different design components. That said, both participants generated works they were visibly proud of and multiple design iterations that we could discuss together.

On reflection, the challenge of a low number of participants could have been resolved by a more causal, intimate approach that would have better suited the situation. However, I lacked confidence to change the structure on the spot. I had yet to gain the experience in being agile that I later gathered working with gallery visitors. I ran with a teacher-led, PowerPoint format in the first phase rather than adopting a conversational mode. Reflecting on this, better preparation for varying participant numbers would have meant I was more flexible and relaxed and open to participant-centred learning. It was also clear I needed to focus on recruitment, as gallery advertising was not sufficient.

5.3.2 Sunday Workshop 2 (21.4.2019)

The second workshop was better attended; a fellow PhD researcher travelled over from town and I recruited others from a market day outside the gallery. My aim for this session was to test capacities of the space and available technology, both of which I found the edges of, with nine participants. Also, I was keen to gain feedback from my PhD colleague Najmah, who also

Figure 90: Participants sharing ipad during Sunday workshop 2, L. Waldner, (2019).

works with creative participatory methods. Five participants spoke English as a second language, so I had to improvise and simplify the presentation on the fly. This revealed that less instruction can still be effective and the model worked across language differences.[84] I retained the base workshop structure and provided a quick lesson in principles of graphic design via PowerPoint presentation, and then invited the participants to begin the design phase in response to the question "What would you say to the sea?"

Technology was shared among participants with two people to each device, each taking turns to create a design (figure 90). As one pair wanted to design something more complex and another was on the desktop computer (Typorama is only available for mobile devices), half of the group worked with Canva and half with Typorama. This was real-time test to see how participants interacted with two different applications, each with their own constraints and advantages as outlined below. For those using Canva the same drawbacks mentioned above arose, with increased complexity and choice acting as a hindrance. Typorama appeared more straightforward and enjoyable for participants to use. As previously mentioned,

84. I did have one participant leave part way through, and I felt this was due to a combination of limited language comprehension and lack of interest.

Typorama is the more basic of the two applications, and requires selection of an image first, then design proportions are chosen and copy is entered. All of this happens before any font templates are encountered. So designing begins with selection of a visual, participants searched for, found, or supplied their own image. This differs from Canva, where participants either scroll through template collections first or begin with a blank artboard to which type, shape, line, and images can be added in any order. Shape and line cannot be added in Typorama; however, it provides the basics for communication design: the ability to combine image and text. The application offers a fair selection of fonts and typographic arrangements. Images and text can be moved, scaled and recoloured. One drawback is that the free version leaves a large watermark on designs that dissatisfied many participants.[85] That said, overall, Typorama is easy to grasp and therefore I had more satisfaction from participants with differing aptitudes.

The feedback from PhD candidate Najmah was helpful, it gave me a steered me towards reducing the amount of 'taught' content in workshops and when working with gallery visitors. Here are her words (sent via Messenger):

> "...maybe less of theoretical teachings, and improve participation process [sic] on your example in the power point...for instance, you give some examples of good and not good media and their words [sic], and let them (audiences) choose, which one is good and why...so I suggest will give more space for participants to participate...and own their journey during your workshop..."

Najmah also suggested offering participants the option of creating more designs outside of the workshop setting which they could then send to me. I had one person do this and have invited the teen photography club to do the same, then upload to a password-protected online location.

5.3.3 Sunday Workshop 3 (28.4.2019)

The third workshop came directly after the *Graphic Design for Kids* satellite workshop where I had tested an entirely new format I had evolved from *The Intertidal Zone* exchanges. The major change I made was to move away from a PowerPoint presentation to work more using a whiteboard to record participants' existing knowledge of graphic design.[86] This was done in a dialogic manner; I asked attendees questions regarding what they already knew about design. Rather than solely delivering information, this interactive, more participant-centred method provided me with an overview of which design areas I needed to build upon and a participatory tone.

The a second significant adjustment, was the implementation of a roleplay activity whereby participants enacted a sea conversation with one another. The task, was one of the first activities and prior to participants working on iPads. Through this activity, I aimed to support participants to conceptualise a human/non-human dialogue through an embodied experience: an enactment of a dialogic exchange (Haslem, 2011; Sanders & Stappers, 2013). During the roleplay, workshop attendees were divided into groups of three: one participant took the role of the sea, another was themselves, and the third person had the task of writing down the dialogue between the sea and individual. This task was developed and tested successfully during the *Graphic Design for Kids* workshop a few days prior. In that instance, the children had been highly engaged in imagining conversations with the sea, I was interested to see how it would unfold with adults (see *Satellite Workshops* to follow).

Although recruitment at first appeared successful this time (six people signed up for the session), only three arrived on this rainy Sunday, including a mother and daughter from Auckland. The configuration of one child and two adults made the delivery of the workshop awkward: I had to find a middle

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85. For this reason, I purchased the pro-version for the two rental iPads and my own iPad Mini. The pro-version also has increased functionality across all areas, including the ability to add multiple text boxes on a design, a function frequently requested in workshops.

86. I used the term graphic design in the workshops as publics seemed more familiar with it than communication design.

ground that would somehow suit both ages. Age difference made the roleplay challenging, but later feedback informed me it was still a helpful process to engage with the idea of talking to the sea. The difficulty was generative as it confronted the challenge of the subject matter of talking about climate change in a social sense. In short, it was good practice.

5.3.4 Sunday Workshop 4 (5.5.2019)

The final Sunday workshop was a chance to test the workshop structure I would present to examiners. I had seven participants, including two teenagers and a nine-year-old. Due to experience gained the previous week working with mixed ages, I was less concerned about age difference. Having multiple young people, closer in age, was helpful in fact; I was able to group them together to work. In this session, I trialled mixing a small amount of PowerPoint with working on the whiteboard. I used six slides to provide examples of how font selection, placement, and scale in conjunction with image choice can affect meaning. I adopted the method of roleplay again and I found it was beneficial to see how the play unfolded; there were enough participants for two groups, resulting in a more playful interaction. Instead, the biggest challenge was the different technological abilities in the room, with three participants requiring significant practical support needing a lot of help.

This workshop demonstrated that images are important to people for expressing their intended meaning. Sylvia, Helen, Heather and Che found it gratifying to work with their own images, telling me this personalised their work and allowed them to express their relation to the sea via specific locations and moments they had been present to (see figure 91). These four worked on their own devices, and were excited to share their new designs with friends and receive quick feedback on social media. Conversely, Adele had a very clear idea of the feeling she wanted to communicate in her image ("suffocating") but had difficulty finding a suitable image that fit her concept. When Typorama's stock images did not suffice we undertook an extensive internet image search. This search process worked to help Adele better understand what she was trying to express: we had to define and redefine keywords to put into the search engine. This also highlighted that technology can be a barrier in design-interactions – frustration almost won out for Adele as she did not have the technical know-how to find what she needed. However, once the right image was located (see figure 92), Adele's design process flowed, re-iterating that participants could often better describe their feelings through images than with words.

Figure 91: Selection of participant designs making use of personal imagery, (2019).

Figure 92: *Help me!*, participant design work, (2019).

5.4 Working with local ecologies: Moving outside the gallery

The Intertidal Zone was a base from where I could connect with ecologies in my community. I collaborated with the Waiheke Community Library to run a children's workshop and worked with existing community groups, including the teen photography club and an adult literacy group. I considered these to be satellite experiments, as they were predominantly run outside of the Zone but tested the same concepts. These workshops were important test spaces; they spurred me to test entirely new session formats and reconfigure a number of methods.

5.4.1 Satellite Workshop 1: Graphic Design for Kids (23.4.2019)

This was my most innovative workshop iteration and led to the development of a number of new methods: preparing material for 9-12-year-olds pressed me to rethink my methods. The session was part of the Waiheke Community Library school holiday programme, which has a reputation for delivering high-quality material. The session needed to be interesting, fun and accessible. It was mistakenly advertised for three hours (rather than the usual two), which further motivated me to develop and implement diverse methods. I had little experience working with this age group so enlisted the help of Lucy Eglington, an artist who runs creativity workshops for children. She helped me to plan a workshop that would suit both the age range and my research requirements.

Collaborating with the library meant participant numbers were assured, the library handled advertising, recruitment and bookings, resulting in a full session with nine participants and more time for planning (see figure 93 for event advertising). Following Lucy's recommendation, we started with a talk about making a space safe for creativity to happen. We established rules regarding how to speak about peoples' ideas and designs whereby we would say positive things or offer feedback when requested. I wanted to avoid boring my young participants with a PowerPoint presentation, so instead we workshopped on a

whiteboard what they knew about graphic design. This method offered the children a chance to share what they knew, which was a great deal, it turned out, and helped establish a rapport with the group. When preparing for this activity I had to distil what I knew about communication design, an exercise in refinement that proved useful for other design interactions. We grouped participant knowledge under What/ Where/ Why/ How, with the final heading leading to the concept of 'ingredients of design'.

After this we moved to an interactive group activity, where I generated a design on a laptop connected to a screen, and the children took turns instructing me on what to change. This was a playful exercise the children visibly enjoyed (much shouting and laughter), which led to a discussion on how colour, image, composition and font choice can create different meanings (see figure 94). Next, children were put in groups of three and given a physical collage activity. Each group had a different sentence, printed in three typefaces in differing scales, along with three different images at three varying sizes. The task was to work together to either reinforce the meaning in the sentence, oppose
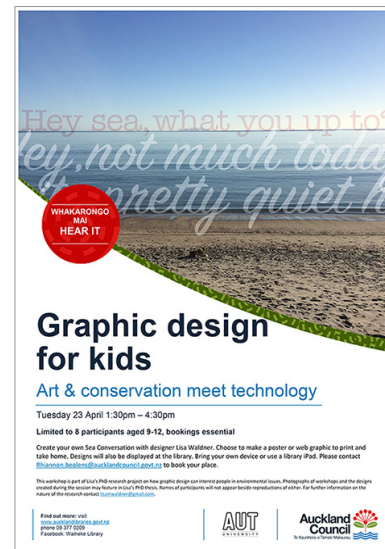
Figure 93: *Graphic Design for Kids* advertising material (2019).
Figure 94: Participants in *Graphic Design for Kids* workshop, L. Waldner, (2019).
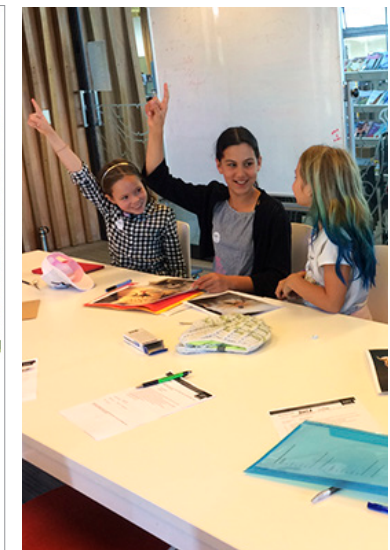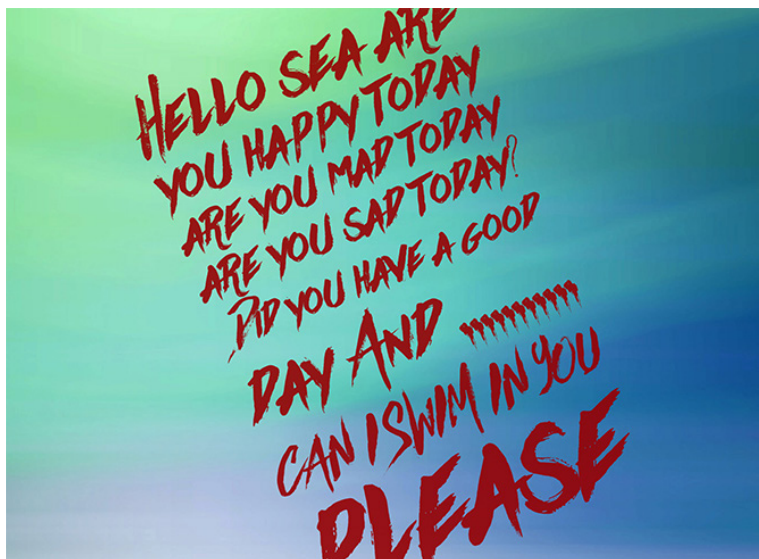
Figure 95: Participant's design work *Hello sea* from *Graphic design for kids* (2019).
Figure 96: Participant's design work *Don't Pollute the sea* from *Graphic design for kids* (2019).

it, or create a new meaning. This exercise fell a little flat; all but one group worked independently of one another, with group dynamics presenting a major challenge. The children were also very vocal about wanting to work on devices rather than collage. However, they appeared to benefit from the activity, producing work they could analyse in terms of how they constructed meaning. To reset the group dynamic, we took a short walk to visit *Sea Conversations*; I allowed the children to bring devices and photograph the artworks, a task many visibly enjoyed. The intention was to have these images available for the next design phase. Returning to the library, we used the whiteboard again to gather peoples' thoughts about the sea, preparing the group for the task of roleplaying a conversation with the sea.

In groups of three, the fledgling lay-designers used worksheets and took turns being themselves, the sea, or a making notes of conversation between the other two. This task was fruitful, even though a predictable amount of silliness ensued ("Do fish pee in you?") most children were highly-engaged and demonstrated a level of ecological concern I had not anticipated ("How do you cope with all the pollution?")

Moving onto the iPads was a highlight for the young participants. Some used material from their roleplay exercise and others developed new concepts. Access to library resources was an advantage; there were extra iPads to work on, with only a few people sharing. The children easily grasped Typorama and quickly developed multiple designs. I was impressed by the design nous of many participants, and noted the satisfaction most attendees conveyed when designing. Once participants selected their favoured design iteration copies were printed out, one for the participant and others for display inside the library and *The Intertidal Zone*. The sentiments expressed in the children's designs ranged from simple to profound, examples of the collective utterings of youth growing up on a damaged planet.

5.4.2 Satellite Workshop 2: Waiheke Teen Photography Club (4.5.2019)

The workshop with the local teen photography club utilised Waiheke's coastal setting as a starting point. We meet on the foreshore of Oneroa Beach, where I gave the brief to photographers: visually respond to the concept of a conversation with the sea. The purpose was to produce images to design with when we returned to the gallery, a ten-minute walk away. However, I also encouraged students to use photography as a method of ideation, I wanted to test how a method I used personally would work for others (see Chapter two). In hindsight, the task of image capture was enough for this group; asking them to visually express a concept was already beyond the standard technical briefs the club usually worked with. Students were given worksheets to record ideas and 30 minutes to photograph. After some initial consternation and confusion, most participants engaged with the brief .

Technical issues arose once we arrived back at the gallery to download images. Club members needed to transfer images from digital cameras to a computer then to an iPad for the design task. I anticipated this would cause a bottleneck, but underestimated the level of support that would be required and the amount of time it would take. The group had a limited amount of time available and many people had to leave before they had managed to download or design. Ultimately, only five of the fifteen participants were able to generate designs, four with their own images (see figure 97). I learned a lot from this session. When trialling substantially new methods, try to limit the number of variables or designate extra time and support for unexpected factors. This session would have functioned better over three to four hours, rather than one and a half, as participants would have had more time to deal with technological issues and ingest concepts. Technology can be a hindrance to creative processes. Here, differing camera models, download software, and technological knowhow caused holdups. When working with unknown factors, I learned that I should plan contingencies and organise extra support and, above all, that preparation is key. Moving between spaces also altered the dynamics, and our transition from beach to gallery would have functioned better if a prearranged arrival task, and relevant support person, had been in place. Working with this large group of teens required more of everything: technology, time, space, preparation and patience. Even though the session had challenges, the methods I was testing have potential. To work with a prearranged, visually literate group at a relevant location offered me rich possibilities for the production of visual content ahead of the design process, conditions I would like to explore in future research projects.

Figure 97: Selection of designs from the teen photography workshop, (2019).

Figure 98: Participants capturing images at Oneroa Beach, Waiheke, L. Waldner (2019).

5.4.3 Satellite Workshop 3: Adult literacy group (17.5.2019)

This final session was held at the Waiheke Adult Learning centre (WAL), directly underneath the gallery, across from the library. I worked with the adult literacy group, an established network of around 14 members who regularly meeting on Friday mornings. The group was well primed to work collaboratively, they had just worked with participatory practitioner Margaret Feeney on an environmental project Water Systems. The session had guaranteed participant numbers, a suitable space to work in, along with inbuilt technology and support. These factors, matched with my increased experience, meant the session flowed well. The group was open and friendly; however, with differing levels of learning difficulties, extra care had to be taken to help people read and understand information sheets regarding the research. Jamie, the group's weekly facilitator, had attended an informal session at the gallery so was familiar with my methods. We discussed beforehand the need for all activities to be presented as entirely optional. The experience I had gained through AUT's rigorous ethics approval system helped me here; I was cognisant of participants' vulnerabilities and worked hard to make sure these were not exploited. I waited until the end of the session to collect consent forms, adding extra time to answer questions. I did not take photographs during the session in case some people did not wish to participate. I also wanted to keep the space feeling safe and relaxed, and recording the session in any way would have interfered with this. Participants may have felt they were being watched or measured.

Though I was working with a larger group I utilised informal methods, to decrease power differentials and reduce the feeling I was teaching a lesson. I worked on a smaller whiteboard and sat down with the group in circle as we workshopped questions about graphic design. The group had insightful answers, suggesting words like 'meaning', 'format', 'advertising', and 'propaganda' (see figure 100 of whiteboard. Jamie considered the sea conversation roleplay too challenging for the group. Instead we worked together and gathered peoples' thoughts about the sea which I then recorded on the whiteboard. This method made

visible what others were thinking and maintained an interactive atmosphere. When we moved on to designing; many participants required hands-on help, ranging from the usual software-related questions through to assistance with spelling or typing words into Typorama. I had Jamie and another helper, Peter, and together we were able to support the group to generate a number of designs each. Using a space participants were familiar with was an advantage here, as people were comfortable waiting. Working with this last group highlighted for me that a relational, creative task combined with design methods can be meaningful for a variety of people with differing literacy aptitudes.
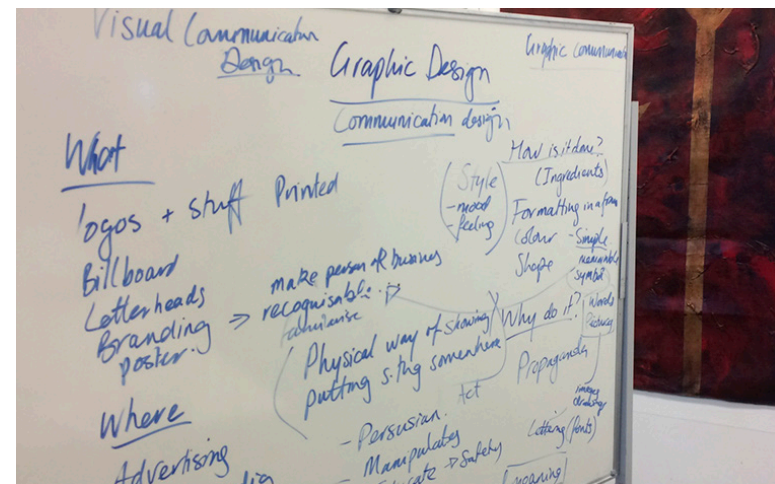
Figure 99: Participant design from Waiheke Adult Learning workshop, L. Waldner (2019).
Figure 100: Whiteboard at Waiheke Adult Learning workshop, L. Waldner (2019).

5.5 Currents, eddies and surfacing: Discoveries made in the intertidal biome

The sea roleplay activity, initially developed as a supplementary method, emerged as beneficial for priming participants for a dialogic encounter with the non-human. Roleplay is a method commonly used in interaction design research to heighten empathy in participants and researchers (see for example Andrianoff & Levine, 2002; Medler & Magerko, 2010; Simsarian, 2003; Svanaes & Seland, 2004). In workshops the activity apparently worked to increase empathy, with many participants asking after the sea's wellbeing. However, of more interest, was the dialogue generated between participants. This can be understood as form of "meaning discovery" made possible through dialogic exchange with the 'other' (Halsem, 2009).

As previously mentioned, the task called on people to take turns 'being the sea', 'being themselves', or observing and recording what was said. Thus, participants experienced each role as well as alternate positions in relation to 'the other': the sea as 'other' (a being to communicate with), the 'person' as other to the sea (a human opening to non-human communication), the outsider 'other' (observer of human/ nonhuman exchange). With reference to Bakhtin's dialogic encounters, Haslem argues:

> Making with the other is of a different order to making without the other, and key to this is the intersubjective nature of that making with the other" (pp. 64-65)

Each 'part' in the roleplay accessed the intersubjective spaces generated through dialogue with 'the other' in different ways, producing a form of collaborative yet personal meaning.[87]

87. Haslem employs his knowledge of communication design practice to define intersubjective as the "generative space of 'give and take' arising from interpersonal interaction. It is a space of communication but never of absolute or perfect communication. Both parties interpret the intersubjective in different ways yet form it together—it belongs to neither party yet is shared by both" (Haslem, 2011, p.13).

The method provided the conditions for new meaning to be uncovered through dialogue, however, 'meaning discovery' was dependant on the level of openness participants brought to the task. Some participants found the exercise challenging, especially when they had a predetermined direction for the conversation in mind, and were therefore unresponsive to the possibility of co-creative exchange. Others found it to be a playful task and enjoyed the improvisation. The children's example below relates a seemingly normal day-to-day conversation that humorously gathers the sea into a domestic environment:

> Participant: "How is your day?"
> Sea: "Very cold and boring."
> Participant: "Oh, that's a shame, come to my house."
> Sea: "As long as you put me in a bowl."

Many used this as an opportunity to ask questions of the sea:

> Sylvia: "May I go swimming today?"
> Sea (Adele): "Not today, my water is filled with jellyfish."
> Sylvia: "Is that because of the moon?"
> Sea (Adele): "No, it's because my water is bombarded by rubbish, only jellyfish can survive."

The roleplay offered a level of embodied practice by orientating participants toward the sea in a conversational context. It supported lay-designer's to imagine what the sea might have to say, an empathetic process that facilitated digestion of relational understandings though dialogue.

A clear advantage to hosting *The Intertidal Zone* in a single location over an extended period was that I could work directly with communities outside of scheduled workshops. These interactions proved formative; I became sensitive to participants' experiences of design processes through my observations and occasional guidance. Even though people could not necessarily verbalise why a design worked, or did not work, when they did arrive at what

fitted with their idea, I could see when things clicked into place. I utilised my experience as a design educator, as a form of situated knowing, to build on these moments, where I would further unpack participant's design choices with them, offering design language to help define their decisions and check if my insights reflected their thinking. For example, a scratchy-looking font might have implied an anger about environmental degradation that the participant wasn't necessarily cognisant of when they started designing. However, if this was the font that intuitively felt 'right' ("it has to be this one") then it became important to value their decision. This demonstrated how lay approaches to communication design could bring a participant's own meaning to the surface. In a sense, their (submerged) meaning was being presented back to them in a visual form.

During these interactions, I watched people use design to move closer to expressing what they wanted to say to the sea. Unstructured interactions made it clear participants required less instruction rather than more. Allowing participants the space to create increased the participatory nature of the process, as they could decide their direction. These sessions allowed me to observe the nuances of peoples' design process. I could see communication-design methods facilitating a form of sympoiesis: participants appeared visibly moved by relating in this way to the ocean. They engaged with, ingested, another way of thinking about their connection to the sea. However, as I traced the trails of people making-with design, I noticed something else: design processes seemed to draw on participants' deeper levels of knowing and make this present to them.

Participants repeatedly expressed surprise when presented with their final design work. The design communicated the meaning they intuitively worked towards expressing, and still participants seemed amazed that they had created the work held in their hands. What they created through image and text was recognisable to others and knowable, yet personal and deliberate, from a place beyond the participant's familiar written or spoken communication. I came to think of this as a 'surfacing'; a rising to the surface of participants' deep sentiments. Sanders and Stappers describe how generative design processes access participants' tacit knowledge, however this is presented as a useful step in a wider design-research process, perhaps to inform the creation of a product or service (2013). I argue such processes can be used as participatory social-change tools, that lay-design methods have potential to make participants' own understanding of an issue present to them. Disconnection from the reality of our ecological crisis is a major obstacle to addressing our predicament. Many people make environmental problems absent to themselves through denial and active indifference; although the science is settled, people are looking away from what they know is there. We need ways of connecting people to this moment of emergency. Making the conditions of the Anthropocene visible through lay-design methods means inviting people to access what they know is going on through their own lenses. Instead of accepting visual decrees of what they should think, people are invited to make-with, to engage in dialogic, conversational, and reflective processes embodied in communication design. Ultimately, people will only connect with the climate crisis if it aligns with their own ways of thinking, so why not work with this?

An informal session with my neighbours revealed the different kinds of connection a less structured approach could create. Even though they lived close to one another, Barbara and Sylvia had not met before, and they connected over the idea of a sea conversation, sharing very personal thoughts as we worked. Without a schedule, participants were free to write about and discuss ideas in depth. Both women's responses reflected a deep kinship and connection to the sea. Barbara had lived at sea for 14 years and understood the sea as both family and mentor. Sylvia developed a private conversation with the sea while walking on the beach, she spoke to the sea as a convalescing friend. While Barbara made many different designs, she seemed to gain the most out of writing her conversation.

Sylvia, on the other hand, had a very complex idea of a two-way conversation that we were unable to achieve in the poster format she had selected. While there were varying levels of 'success' in terms of design-objects produced, both women emotionally and conceptually engaged with the relational concept and expressed satisfaction at the end of the session. Sylvia and I will continue to realise her sea conversation, but in an animated format; she will direct and I will design. Connections were created here (conceptual, interpersonal, creative), facilitated by a relational creative task, and my relational outlook helped me to comprehend this process as 'successful' as my participants were both moved by and connected with the sea and with each other. To revisit Halsem, the process of designing artefacts created a space for dialogue with the 'other', a space to consider kinship with non-human nature (2011).

As suggested earlier, design is can be understood as a conversational method of exchange between designer and concept, and during *The Intertidal Zone* I observed that this holds true for lay-designers too. Siting *The Intertidal Zone* inside Te Whare Taonga o Waiheke generated a spatial conversation between my participatory area and the surroundings. My projections, posters from Wellington Media Collective, High Water prints, the accumulation of participants' design work, and the wider *Sea Conversations* exhibition all conversed with each other to prime participants' collective interactions in the workshops. Conversation was deliberately invited in *The Intertidal Zone* processes: I began by asking people to write down their conversation with the sea, and we then discussed this in a conversation, before participants started working dialogically to visually communicate their idea.[88] Encouraging people to converse with the sea, to relate to the sea in a personal way, provided imaginative spaces for ideation and reflection on this notion; visitors imagined the ocean as a family member ("It's like my brother"), a sick friend ("How would you talk to someone who is dying?"), someone who was experiencing psychosis ("it's

88. Ings (2011) and Sinfield (2016) assert the dialogic nature of communication-design processes – a designer moves back and forth in conversation with their work as they move towards a final resolution.

Figure 101: *I'm hurting*, participant design work (2019).
Figure 102: *Do mermaids live in you?* participant design work (2019).

like he can't control himself either", see figure 101). Some asked questions of the sea (figure 102) others noted an interdependence or one-ness ("our salt is the same, we are not separate"). Conversational two-way dialogue with the sea emerged when participants imagined and then expressed the sea's point of view in their designs.

During smaller sessions, where I could also become part of the conversation, enabled a more intimate dialogic approach. I observed in the *Graphic Design for Kids* workshop that children seemed more curious, posing questions to the sea rather than solely formulating statements. I found that by framing a lay-communication design process as a conversation, for instance between lay-designers and artefacts, or designer-facilitators/participants / and design artefacts, I could apprehend the potentially generative conditions of exchange that arose through community design interactions.

5.6 Intertidal contemplation

The Intertidal Zone was a community-based space, where I worked with a variety of people, testing iterations of my relational design processes in quick succession. Over the six weeks the space was open, I worked with gallery visitors, local artists, invited community members, and varied workshop groups, inside and outside of the gallery. Visitors engaged in conversations about what the sea means to them verbally, through design and by writing their thoughts down. Accordingly, visitors participated in the ebb and flow of *The Intertidal Zone* and shaped the space by adding their perspectives. Designs and written contributions filled the walls in changing configurations; eddies left for others to consider.

Through my role in hosting *The Intertidal Zone*, I explored ways lay-design can function as a form of sympoiesis; a process of making-with. Looking at this from different angles, I first considered how communication design helps people to make-with, and digest, the speculative notion of a human/non-human dialogue. Participants designed their dialogues with the sea, expressing rage, generating utterances of kinship and regret, they made-with design and connected with their feelings about the ocean. By reimagining their relationship with the sea, people more than made-with design, they used it to evolve-with. *The Intertidal Zone* also tested how communication design can facilitate making-with others in collaborative or participatory

configurations where a designer is more enabler than author. Through my experiences in *The Intertidal Zone* I came to understand lay-design as capable of rendering people sensitive to their own deep feelings about the Anthropocene. It made participants' tacit knowing visible to them.

The evolution of the *Sea Conversations* exhibition at the Waiheke gallery and within it *The Intertidal Zone*, demonstrated other kinds of sympoiesis. Both the gallery and my project evolved-with one another and rendered one another possible. *Sea Conversations* emerged from *The Intertidal Zone* concept, while the staging of this exhibition of artworks and the virtual reality experience made my design test-site viable over a long duration of community engagement. Artists from the show attended workshops ("I didn't think I could do something like this")[89] and gave me feedback on the space ("This is really important, what you're doing here").[90] I made-with my community context and in doing so facilitated fresh ways of considering the gallery space as an interactive and political space where design is a relevant contributor. Ultimately *Sea Conversations* and *The Intertidal Zone* offered ways of imagining relationships with other-than-human, as Tsing et al. remind us: "Slowing down to listen to the world – empirically and imaginatively at the same time – seems our only hope in a moment of urgency and crisis" (2017, p. M8).

89. These are the words of ceramic artist Caro Becroft after attending an informal design session in *The Intertidal Zone*.

90. A comment made to me in a conversation with sculptor Anton Forde.

Chapter. 6

Chapter 6.
Imagining the world differently

"You are me and I am you" Sylvia, Intertidal Zone visitor.

This thesis set out to uncover the way communication design might encourage relational and ecological understandings in the troubled conditions of the Anthropocene. To do so, I constructed a relational, design-based methodology with an ecological, creative premise that celebrated, yet also unsettled, our engagement with climate change from a situated, island context. I deployed a twofold design inquiry: one, my independent practice where I generated kinetic-typography animations for public distribution and, two, a generative participatory practice whereby I enabled my local community to design their own messages to the sea. Thus, over the course of this research I moved from outcome-oriented design, making design for the community, to process-oriented, participatory ways of making-with my community.

I approached my research question using design inquiry, initially through the process of designing communications; I researched through design (Downton, 2003). I operated as a situated insider, as a mother and resident of a small island at the edge of the world, I generated animated typographic works about the sea and climate change. I used these factors to access strong emotions about the climate emergency, channelling into my work the first-hand experience of complex feelings of guilt, despair and grief. I have shown how such experiments helped me understand how designs worked at scale on architecture and at the intimate scale of social media, and how they 'talked to' each of these environments. In the first phase of the thesis I tested work online, using the social-media networks available to me through High Water, a climate initiative I helped to run. Later, I began to develop participatory workshops and to orientate my practice toward speculative environmental questions. I reflected through design to try and grasp how others may be digesting ecological crises, then shifted into a mode of enabling others to share

their fears and hopes through collective conceptual and applied design tools. I found that, by studying my own design practice, I better understood the conditions inherent to communication design and those available to lay-communication designers.

When generating visual materials, I examined my practice and outcomes through a relational design-things lens, where the process was as important as the final designs. Accordingly, I turned my attention towards the processes and interactions between the constituents of my design assemblages, specifically the modes and conditions I encountered when designing. I paid close attention to the exchange between the modes and conditions of design as I experienced them: ideation, iteration, reflection, emergence and distillation, attending to the ways imagination and emotion supported each modality. I came to understand communication-design practice as more than a series of phases, as a kinetic exchange between modes that moves a designer towards articulating an idea. I comprehended the potential of these modes, and the exchanges between them, as ways of metabolising the enormity of climate change.

Through ideation, I imagined different ways of relating to the world: what does it look and feel like when we treat other-than-humans as kin? In reflective exchanges, I intuited and reflected on what such imaginings might mean; as a practice of staying-with and digesting the Anthropocene. I developed iterations, visual responses I could use to check back in with myself again, through reflection, considering: did this fit how I felt about non-human nature? As designs emerged, I remained in conversation with the work, working dialogically to articulate my relation to climate change and staying-with the discomfort of my feelings. The conjunction with parameters of communicability distilled my feelings and thoughts about the sea and climate change sufficiently to render visible my submerged understanding of them (Sanders & Stappers, 2013). As a next step, I wanted to know whether design modes would operate similarly for others, specifically for lay-designers: could these same conditions enable other people to address present ecological entanglements and to speculate on alternative futures?

Throughout the project, my independent design experiments continued alongside community-orientated events. I combined kinetic-typography with live-action footage to generate visual-hybrid animations for public projection on venues like the Waiheke Library canopy and Matiatia Wharf. The processes of designing these exploratory works were valuable in generating the primary creative theme for the thesis: a conversation with the sea. I applied Latourian concepts of a non-human democracy to my island setting and visualised concerns about present and future prospects of a rapidly warming world. However, the public projection tests of my animated design works generated less interaction with my community than I had hoped. Passers-by received the work as a fleeting piece of design, and I had little idea whether the work made any meaningful impact. Much like considering the parameters of a design brief, this made me consider resources available to me in my island community, and subsequently shift focus to facilitating community design workshops. Through increasingly interactive methods, I tested notions of a dialogue with the sea, beginning with a request for content via text messages to friends and finishing with a series of open design workshops.

In 2017, I designed and deployed three workshops, titled *How to Talk to an Elephant*, at the Waiheke Sustainability Centre and the Waiheke Community Library. Testing the potential of participatory design workshops, I discovered public enthusiasm to learn communication-design skills. In response, I invited people to converse with a non-human entity and asked them: If you could talk to the sea, what would you say? Participants used partially automated software and designed multiple social-media graphics on iPads and smartphones. Employing communication design as a generative "maketool" (Sanders & Stappers, 2013, p. 70), participants would show me what their dialogue with the sea would look like, so that we could get to the heart of their concerns about our compromised planet, presented through their own lenses; utterances from an ecological tipping point (Bakhtin, 1981). Talking to the sea, they were grateful ("thanks for the good times", see figure 103), apologetic ("I'm sorry")

Figure 103: *Thanks for the good times!*, participant design work, (2017).

Figure 104: *What comes next?*, participant design work, (2017).

and curious ("what comes next?", see figure 104). Significantly, many imagined how the sea might respond ("I'm not a toilet"). I witnessed design processes enabling people to make-with environmental issues and digest the concept of a human/non-human dialogue. Throughout this thesis, I have appropriated Haraway's term sympoiesis from molecular biology to describe the dynamic and responsive worlding-with in which entities ingest and metabolise one another to evolve collectively into something new (2016, p. 58). Following this metaphor, I found that the ecology of my community was a site where I could sympoietically make-with compatible local events.

Subsequently, I looked for opportunistic alignments with local organisations, including design-based collaborations with Plastic Free Waiheke, through which I co-facilitated a visioning process and hosted a participatory design stall. Engaging with like-minded organisations mitigated the challenge of workshop recruitment and provided further testing grounds for my methods. Again, I witnessed how communication design can help people visualise complex, emergent ideas. For example, participants in the visioning workshop used the design of a magazine cover to help them imagine a future Waiheke without plastic. Working in groups, members were nevertheless able to design different iterations of ideas to explore conflicting concepts. Applying a relational outlook to people's interaction through, and with, communication design I saw visual communication assist people to articulate what they had trouble expressing in words – this generative method allowed the surfacing of latent knowledge. Importantly, the process of design transpired as more vital than the designed outcomes; it gathered people around plastic, as a Latourian "matter of concern" (Björgvinsson et al., 2012, p. 103).

6.1 What would *you* say to the sea?

These observations, together with the questions raised by participatory and self-directed design experiments, culminated in *The Intertidal Zone*, a participatory design space at the Waiheke Community Art Gallery – Te Whare Taonga o Waiheke. This community space, close to the main village centre and the island's passenger ferry terminal, is well patronised by locals and visitors alike. Working in the gallery over a six-week period, I tested differing configurations of participatory interactions, ranging from small informal design-exchanges to pre-arranged workshops on Sunday afternoons, and work with local interest groups.[91] During *The Intertidal Zone*, I found a vibrant affective atmosphere was generated by the people invited to visually communicate their conversation with the sea as a social-media

91.   Over six weeks, I hosted seven public design workshops, four inside *The Intertidal Zone,* and three satellite sessions with local interest groups outside the space, including the Waiheke Teen Photography Club, a school-holiday workshop for kids (9-12-year-olds) at Waiheke Community Library, and with the adult literacy group at Waiheke Adult Learning.

graphic designed on a smart device, or to write responses to the question to post on the wall. Imagery and words resulting from their designs accumulated on the walls (figure 105). As I had hoped, the Intertidal space thus changed and evolved over time, as it filled and emptied of visitors, leaving trails of design works and words written to (and from) the sea. Thinking back, it became more than merely a space to display ongoing participant design-work and a selection of my own animations; it evolved into a place to reimagine human/non-human entanglements. By asking my community what they would like to say to the sea, I found that many Waiheke Islanders and island visitors began to reconsider their relationship with this non-human entity so sensitive to climatic change.

Moving back and forth between fixed workshop structures and responsive gallery-based design exchanges, I developed and honed my methods through iterative versions, each session and interaction informing the next. Accordingly, I moved from a designer-led lesson format to participant-driven approaches that included collaborative whiteboard discussions and roleplay. During roleplay, participants took turns either 'being the sea' or 'being themselves' talking to the sea. This embodied enactment of our current ecological situation emerged as a core method to foster imagination within a dialogic exchange and bring forth feelings ranging from discomfort to humour (Haslem, 2011).

Figure 105: Visitors hanging designs in *The Intertidal Zone*, L. Waldner (2019).
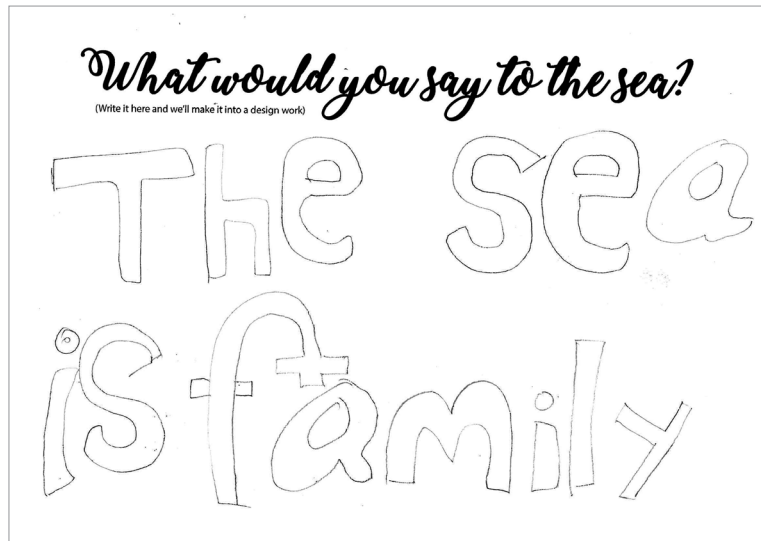
Figure 106: *The sea is family*, anonymous written contributions to *The Intertidal Zone*, (2019).

The more relaxed design-interactions with gallery visitors, while I hosted *The Intertidal Zone*, turned out to be a generative counterpoint to structured workshops. Such exchanges accelerated my research as they gave me a chance to closely observe people's experience of creating communication design on iPads. I realised that communication-design processes made participants' tacit knowledge visible to them and brought to the surface their own relationship to the sea, while they digested the relational concept of a sea conversation. However, I had not expected how much it would impact the participants when they saw their own tacit understanding of the sea visibly laid out in front of them ("I didn't know I felt that way"). Neither did I anticipate how deeply the creative relational concept of a conversation with the sea would resonate with visitors. This manifested in the number of written contributions left by visitors in response to the concept: close to 100 *Intertidal* visitors generated hand-written responses; they took up the call to speak with the sea. Grief, poetry, gratitude and kinship intermingled in these contributions. I sensed a longing to connect, a desire for dialogue with and about the environment; people wanted to talk to the sea – after all, "the sea is family" (see figure 106).

Throughout the thesis project, I documented my experiences designing via written reflections, photographic and video-based processes, thus collating the trails and connections between the different actors and my own design tests. I looked for elements that would reveal the capacity of communication design-things and the relevance of a relational creative approach to strengthen socio-ecological bonds.

6.2 How communication design metabolises design-things

In this thesis, I have foregrounded design-things, returning to the origins of the word, 'thing' as an assembly to address matters of concern (Atelier, 2011, p. 7). As we gather to face environmental crises, we require methods that richly communicate our deepest thoughts to one another (figure 107). We also need ways to empathise with the non-humans among us, so that we can converse with them, and find ways to represent the other-than-human in design assemblies that work to generate future worlds.

A significant outcome of this research has been the articulation of a connection between the relational notion of design-things (as opposed to the formerly stable design artefact) and the wider field of communication design. In relational, participatory settings, the vital capacity of communication design lies in the

Figure 107: *How I long to know your deepest depths*, participant design work, (2019).

words that describe the practice: visual communication wherein visual design processes leave visible trails to be explored. Communication design leaves visual trails to follow, and design iterations reveal choices towards (or away from) particular ideas. The selection of images, typeface, font colour, filters, as well as the arrangement of elements, all reveal something about the meaning a designer (lay or professional) is moving towards articulating, and their traces describe the movement towards explicating an idea. Design choices can be traced as a form meaning discovery, the process of materialising the designed object working to refine a practitioners knowledge of the matter at hand (Haslem, 2011). Ecological conversations are often suppressed in everyday life, yet in following the design trails inherent to communication design as a field, insights into my own and the participants' thoughts and feelings about climate futures has emerged. The richness of the visual as a communication tool is significant; some things cannot be put into words.

In an instance of a trail that relates the enabling quality of community events, participants from the *How to Talk to an Elephant* have told me how they went on to use design skills gained in workshops to promote their own local, sustainable business ventures. For example, Kristen Busher in her social media graphics for the Waiheke Resources Trust, Anna Dawson in the promotion of her business Plastic Free Pantry, Prashanti Lovegrove in her advertising for her weaving workshops and waste reduction initiatives, and Kirsten Simmons in her marketing for Talking Tree Hill, a children's outdoor education facility.

Communicability and imagination emerged as important design conditions for the participating lay-designers. While communicability was a parameter to distil participants' meaning, it was also a target, a measure of whether a design was 'finished' that signalled the end point of the trail. Imagination was key – through design people started imagining their relationship to the sea, and how it might be experienced differently. In the final version of the workshops, the design process combined

Figure 108: *We are not separate*, participant design work, (2019).

imaginative roleplay with consumer software design applications. During the development of my workshop model, over 80 people participated in 10 different workshop iterations, from a range of ages, from children to adults, tourists to activists, with a predominance of women in the age range 25 to 55 (although I did not ask for personal information, my observations suggest this demographic). The project took literally the notion of assembling communities to address matters of concern (Atelier, 2011, p. 6). I gathered people by inviting them to participate in a visual eco-political dialogue through their own lens. People responded with contributions to a sustained visual conversation, which extended well beyond the time and space of the workshops. Communication design helped people become attentive to their connection to the sea and consider what is happening to this vital non-human entity (Tsing et al., 2017, p. M7). Thus, people not only entered into conversation with the sea, but also with themselves.

A significant aspect of the workshops was how the different participants digested new ways of relating to the sea. People brought their sea with them and communicated it to others: they presented their experiences, memories, kinship feelings, grief, gratitude, despair, and celebration through images, words, fonts, filters, and composition. Semi-automated, consumer-level software was tested, with a final selection made for ease of use and ongoing participant accessibility. An expansion of the design-things framework took place and design functioned as a relational process, in and of itself, to engage people with a topic – no longer was it simply a process for developing design outcomes, such as a platform or service.[92] In the process, I shifted the notion of designing-with, from a description of how we work together with communities to meet their needs, to a question of how communities use design as a method to design-with themselves. Over the course of the thesis, my research moved from outcome-oriented design practices to process-oriented, participatory design research. This movement was facilitated by my situated knowledge as a designer and insider position as a community member (Greene, 2014; Haraway, 1988). I would not have been able to grasp the participants' experience if I had not wrestled creatively with similar themes myself.

This methodology was not without limitations. If we see design things as open and porous, then how can we take account of every connection and interaction in a design process? Considering the interactions or trails between constituent parts of *The Intertidal Zone* assemblage, including participants and their worlds, technology, the space, physical outcomes, auxiliary interactions with the gallery and myself as host and enabler, the thesis could have expanded ad infinitum.

The consideration of my situated position offered important parameters that apply also to the urgent needs to work within the limits of our ecological resources – yet I also had to be cognisant of the global inequities concerning access to contemporary design tools. While my feminist-orientated, situated approach provided me with rich emotions to draw on for my own design

92. For more on the applications of design-things, see Atelier (2011).

work, and subsequently to understand the complexity of others in the face of "climate mutation" (Latour, 2018, n.p.) this approach also risks being too centred on one individual (in this instance, a comparatively well-resourced Pākehā woman from a stable and wealthy developed nation). Since access to resources and equipment, including iPads and projectors, and the presence of a trained designer may not always be viable in less resourced locations, the findings of this workshop model may not be easily transferable there. The software used in *The Intertidal Zone* also has the limitations of templates, and fewer options for customisation than some open-source applications. Nevertheless, the conceptual framework for the workshop is transferable and could easily work with pens, paper, and print-outs of imagery.

6.3 The dynamic and potential of groups

This thesis offers insights into working and evolving with lay-designers for communication designers who are interested in participatory processes. An enthusiasm to learn communication design techniques often brought participants to the workshops. They then found that collective practice can enable dialogic exchange, with self and others, about complex issues like climate change (Bakhtin, 1981, 1986; Haslem, 2011). The energy of the group sessions generated a convivial environment, and people interacted and related their thoughts to others before, during and after design processes. There was a buzz, particularly when participant numbers reached four or more, often expressed through laughter but also through conversation and sharing. People appeared interested to see and hear about what others had come up with. Although there were technological constraints with software templates, these very constraints also allowed the lay-designers to get a sense of success quite quickly. To initiate participant design processes, whiteboard discussions were more effective than PowerPoint presentation and acted to gather and assess participants' existing knowledge. The role-played conversation with the sea, with a set of constraints, created an embodied connection with the thinking-writing-designing

process. Role reversals (as in switching between 'me' and 'the sea') appeared to condition participants into an empathetic, and politicised mode. While working with groups, I got the sense that participants felt they were part of something bigger, contributing to a larger picture and facing difficult ecological questions together. This feeling may arise from working alongside others, as Tony Fry suggests, for our futures depend on engaging collectively around shared concerns for the collective good (2010, p. 8).

There is potential here for community strengthening for the important work of facing the yet-to-come – but also the will to share has been found by others to hold a capacity to allay psychological impacts of the climate crisis. Contributing to climate action is a recognised way to alleviate the anxiety of living in anthropogenic times (Stoknes, 2015). My observations of participants appear to bear out this sense of psychological relief, even if it is for the short period of the workshop. Some interactions long after the event (for example from participant Maria, see Chapter Five) also suggest that for some the experience had a durable effect. Participants made-with design, they also made-with (and evolved-with) themselves and a non-human other, they designed-with themselves and others. These sympoietic processes were made possible by using design activity to pose a relational question centred on the sea, an entity many of us relate to. This type of creative participation holds value for people beyond learning design skills; participants have an opportunity to become present to a non-human other, in terms that are meaningful for them as they guide their own process. This is a way of sensitising people to the conditions of the Anthropocene, to matters of human connection and dependence upon our non-human kin. In such critical times, we must find new ways to work co-operatively.

Group interactions also have the potential for wider impact; in groups there are more possibilities for participants to interact, more chances to be exposed to the thoughts of others. A lay-

designer may feel emboldened by meeting others with similar ideas, and several participants mentioned that they would pass on their new-found design skills to friends or family members. More people can be reached in workshops, in ways that are relatable to participants as they are learning with and from others. At their best, workshops provided a space for participants to share their feelings about the Anthropocene with others, rather than me, a designer, telling people what to think.

The larger workshops facilitated collection of considerable designed materials, as there were simply more people in the room doing the activity, interacting and producing more designs. However, to effectively capture all of this required more skilled people noticing and gathering relevant observational data, as the designs alone are not the sole focus; interactions with technology, between participant and different steps of creative task, participant-to-participant, participants' reaction to the space and so on, are also important. If I could work in a small research team in future this would mitigate the difficulty of acting as both 'host' and 'observer', yet there were advantages of my high level of investment in both the political outcomes and sociality of the workshops. There were also drawbacks in the workload involved in creating and running workshops. Factors to consider for future researchers are the time involved in the preparation of materials, organising a space and relevant technology, recruitment, facilitation, observation, and documentation, not to mention analysis of findings.[93] This is a lot of work for one researcher, whereas a small team could share this these tasks. However, I found a richness that came to the analysis stage that would differ if the designer/researchers were not involved in delivery and observation; being present heightens the opportunity of apprehending unexpected findings. On the other hand, the perspectives of other designer/researchers may lead to observations/findings of a different kind. In the future I would like to build on this model to work with others.

93. This would differ if workshops were environmental activist events rather than research.

6.4 The flow and intimacy of working with smaller numbers

On a personal level, I found the more intimate design interactions provided some of the most illuminating points of the research. Through these interactions, I had a more attuned sense participants' experience of design methods and how to relax into letting a participant lead. Relieved of performance nerves and the 'participant expectation' of group work, I felt a lightness when working with smaller, informal groups. Prior to hosting *The Intertidal Zone*, I saw workshops as a formal exchange; where in return for people's participation I should deliver 'Design 101' in a lesson-like format. Interacting with smaller groups, I came to trust my abilities as an educator, that participants would learn design skills through our discussion of their work; a more relaxed approach that went on to inform workshop models. Close proximity to participants provided a level of observation not possible in a group setting. This, combined with the more relaxed structure meant it was easier to try new ideas based on my perception of what would work for people. I enjoyed this flexibility; I could gauge which direction to take the interaction and adjust methods based on how things were unfolding. As design-facilitator, my responses to participants increasingly integrated modes of ideation, iteration and reflection. Staying with participants as they worked, I was available to provide assistance and encouragement, when people got stuck with technology or could not find a suitable image, I was there to support them then let them get back to the task. I could also notice body language or frustration that might be missed when working with a group. I watched closely as people's tacit understanding of the sea become present to them. I saw submerged knowledge surface by watching the expression on people's faces and their body language when they felt a design was "just right". The level of noticing made possible in these interactions was important.

6.5 Raising questions through design

Communication design emerged as a form of dialogue and often raised more questions than it answered. Akin to a conversation, communication design practice is a process of call and response, enacted through reflective movements between ideation and iteration. When people visually communicated their thoughts to others, they imaginatively engaged in human/non-human conversations, and importantly they entered a dialogue with themselves, by considering what would this look like for them? This project made use of those internal processes to get people in touch with how they are feeling about the environmental crisis. Participants often looked to me with queries like "Where to after this workshop?" Design conditions had generated an orientation that requested a consideration of what "here" means. What is happening right now to our biosphere? This means being present to the current climate emergency, this is a state of mind that stays-with the discomfort, stays-with the grief and the beauty and our ongoing capacity for life and play. This, in turn, raises questions as to who has the 'right' to do design for communities facing socio-political issues. This is a matter not of who the designer is or should be in terms of taste or style, but of placing people at the centre of their own learning and experience: enabling them through communication design.

As with all projects of this scale, questions emerged that I did not have either time or resources to address. The first considers how relational frames could be applied to many kinds of communication-design events, where designers evolve-with diverse communities. For example, how can we use the interactions involved in establishing lay-design workshops, or other 'design-things,' to further our understandings of how to face other kinds of complex political matters? What do peripheral interactions in a design process reveal about a particular community ecology and how could revelations be used to inform subsequent activist design-led events?. Further, how can design events cross-pollinate with other creative areas of the community to deepen our connections? This is an expansive view on the agency of design as a socio-ecological practice that could use visual-communication practices to facilitate and express connections generated in and around design-things. This all leads to a question of how the model presented here could be deepened and/or expanded for delivery in other areas, such as the sciences or humanities. This was a

speculative project; however, I remained curious as to how researchers might measure shifts in participant thinking about issues they worked with. Beyond basic surveys, I wonder, what tools could be developed to build upon observational data, to garner further insight into participant experience of designing, and any subsequent changes to their attitudes toward the topic they dealt with? This is an area I hope to collaborate with others on in the future.

This project is about making our connection to earth systems present. However, interdependence and culpability can be an uncomfortable mix. How do we hold both notions without falling into despair? Participating in relational creative practices, people experienced, and explored, human/non-human interconnection, and the resulting complex emotions that arose. Staying-with these feelings, not looking away to the past or the yet-to-come, is to be present to our ecological moment, as Haraway suggests. This is a resistance to climate denial and indifference. To face into our grief, our discomfort, our gratitude is to use our humanity to evolve. In order digest these questions we can, at the least, make a point of connection with ourselves and others (human and otherwise), where we conceptualise human and non-human "ongoingness" (Haraway, 2016, p. 3).

6.6 Emergent Directions: Looking forward and outwards

My work suggests ways to embrace popular lay-design practices and harness these towards eco-political ends. I would like to continue the practical applications of this both inside and outside of the academy, as I feel these methods have real potential to facilitate change. I aim to explore ways my methods might function as a pedagogical tool and look forward to accepting invitations that have been made to lead workshops in schools in Tauranga and Auckland. I have also been asked to continue leading design workshops in my own community, a request I hope to combine with advancing local projects such as Plastic Free Waiheke. I will also be contributing to the film project All about the water by local company ember::vision, which

seeks to consider our inseparable relationship to water via cinematic media. At the time of writing, as a direct outcome of a community member visiting *The Intertidal Zone*, I have been invited to contribute to the Waiheke Collective Marine Group, who are planning an extensive six-month community-led process to work towards protection of the Hauraki Gulf. The group are working with the question "What does the blue mean to you?" and are interested to learn what I garnered during my research about peoples' feelings towards the sea.

In addition, I intend to apply for the Tīkapa Moana/Hauraki Gulf Oceans Lab initiative, which aims to collectively address the health of the waters near to Auckland and surrounding the gulf islands, including Waiheke (Spirit Lab, 2019). Beginning in late October 2019, the Oceans Lab would be an opportunity to apply the skills and creative knowledge gained during the thesis through a social-lab model that, too, recognises knowledge as embodied. These directions indubitably offer rich material for academic publications. However, I also want to explore other avenues for distributing these methods, so they may be of use to other community-based activisms. This is where I see design-based methods being most useful: when engaging and connecting people.

This was a 'live' test of communication design as a participatory practice where lay-design was proposed as a re-directive practice towards reformulating human attitudes to non-human nature. Imagination, reflection, emergence are proposed as dynamic modes for emotionally connecting with Anthropogenic conditions of multispecies entanglement. I am also interested in how to archive the designs produced by others so they will be accessible to future researchers. While I did not have the capacity to create an online archive of design outcomes from this project, I would urge other researchers to ensure design-based findings and material are made accessible to others.[94]

94. The ethics permission granted by AUTEC for this thesis (16/271) did not cover distribution of participants' design work to online locations. In my application, I determined that lay-designers retain intellectual property of their own work, permitting me to publish their designs in this exegesis and subsequent research outputs. Notionally, participants could upload their own designs to an online database, but it was outside of my resources to action this proposition during candidature.

An online database that recorded design-based outcomes such as these, linking to specific projects, would be a valuable resource for design researchers, academics in other fields and community initiatives.

As science journalist Gaia Vince asserts, we live on a human planet: we are the most powerful and dominant species on earth, our actions decide the fates of all species, including our own (2015, p. 4). The way we currently wield that power ignores the fragility of our dependence on the systems we rely upon for our survival and the ongoing function of our civilisations. Our fortunes are linked to the species and systems we have influence over. This is a lot for people to factor into daily lives. For many of us, it is easier to look away from the climate crisis; from outright denial or low-grade apathy, we dismiss climate change from our thoughts. We make it absent. The design modes I suggest ask people to notice and attune to what is currently happening in our biosphere: mass extinctions that signal the collapse of our "safety net of multispecies interdependencies" (Tsing et al., 2017, p. G7).

The research refigures communication design as a participatory practice that invites lay-designers inside a previously closed discipline. During the research, I developed methods wherein participants could lead and retain autonomy of their work and processes.[95] Opening the doors on communication design and showing people how it functions could serve related activist or anti-capitalist movements. Long after attending workshops, participants often commented to me that they had a new way of considering graphic design. Participatory processes appeared to demystify the ways they were being spoken to by consumer culture. Visual communication design is a form of language. Following Bakhtin's assertion, language is dynamic and continually in formation, therefore the lay-design practices I propose have the potential to shift communication design away from the utterances of consumer-capitalism and towards the concerns of the people (1981, p. 272). This suggestion has the potential to undermine many communication designers'

95. This was stipulated to participants in information and consent forms prior to any design activity occurring, see appendices for all consent forms related to AUTEC processes.

current 'bread and butter', which relies on helping corporations encourage consumption. In light of the correlation between climate change and consumer-capitalism this could be way of politicising communication design (Boehnert, 2018, p. 182). I suggest expanding on the ways designers function, and bringing communication design further into the fold of social-design activities where designers might have a role in remodelling our nature-cultural interactions.

The project challenges and expands the role of communication designers in our shifting economic, professional, and ecological landscapes. It offers a picture of communication designers that looks beyond our capacities as services providers, authors and producers and towards our abilities as enablers (for more see Armstrong & Stojmirovic, 2011, p. 15). p. 90. Most importantly for me, the work responds, in practical terms, to Anderson's request for anthodecentric and speculative design-based methods, which became a refrain throughout the thesis (2015, p. 338). The project worked from an applied grassroots level towards increasing sensitivity to the non-human suffering caused by climate change – factors that are politically significant in light of the climate emergency. Communicating through visual means is ultimately a way people can experience different ways of being the world. In settler culture in Aotearoa New Zealand the sea is often considered silent and non-sentient, yet this thesis contributes to a growing body of work that considers the sea to be worthy of recognition as equal to humans (see Brierley et al., 2018; Salmond, 2015, 2018). I join Māori Earth Systems scientist Daniel Hikuroa in his call to treat the sea as a being, with rights equal to humans, as in local precedents Te Urewera Act (Te Urewera Act, 2014) and Te Awa Tupua Act (Te Awa Tupua (Whanganui River Claims Settlement), 2017), whereby sections of land and rivers were granted legal personhood (AUT University, 2019).

The Intertidal Zone expanded how a gallery operates to become more than a place to view artwork, and of ways a community library can function as public, interactive space. Contemporary galleries such as Te Uru (in West Auckland) are increasingly

interested in community engagement. An example is their upcoming workshop hosted by artist Judy Millar where participants can work with creative learning application Squiggla to generate free-from drawings as a means of exploring creativity in a non-judgemental setting.

The research provides examples of how existing community facilities, networks and bonds can be utilised for participatory processes that raise questions regarding how design can evolve communities from within. Just as design emerges from a context, I worked-with my local context to advance the research. I was able to access free, community-based spaces, meaning I could test methods in places familiar, or at least recognisable, to participants. The spaces I used for design events, and the people who helped run them, shaped how the research developed. The advice and practical support provided by employees and volunteers of both institutes made participatory practices viable. Equally, the act of hosting interactive design workshops evolved community members' concepts of the types of activities that could occur in libraries and galleries.

Producing this thesis has highlighted for me that the processes specific to communication design are useful, socially and practically, to different kinds of communities. My own design-practitioner knowledge and pedagogical background facilitated this; I understand the experience of the different phases of designing. Beyond this, the research has helped me realise, in practical terms, how communication design can be of use to the climate crisis. Processes of ideation, reflection, and iteration can help us distil and act on the climate emergency; they are necessary practices for imagining our world differently. When combined with our own intuition and relational frameworks, we can become more present to our interconnection with what is around us, and generate diverse ways of being that fit our community contexts. Ultimately, I learned that a (communication) design-way-of-doing can be of use when living on a damaged planet; that my particular skill set can contribute to positive change. Rather than a way of instructing people to

participate in democracy, communication design is presented as a means for lay-people to address issues outside of formal democratic processes. An expanded sense of humanity is crucial now, and we must extend agency to those we share the planet with. At our best, we humans are empathetic, generative and resourceful. We can generate new thoughts to think thoughts with, new stories, and new ways-of-being to move forward with. We can evolve differently.

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I really
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You all
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Appendices