

LIMINAL EPISTEMOLOGICAL SPACES

**DIFFRACTING WITH MATERIAL
CORRESPONDENCES BETWEEN
DESIGN AND PHILOSOPHY TOWARD
NON-MODERN KNOWLEDGES**

A Master's Thesis by Otto Rønne
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Liminal Epistemological Spaces:

Diffraction with Material Correspondences Between
Design and Philosophy Toward Non-Modern Knowledges

Master's Thesis

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PREFACE

This thesis comes from a personal sense of urgency. I chose to work on this project because I wanted to do something challenging and different. I wanted to be challenged and to work with the theory that I have spent the past few semesters immersing myself in. This project allows me to work with something that interests me far more than much of what I have encountered through my design education. I get to ask questions about how we produce knowledge, whose knowledge counts, and what and who gets lost in the process.

Reading the theory that grounds this project has been and still is humbling. I am asked to admit my own complicity in the structures I am questioning, but that also only makes me more engaged. Part of what has been driving this thesis is the frustration that I was not exposed to these issues—in this way—sooner than I was, and that I have spent so much of my time and education learning how to recreate the very same system(s) that I am now critiquing. It feels as if the theory finally put words on something I had sensed but could not put words on before.

In this thesis, I work as a designer encountering philosophy. Coming from design, philosophy is both intimidating and surprisingly accessible. As a designer, I can admit my fallibility and engage with ideas without having to reproduce a long chain of argumentation to show lineage. And although philosophy has been an interest of mine for a while, it was contemporary and feminist literature that ended up capturing my attention fully. The possibility of approaching from different angles to make sense of the world, which is what this thesis tries to do.

This work is a stepping stone that may set me on a path where I can continue working with these questions in the future. I can only hope.

ACKNOWLEDGEMENTS

I want to thank my supervisors, Virginia Tassinari and Iohanna Nicenboim, for your trust and support. The trust that I could handle the work, the trust that I understood things that at times felt rather complex or ‘out there’, and the trust that gave me the freedom to explore. I believe that your trust is what allowed me to grow. But I also want to thank you for your sharpness, for helping me cut through the fog and make sense of things. You have both, in your own ways, been an inspiration for me to work harder and stay curious—and have been a huge part of shaping me as a researcher and my education here at the TU Delft. I want to thank my family for their support from abroad. For their patience when I ramble about things that only make sense inside my head, and for listening anyway, and for the calls that reminded me to slow down and take care of myself. I also want to thank my friends, both new and old, for the bouldering sessions, shared dinners, quiet moments over tea, and for reminding me that there is a life beyond school. I also want to thank the people of StudioLab for taking me in, creating a space that felt welcoming and inspiring, and for being great company along the way. Your openness and everyday conversations made the work feel lighter.

And finally, I want to thank you, Maja, for the long walks and even longer talks. For helping me make sense of what I could not, and for your love, patience, and support. I am happy to have shared this journey with you.

DECLARATION OF USE OF AI

I also want to take a moment to acknowledge my use of AI throughout this thesis.

I have used OpenAI’s ChatGPT (5.2) and Anysphere’s Cursor (2.0 and 2.1) to support coding tasks in CircuitPython, JavaScript, and TouchDesigner in developing design experiments. I have used Anthropic’s Claude (Sonnet 4.5, Opus 4.5 and 4.6) to look up some terminology and, at times, to understand concepts at a surface level before going into the literature in more depth. Claude was further used during the writing phase to spar with to *structure* the discussion chapter and test argumentation. Grammarly and LanguageTool were both used for proofreading (included here since they now use AI features).

In all cases, the conceptual work, theory, design experiments, data collection, data analysis, visuals, diagrams, and argumentation are all my own.

No AI-generated text was used as part of the written text in this thesis.

ABSTRACT

The Anthropocene is not only an environmental crisis but also a crisis of knowledge. The dominant ways we produce and organize knowledge are complicit in reproducing the conditions of this polycrisis. This master’s thesis asks how design, in the encounter with philosophy, can help think otherwise in order to support the creation of non-modern knowledge.

Using a research-through-design approach, informed by more-than-human design, decolonial thought, and posthumanist philosophy, the thesis progresses through four iterative design experiments that each build on what emerged from the previous. The thesis expands on transdisciplinary methods and the concept of liminality in design research, after identifying two gaps: liminality has been used only analytically, not generatively, and existing transdisciplinary methods are not suited for knowledge production that exceeds modern epistemology.

The research makes three key contributions. First, it proposes that liminality can be used generatively to suspend modern categories in knowledge production, presenting liminal epistemological spaces where non-modern knowledge can emerge. Second, it develops material correspondence as a designerly approach of thinking-with and -through artefacts as a means for entering epistemological liminal spaces in transdisciplinary encounters. Third, it identified traces for recognizing when a liminal epistemological space is entered, along with conditions for material correspondence to support the cultivation of such spaces.

The non-modern knowledge that emerged was about positionality: in the final design experiments, participants generated knowledge about their positionality through felt, embodied, and relational means. This points to a form of knowledge production that exceeds modern logics of categorization, representationalism, and dualist structures. The findings are based on a situated and limited exploratory inquiry, and should therefore not be seen as generalizable nor ‘validated.’ This thesis offers a humble and fallible step towards claiming design as a practice that, when oriented towards epistemological openness, can contribute to creating the conditions under which non-modern knowledge might emerge.

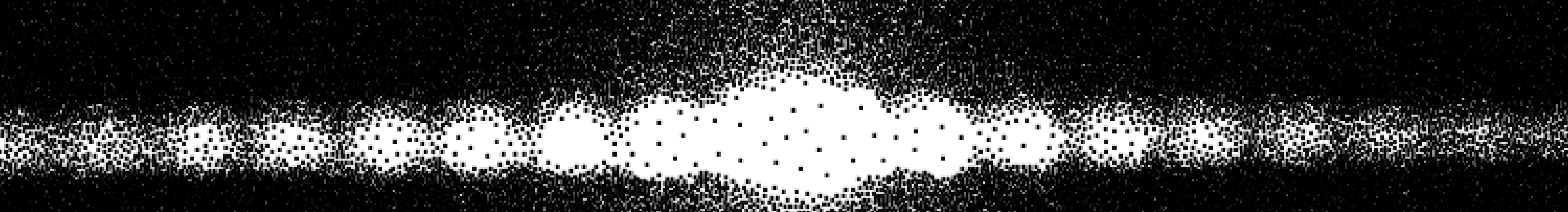
Keywords: liminality, material correspondence, non-modern knowledge, epistemology, research-through-design, more-than-human design, transdisciplinarity, positionality, decolonial thought

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CHAPTER 1

INTRODUCTION



PROBLEM FRAMING

We are in the middle of an intersecting crisis that is both ecological, social, and political. This is what we call the Anthropocene. It is both an environmental crisis and a crisis of knowledge. The very ways we think are what produced and reproduce the conditions of this polycrisis, and on their own, will not be able to think us out of it (Haraway, 2016; Tsing, 2015). Our current ways of knowing often end up reducing the world, for example, through separations, especially hierarchical dualisms, such as between nature and culture, subject and object, knower and known. These separations are far from innocent, but active cuts that shape what worlds become possible (Barad, 2007). Cameron Tonkinwise (2021) puts the stakes into words:

“To be in crisis is to have no time to ask profound questions. Things are urgent; make a decision; act. And yet what provokes the crisis is the inadequacy of current ways of thinking and acting. It is no use making a decision to act if you will only reproduce what led to the crisis. You must ask profound questions that open up completely new ways of thinking and acting if you are to find a way out of the crisis.” (p. 43)

The modern is the conceptual framing for our current condition. It describes the structures through which knowledge continues to be organized, valued, and policed (Latour, 1993). Modern knowledge production—also called modern epistemology—privileges rational language, treats representations as stable and complete, and creates disciplinary boundaries that split understanding. It claims to be universal, disembodied, and to have a total and objective view. Outside the boundaries of modern epistemology lie other types of knowing that are made invisible or illegitimate, such as embodied knowledge, oral traditions, and affective and material ways of knowing. This invisibility has colonial roots (Santos, 2016; Vázquez, 2020). It is a separation between legitimate knowledge and what is considered illegitimate that happens through colonial violence, through a systemic erasure of other ways of knowing and being. The unmaking of knowledge is an unmaking of “worlds of sensing and meaning” (Vázquez, 2020, p. 27). To generate knowledge otherwise is, therefore, both an epistemological and a political task that requires accounting for what has been erased and exploring what might emerge.

Feminist and decolonial scholars have been addressing these concerns for decades, developing practices and vocabularies for ‘knowing differently’. Their work points towards knowledge that is partial, situated, and accountable to its conditions (Haraway, 1988). Decolonial thinkers propose “border thinking”, which is an epistemological stance that works from spaces where modern categories do not fully hold (Anzaldúa, 1987; Mignolo & Tlostanova, 2006). These other ways of knowing enable knowledge emerging from the body, the senses, and the material world—forms that modern epistemology systematically excludes—fundamentally change the relation to and existence in the world. However, these critical conceptual frameworks do not translate into practice easily:

“There is a gap between decolonial theories and designerly work that a project of decolonizing design should address, even if it ultimately means rethinking and redesigning our relationship with designing altogether. (...) In other words, a project of decolonizing design speaks from and fosters spaces in which many border languages emerge.” (Schultz et al., 2018, p. 93)

Within design, a lineage of scholars has experimented with what such conditions might look like. Nomadic practices (Wakkary, 2021), critical praxis (Staszowski & Tassinari, 2026), and—in broader terms—more-than-human design (Forlano, 2017; Nicenboim et al., 2023; Wilde & Lenskjold, 2023) all explore how making, embodiment, and material engagement can generate knowledge that exceeds rational language and abstraction. Design is one practice among many that holds potential to generate knowledge otherwise. Design can offer an orientation towards the material. Yet design’s own complicity must be acknowledged. Despite claims to “decolonize design,” the structures of knowledge production remain largely intact:

“Despite claims and moves to ‘decolonise design,’ there is still no doubt that the hegemony of the Anglo-European academy, its institutional forms, its mechanisms, methodologies, and epistemes for producing knowledge, still maintain a dominance globally over local institutionalised forms of knowledge production in academies across the world. (...) Problematising knowledge production lies in questioning who, who for, and where from, writes and speaks.” (Ansari, 2021, p. 137)

The master’s tools, as Audre Lorde (1979) reminds us, will never dismantle the master’s house. Design cannot simply adopt decolonial vocabulary while leaving its epistemological foundations unchanged.

This thesis explores one possible response: design in encounter with philosophy. Western philosophy offers an interesting counterpoint to design, as it has a long history and established traditions in being a ‘thinking practice’ that generates ‘theory’ instead of being based in ‘practice’. Historically, philosophy is presented as a disembodied activity happening in the mind (as opposed to the body), yet philosophy also contains resources for its own critique: traditions of questioning, of putting assumptions into doubt, of thinking at the limits of what can be thought.

Furthermore, design in its establishment and development as a discipline has long borrowed concepts, frameworks, and discourses from philosophy. This relationship is one-directional, since design rarely offers something back, and the loop is never closed. This thesis work explores what happens when design enters into encounter with philosophy. What becomes possible when neither discipline fully holds, when categories are suspended, when thinking happens through making rather than prior to it?

This thesis will try to humbly respond to these issues, taking the first steps towards addressing the following research question:

How can **design, in encounter with philosophy**, help **think otherwise** in order to support **the creation of non-modern knowledge**?

PROJECT APPROACH & PROCESS OVERVIEW

This section provides an overview of how the thesis proceeds, including the methodological commitments that guide the work, the different design experiments that were conducted, and the scope and limitations of this thesis.

DESIGN-RESEARCH APPROACH

This thesis uses what is known as *research-through-design*: the production of knowledge through design activities (Stappers & Giaccardi, 2014). This thesis aims not to produce a final tool or conclusive methods, but instead to learn through iterations of design experiments. The thesis approach draws on practices from *more-than-human design*. These practices encourage experimentation, reflexivity, and sense-making beyond user-centred methods and perspectives (Forlano, 2017; Nicenboim et al., 2023; Wilde & Lenskjold, 2023; among others). They also decenter the designer as a sole author while opening space for knowledge to emerge through material engagement, embodied activities, and relational encounters and entanglements. This thesis emphasizes this orientation from more-than-human design by engaging with what it might mean to decenter from the modern epistemology itself through openings and suspensions, not products, solutions, or closures.

MATERIAL CORRESPONDENCE

Throughout this thesis, I both use and develop on an approach I call *material correspondence*: thinking with and through artefacts instead of treating them as representations of pre-formed ideas. Material correspondence perceives artefacts as having agency, meaning they are treated as active participants in knowledge production. The artefacts are, by contrast, therefore not ‘just’ containers of meaning, but influences participants as provocations that generate meaning in the encounter.

This commitment is elaborated further in a later chapter (Chapter 3: Design Experiments, Introduction), where I draw on Tim Ingold’s notion of *correspondence* to frame what it means to think alongside materials and each other.

DESIGN EXPERIMENTS

The thesis progresses through four design experiments, each building on what emerged from the previous. Figure 1 provides an overview of the process. Although the overview presents the process as linear, the exploration is emergent and multiple things often happen simultaneously. Throughout the whole process, literature informs the experiments, and while the experiments encourage more desk research.

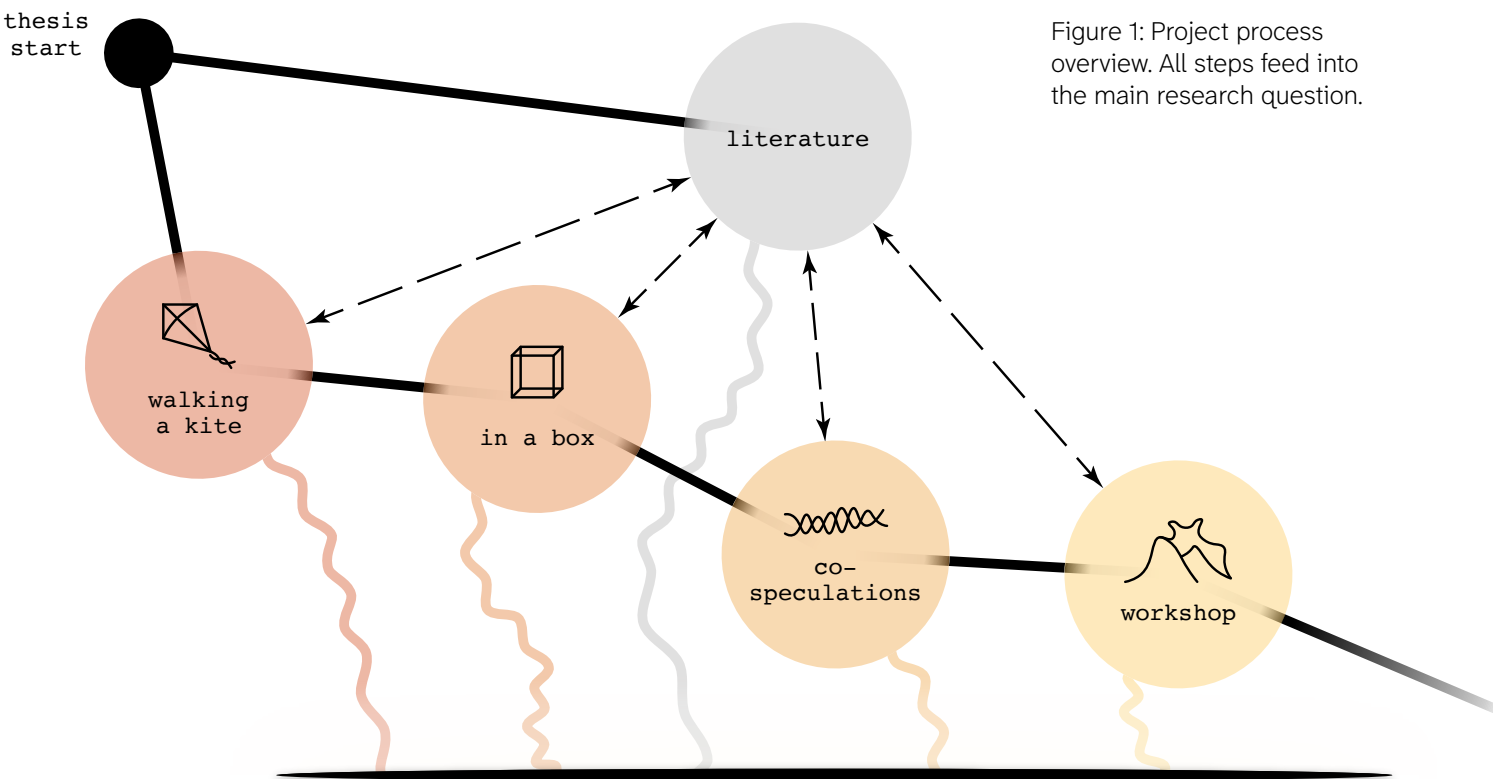


Figure 1: Project process overview. All steps feed into the main research question.

How can **design**, in encounter with **philosophy**, help **think otherwise** in order to support the **creation of non-modern knowledge**?



What does it mean to correspond through material engagement?

The experiment involves constructing and walking with a kite. I explore how we might let knowledge emerge through material engagement instead of through language alone. The experiment reveals some clear limitations, so I shift focus from a single artefact into a collection of provocations instead:



How might provocative artefacts open an epistemological space between disciplines?

The provocations work differently depending on their presentation and engagement. Although they trigger interesting conversations, such as questioning one’s own disciplinary position, something is missing: the body remains absent from the inquiry. I am pulled towards working with more intimate and tailor-made encounters:



What emerges when material correspondence is rooted in personal urgency and embodied engagement?

Through one-on-one interviews and co-speculation sessions, I find that vulnerability, contested terms, and unexpected interventions open the epistemological space in ways that planned provocations did not—but also that imposing artefacts onto others, however carefully designed, limits what can emerge. Expanding on these experiments, I want to test the new assumptions and see what happens when multiple participants correspond with each other:



What kinds of knowledge emerge when participants materially position themselves in others' conceptual landscapes?

In the final experiment of this thesis, multiple participants are gathered to explore how they resist modern categorization as “Monsters” and what happens when they question their own positionality by materially placing themselves in each other’s conceptual landscapes. This workshop generated insights that are inaccessible through conversation alone, but also left questions open for further work:



What is the relationship between vulnerability, care, and the emergence of non-modern knowledge?



What are the traces that indicate one has entered a liminal epistemological space? How do you measure this liminality?



How might such states be cultivated without being prescribed?

In this thesis, I will be aiming to generate transferable knowledge. This knowledge will emerge from specific and situated explorations, but might inform others working in similar directions. Throughout the project, the following criterion is used as a guide for the research:

Can we create a method that is able to generate transferable knowledge that not only allows correspondence between people with thinking-practices—for example, designers and philosophers—but also allows for critical reflection on their positionality and epistemology (and the intersection); allowing them to talk about their positionality and break through biases?

In stating this criterion, I place a few assumptions that I also set out to explore in the thesis. I assume that material and embodied engagements can access a kind of knowledge unavailable to conversation in language alone, and that biases and unexamined positionality are part of what keeps disciplines from working together generatively. The project exists as a prototype in itself, since I do not aim to deliver a finished method, but to explore what such a method would need. Through this exploration, I hope to shed some light into a space of other ways of thinking.

Throughout this thesis project, I develop and build on theoretical terms. These developed terms are collected into a glossary that you can find on page 185.

CHAPTER 2

BACKGROUND THEORY

CHAPTER INTRODUCTION

In this chapter, I provide the theoretical grounding for the thesis and provide more nuance into the problem stated in the beginning. I also review two concepts: liminality and transdisciplinarity.

The first section presents and situates the onto-epistemological commitments of this thesis. In this section, the expression ‘thinking otherwise’ is further clarified. It is presented in more depth why this is important through argumentation starting from coloniality and the modern. I present a response to this issue through feminist theory and Karen Barad’s *agential realism*.

The second section reviews how liminality has been used in design literature. It identifies a tendency to use liminality analytically, meaning that liminality has been a way of describing in-between states on different levels. Towards the end, I turn this around and discuss the potentials of using liminality generatively instead. The proposition made in this section extends liminality to be an epistemological condition that one inhabits in order to generate knowledge ‘otherwise’.

The third and final section is a review of the status quo of transdisciplinary methods and approaches in terms of usability for this research project. The review identifies some limitations of the current approaches. Towards the end, it is concluded that current approaches are often goal-driven, drawing from design-thinking traditions, which risks closing conceptual spaces prematurely. As a conclusion, it is discussed whether these approaches are useful to the research, as we are looking for ways of working transdisciplinarily while keeping concepts and knowledge generation conceptually open.

As a conclusion to this chapter, I present the gaps this thesis will attempt to occupy and lead into the research-through-design experiments of this thesis.

NUANCING THE ISSUE: *DECOLONIZING EPISTEMOLOGY*

Knowledge is not neutral: The way knowledge is produced is not neutral, and neither is Science (Escobar, 2018; Haraway, 1988; Quijano, 2007; Vázquez, 2020). Knowledge determines what can be known, who can know, and what forms of knowing and understanding are legitimate or made invisible. Modern knowledge production is based on Western scientific rationality and has positioned itself as universal and ‘objective’—but this distanced positioning actively excludes other ways of knowing while at the same time denying that any exclusion has taken place (Vázquez, 2020). This exclusion is not accidental, but structural and violent: Knowledge systems that emerged from the European Enlightenment and colonial expansion organized the world after its own logics, and established hierarchies between the rational and the irrational, the universal and the local, those who know and what is known about—a relation between a subject and an object. These relations continue to inform our knowledge and knowledge production by shaping our research, how it is funded, what theories are taught in classes, and what (worlding-)practices are being taken seriously. And such relations continue to exist—even in what some might consider *modern times*.

THE MODERN: OUR CURRENT CONDITION

The term “modern” needs clarification. In decolonial discourse (among other discourses and disciplines), the “modern” does not refer to the time we live in as *contemporary* or *most recent*, but instead refers to how knowledge, being, and power are being configured in a specific way. The knowledge is configured through modern institutions, categories, and hierarchies in order to organize in certain ways and manage what is valued. Modernity can be categorized by the foundational separations it makes: nature/culture, subject/object, human/non-human, artificial/natural, mind/body, and others (Latour, 1993). These separations are not descriptions of reality but ‘purifications’, or in other words, attempts to keep categories split while they are in reality entangled. From a decolonial perspective, these separations are ‘not just’ epistemological, but are in nature colonial (Mignolo, 2011). The modern project of universal reason was also a project of colonial domination through the imposition of European categories onto the rest of the world, which led to the displacement of other knowledge systems and the extraction of resources, labour, and life. Four beliefs, Escobar (2018) argues, are fundamental to the modern creating the dominant story of life (Escobar et al., 2024): in the Individual (as basic unit of society), the Real (as objectification of the world), the Economy (as a separate and self-regulating domain of life), and Science (as the only valid form of knowledge). Escobar continues, informing us that these are *not* universal truths, but historical social constructs with real material consequences that continue to shape the present (Escobar, 2018).

COLONIALITY AND THE ERASURE OF WORLDS

The establishment of modern categories required a suppression of other ways of knowing and being. This colonial domination has continued to persist after formal colonialism ended in what is otherwise known as *coloniality of power* (Quijano, 2007). Santos (2016) introduces the term *the abyssal line* that draws an invisible division between what counts as knowledge and what is dismissed as ‘non-knowledge’, leading to the erasure of both worlds and knowledges. This line makes it fairly easy to understand what is meant by “erasure” and “making invisible”: On one side of the line are disciplines acknowledged in the modern epistemologies, such as science or (Western) philosophy. On the other side of the line—what is being made invisible—are the knowledges of colonized peoples, oral traditions, embodied practices, and worlds that do not conform to modern categories. The word *abyssal* is derived from the word *abyss*, which can help clear up how something is made invisible: When something is on the other side of the line, it is thrown into the abyss—made non-existent. What is on the ‘other side of the line’ is not even recognized as alternatives to the modern epistemology, because it is not recognized at all. This violence does not stop at knowledges, but continues to erase other ontologies as well in what is called *the colonial difference* (Vázquez, 2020):

“The worldmaking power of modernity is implicated in the unmaking of other worlds, in the classification of others, in the silencing of voices, in the erasure of worlds of sensing and meaning, in the wasting away of Earth.” (p. 27)

The colonial difference operates through the *double erasure of coloniality*: first, coloniality erased other worlds; second, this erasure is dismissed from historical consciousness: “The double erasure names the erasure of the erasure.” (Vázquez, 2020, p. 23) To know otherwise than through the modern episteme is both a task of uncovering what has been erased—recovering ways of being and knowing—and also to discover what could be—finding new ways of generating knowledge that steps beyond modern constraints.

LOGOCENTRISM: THE PRIVILEGE OF RATIONAL LANGUAGE

Central to modern knowledge production is *logocentrism*. Logocentrism is the idea that rational language is the primary medium through which ‘truth’ is communicated, and that language is able to fully capture reality in its words. A few assumptions are underlying this idea, such as meaning being stable and independent from the context in which it was made or is used. The belief in rational, context-free language was central to the colonial project, since it justified the domination of peoples whose languages and knowledge systems did not conform to European standards of rationality (Abram, 1996; Mignolo, 2007):

“The belief in the existence of a rational, context-free language as a sign of the rational creature that had emerged in early Western modernity was part of the discourses that legitimized the exploitation and domination of those who supposedly did not use rational languages.” (Schneider & Heyd, 2024, p. 2, citations removed)

Understanding the issues and violence that logocentrism has brought to developing and reproducing modern logics further details how its constructs only privileges some forms of knowledge. If knowledge must be articulated in rational language to be valid, then embodied, material, affective, and situated ways of knowing are rendered illegitimate. At best, the ‘illegitimate’ knowledges are only raw material to eventually be translated into ‘proper form’.

However, it is important to note that this critique of logocentrism does not mean that we should abandon language, nor does it mean that words themselves are evil. The issue is not with words, but with the assumption that they can fully represent reality without excess. Quite the opposite—language can also be a generative and affirmative tool. This critique of logocentric language positions the thesis towards a material practice. By engaging with making, artefacts, and embodied activities, design can include parts of our experience and knowledges that logocentrism excludes—a way of knowing that language alone cannot capture.

REPRESENTATIONALISM AND THE RISK OF CLOSURE

Representationalism is another issue briefly in the spotlight, and which is very entangled with logocentrism. Representationalism is, in short, the assumption that representations (language, visual, or material) can fully stand in for what they represent. For example, in a representationalist view, a map will correspond fully to the territory, or a description of a thing fully exhausts the thing itself. The issue hinted at here is not representations themselves, since representations are unavoidable. This thesis, for example, will make constant use of them. The issue presents itself when representations are viewed as stand-ins with complete, stable, and univocal meaning. The representationalist belief risks closing partial and situated views as universal.

This “representationalist trap” happens under the assumption that representations and reality exist as two different domains that can be crossed given representations are accurate enough (Barad, 2003). However, Barad argues that representations are not ‘outside’ the world they describe, but are part of it, and therefore constitutes its becoming. The representations have agency and are *not innocent*, but rather, they shape what matters and what is excluded. Artefacts do not simply ‘have’ meaning, but also take part in making it—opposing the representationalist view of stable meaning.

From Barad’s counter-point, it follows that representations risk ‘closing concepts down’ by settling boundaries and meaning while the representation is still actively diffracting meaning and acting back on us. By closing concepts, we lose what exceeds the closure, its ambiguity, and its generative potential.

DISCIPLINES AND THE THEORY/PRACTICE SPLIT

In the modern organization of knowledge, knowledge is separated into disciplines, each with its own objects, methods, and ways of validating knowledge. At surface level, disciplines are seen as descriptive measures, but from a Baradian perspective, disciplinary boundaries are ‘agential cuts’ that produce distinctions (Barad, 1999). The boundaries between design and philosophy, between making and thinking, are not given but made. They can therefore be questioned and, potentially, unmade.

Similarly, these ‘cuts’ also exist between theory and practice. In the modern framing, theory is produced in one place (the mind, the academy) and applied in another place (in practice, through the body). Manning & Massumi (2014) argue that thinking does indeed happen *in the act*, and that doing is already conceptual. The separation is not how knowledge works, but a flattening of both creative and intellectual work.

“These forms of value-producing collaborative activity tend, by nature, to overspill sectorial and disciplinary boundaries, and to fundamentally call into question the traditional split between “theory” or “pure research” on the one hand and “practice” or “applied research” on the other.” (Manning & Massumi, 2014, p. 84)

ONTO-EPISTEMOLOGY: BARAD’S REFRAMING

Karen Barad’s philosophy, named *agential realism*, gives a fundamental reframing of the issues discussed above. Instead of separating epistemology (how we know) and ontology (what exists), Barad presents the idea of “onto-epistemology”. Onto-epistemology recognizes that ‘knowing’ and ‘being’ are not separate but instead mutually constitutive:

“We don’t obtain knowledge by standing outside the world; we know because we are of the world. We are part of the world in its differential becoming.” (Barad, 2007, p. 185)

Onto-epistemology cancels the representationalist assumption that knowledge is *about* a world which is independent from our knowledge-production practices, while also revealing the ethical and political stakes of knowledge-production, since knowing and producing knowledge becomes a worlding-practice (making worlds). The term is thereby extended into “ethico-onto-epistemology”, demarking how all of these previously separated aspects are indeed entangled. These ideas are based on what Barad calls “material-discursive practice” (Barad, 1999, 2007). In short, this refers to how our discourses do not only describe the world and how matter does not exist passively and waiting for interpretation, but instead how the material and discourse are “reconfiguring” reality. It is a term used to reveal how both shape what can be known, what can be said, and what matters.

As already mentioned, Barad also uses the term “agential cuts”. These cuts are the distinctions we make to make sense of the world around us. They are not innocent, and can, in the cases described previously, be violent in their world-making. However,

without any cuts, there would be no differentiation, meaning no knowledge. So it should be underlined that it is not the cuts themselves we want to remove, but instead understand how to make them responsibly and with an awareness of what they produce and exclude—what worlds are made possible and impossible.

For this thesis, Barad's ontology becomes a philosophical commitment: an apparatus through which design experiments and findings are understood. This is important, since different philosophical commitments would produce different insights. Through Barad's onto-epistemology, we become sensitive to relationality and materiality, making it suited to inquiries into *material correspondence* and *liminal epistemological spaces*.

SITUATED KNOWLEDGES AND POSITIONALITY

Feminist STS and critical theory provide another view of epistemology that challenges modern Science by questioning the core claim that it is possible to produce universal knowledge that is disembodied and seeing everything from nowhere—or what is otherwise referred to as the “god trick” (Haraway, 1988). Historically, knowledge is produced from the position of white, male, cis-heterosexual, Euromodern observers, whose situatedness has been made invisible by being the ‘default’. Haraway's response is instead “situated knowledges” that admits that all knowledge comes from somewhere, situated in specific locations and histories and is partial and accountable. Importantly, situated knowledges is not to be misunderstood with relativism (that there are no truths and beliefs and values are relative to the perspective of individuals or cultures). It is the recognition of partial perspectives that can connect with each other to form a richer and more accountable epistemology.

The “god trick” is extended in decolonial discourse as the hubris of “zero-point epistemology”. It describes how observing the world from a supposed neutral position is what gives the non-situated observer power to objectify (Vázquez, 2020):

“His power rests in the denial of his positionality, the unmarked position of his place of apprehension and its epistemic location.” (p. 23)

The zero-point epistemology makes the god trick visible as a role of colonial power. To see from nowhere is, in fact, seeing from the position of the modern. By claiming to be nowhere, this view avoids being accountable for what and how it sees. Decolonial critique seeks to position this gaze and reveal its Euromodern implications:

“For decoloniality, the nowhere of abstraction is actually situated in a geopolitics of knowledge and aesthetics that articulates the colonial difference. The hubris of the zero point indicates the epistemic pretension of speaking from nowhere; it presupposes the separation between the subject and the object of western epistemology.” (Vázquez, 2020, p. 23)

POSITIONALITY

The decolonial response to the zero-point epistemology is to ground the ‘we’ that constitutes each of our positions in one's own historical positionality, and not to flee towards an abstract individuality (Vázquez, 2020):

“A positioned self cannot assume to be the center of the world, a positioned self is always conscious of the radical plurality of worlds and histories around her.” (p. 8)

Instead of using positionality as is sometimes seen in academia and beyond as a methodological requirement that needs to be over with in the beginning of one's work, it is an ongoing practice of locating oneself within the larger context of one's work and what one critiques.

“Positionality undoes the universal validity claims of non-positioned knowledge and reaches towards a more truthful and plural understanding of located and contextual knowledges.” (Vázquez, 2020, p. 11)

In this thesis, positionality should replicate the decolonial stance by constantly being aware of how one relates to the work, the theory, and the context, and how the work has an effect back on me and changes me. To never claim that generated knowledge is universal requires the presence of the researcher as an individual with certain interests and limitations, which in turn, allows for a more honest, accountable, and situated knowledges to emerge.

EMBODIMENT AS EPISTEMIC RESOURCE

Embodiment is one of the central aspects of situated knowledges, and is something disconnected from the modern epistemology as it is seen as a hindrance (introducing bias and errors) that needs to be handled through rational logics. Feminist and decolonial epistemologies reclaim the body as a site of knowledge, placing it as different to abstract knowledge with its own advantages and insights. Such knowledge comes to be through making, sensations, and other material practices, and is something inaccessible through rational *thinking* and logocentric representationalism.

“To think with touch has a potential to inspire a sense of connectedness that can further problematize abstractions and disengagements of (epistemological) distances, the bifurcations between subjects and objects, knowledge and the world, affects and facts, politics and science.” (Puig de la Bellacasa, 2017, p. 97)

Within the design field, embodiment and embodied knowledge have gained more attention recently. Through embodied activities in design research, participants have been able to “reflect on and reposition themselves in relation to a core concern” (Wilde & Lenskjold, 2023), enabling participants and researchers to increase relational thinking and relate to and raise awareness about the more-than-human (Heitlinger et al., 2021; Honauer et al., 2024; “The Treaty of Finsbury Park”, n.d.; Wilde & Lenskjold, 2023) or

insights into emotions (Schleicher et al., 2010). Embodiment in design research allows us to gain new perspectives, for example, by introducing a change of bodily sensations, enactments, and other changes to materials (Wilde et al., 2021). Bell et al. (2024) found themselves becoming sensitive to more-than-human lifeforms by engaging their sense: “smelling a rotting fruit, touching its sticky or slimy textures, and recognising mold’s visual changes and appearance.” Through movement, sensations, and somatic training, it is possible to destabilize the habitual (Höök et al., 2018). These scholars demonstrate that feminist epistemology is both philosophical and practical.

BORDER THINKING AND KNOWING OTHERWISE

The presented theory above intersects and arrives at a question: *What does it mean to know otherwise?* Knowing otherwise, at least in the intents and purposes of this thesis, is not to reject modern knowledge (which would be impossible because of the positionality of the researcher)—but instead to work at its borders and gaps, and against its closures.

“Border thinking” is one concept used to describe what this might mean. In essence, border thinking is about thinking from the border that modern categories cannot fully grasp, and “emerged from and as a response to the violence (frontiers) of imperial/territorial epistemology” (Mignolo & Tlostanova, 2006, p. 206). Exclusion is seen as a kind of resource instead of something that is missing, with the central point being that those who have been excluded from (privileging from) modern knowledge production know something about its limits that those in the centre of it cannot see:

“Border thinking is the epistemology of the exteriority; that is, of the outside created from the inside (...)” (Mignolo & Tlostanova, 2006, p. 206)

The term originally comes from Gloria Anzaldúa’s book *Borderlands/La Frontera* (Anzaldúa, 1987; Mayblin, 2018). This book presents and makes an example of border thinking by writing from the experience of living on the geographical border between Mexico and the USA. Anzaldúa presents the idea of gaining a “mestiza consciousness” from which one holds contradictions with no resolution. It puts into words a direct conflict with modern epistemology, as it becomes a way of holding ambiguity instead of seeking clarity and singularity. However, to Anzaldúa, this is *not* a comfortable position. It emerges from and is lived through the violence neither belonging to one category nor the other. Border thinking requires what Anzaldúa calls “tolerance for ambiguity”, which is the capacity to live with uncertainty and resist choosing one side or the other.

Marisol de la Cadena contributes two related concepts: “Excess” and “not knowing” (de la Cadena, 2015, 2021; Escobar & de la Cadena, 2024). Excess is the name for “what *is* beyond the limit of what *can be*” (Escobar & de la Cadena, 2024, p. 30), and describes the position in which respective worlding-practices cannot grasp each other’s onto-epistemological positions:

“For example, that a rock was a person, that potato seeds feel, that hail can be mean—Marisol grasped neither statement without turning them into “cultural beliefs about nature” which in turn would signal that those statements expressed a reality of second order (beliefs are not really real, right?)” (Escobar & de la Cadena, 2024, p. 30)

Not knowing is the epistemic stance that follows this logic. It requires the researcher to seek a more humble position, and let the knowledge emerge instead of presupposing what is real and not: “the experiment speaks epistemological languages; it is on a par with the researcher.” (de la Cadena, 2021, p. 251) This stance assumes that knowledge that does not fit neatly into existing categories is “yet to emerge” and in excess of modern categories. It is resisting closure and allows ambiguity.

BINDING TOWARDS THE LITERATURE REVIEWS

In the presented literature above, it is evident that the issues this thesis works with are nuanced, why they have been presented in more depth from the initial introduction to the thesis. The theory provides examples, but no definitive answer to what it means to know otherwise or decolonize epistemology. There is no method that guarantees beyond-the-modern knowledges. Instead, it provides an understanding of what is at stake with modern knowledge production, and why it is important to explore generating knowledge otherwise.

In the following two sections, I will go over my reviews of *liminality* and *transdisciplinarity*. These reviews examine how these concepts have been used in design and related fields, and they identify the gaps and limitations of existing approaches. The reviews will provide some starting points for the research and further guide us in the experiments. These two specific focuses were chosen because of the nature and context of this thesis:

First, *liminality* was sought out as one of multiple alternatives to border thinking because of its inclusion in a recent paper by Wakkary and colleagues (Wakkary et al., 2025). Liminality is a term that is also used across literature, and has gained a lot of traction in contemporary media as liminal spaces. To me, this felt like a natural starting point to understand how the emotions and experiences such spaces can provide to a practical-theoretical exploration that at times will move in the abstract.

Second, *transdisciplinarity* was researched in-depth because of the thesis context of working between disciplines. More precisely, the review looks into what methods and tools in the status quo of transdisciplinarity can support the exploration that I intend to explore in this thesis.

LIMINALITY: A BRIEF REVIEW

Liminality is a term that originates from anthropology to describe the quality of disorientation that happens in the middle of a rite of passage, when a person no longer holds their pre-ritual status but has still not begun the transition into the post-ritual status (“Liminality”, 2026). The word liminal comes from the Latin word *limen*, meaning ‘threshold’. The word liminal is generally used in three different contexts: Physical liminality, describing a place being detached; social liminality, describing subcultures that are not part of the mainstream; and cultural liminality, describing rites of passages (“Liminal”, n.d.).

LIMINAL SPACE: HOW LIMINALITY FEELS

Liminal spaces often depict the sense of liminality that is otherwise often described in words or referred to by concepts. A liminal space can be quite literal, like a doorway being a transition from one state (or room) to another, but it can also fall into the uncanny valley simply by feeling out of place or missing something (for example, a swimming pool with no sign of humans in it).



A LIST OF LIMINAL QUALITIES

The word liminality carries a range of different qualities, sensations, and emotions. These qualities can sometimes be felt simply by reading a piece of literature or looking at a picture. Here, I have tried to collect a list of these qualities to further expand how liminality is described beyond descriptions.

- weird
- curious
- a form of weightlessness
- anticipation or the moment right before something happens
- open
- confusing
- full of hope
- the feeling that someone or something is watching or waiting
- suspension in time and place
- empty
- eeiry or creepy



As part of these qualities, liminality has the qualities of being in-between, at the threshold, which can be hard to describe concretely in words and is not a settled concept.

LIMINALITY IN DESIGN LITERATURE

In this review, I go over contemporary literature from design research and related fields to examine how the term liminality has been used. This term in particular is interesting to us, as it is used to describe the central theme of this thesis of how to generate knowledge ‘otherwise’.

LIMINALITY AS ‘TEMPORARY PHASE’

Watkins et al. (2020) use liminality to describe the space between education and future practice. They call it a liminal “studio bridge” space between academia and practice. This use of liminality to describe a type of phase-transition is the closest to the original meaning of the word. Taboada & Coombs (2013) similarly use liminality to describe the phase that first-year design students enter when they have to learn about different design theories, and where they transition into being university students. In both cases, liminality is used analytically, as a temporary phase that one enters and exits, rather than as something ongoing or ontological.

LIMINALITY AS 'POSITION'

Stepping beyond the expected use of the term liminality, other authors use it to describe a broader, disciplinary position rather than a temporary individual phase. In these cases, liminality is instead used as a structuring condition. Leret & Raijmakers (2013) describe the designer as being in a liminal disciplinary position between art, design, and science, or what they also call an “in-between position.” In this position, designers become intermediaries who are able to explore new opportunities and question relationships between science and society. Ely et al. (2020) similarly use liminality (and ‘borderlands’) to describe how design-academics inhabit a role that exists between categories, having hybrid roles between “design practice, theory, history and research.” This hybridity is argued to be a strength because it enables the design-academics to translate between roles, reframe problems, and generate alternative outcomes. Miller & Rudnick (2011) argue that design tends to be overlooked in public policy because it exists in a liminal zone between knowledge and action, before decision-making, but after research (even if this context has developed a lot since 2011).

LIMINALITY AS 'LIVED CONDITION'

A different set of authors use liminality to describe a more continuous condition of being in-between. Quesnel et al. (2024) frame liminality as a rejection of a dichotomous relationship between two ‘states,’ using it to explain how design researchers often exist in a liminal space and therefore adopt a “process ontology” of *becoming* rather than simply *being*. Liminality, here, is not a singular instance, but something one steps into and out of—although it is still used in a relatively traditional and analytical sense of the word, with focus on being between disciplinary boundaries. Wang (2025) moves further by using liminality to describe something continuous: it is used to describe people’s lived experience of inhabiting in-between positions, such as living between languages, cultures, or normative categories. According to Wang, people are not ‘passing through’ liminality, but are inhabiting it. This creates frictions that are valuable because they reveal the limits of representative categorization. Turtle (2022) similarly uses liminality to describe queer in-betweenness as ‘processual becoming’ over time. In Turtle’s case, liminality is a concept used—in combination with Machine Learning algorithms—to resist binaries by highlighting and question categorization through uncertainty, ambiguity, disorientation, and misclassification.

LIMINALITY AS 'ONTOLOGY'

Finally, some authors extend their use of liminality to be treated as an ontological condition that is ongoing and productive, rather than a descriptive position or phase. Wakkary et al. (2025) use liminality to describe a “double movement of presence”: designers exist as partakers in more-than-human agencies while also maintaining their human routines, practices, and responsibilities. Liminality is used to describe spaces such as not-quite outside (in the backyard) while not quite inside the house either. Liminality refers to existing in two modes at the same time, which are not oppositions but not aligned either. Speight & Vaughn (2020) uses liminality as an ongoing ontological space, arguing that Black citizens in the U.S. are “permanently liminal citizens” as a result of modern racial categorization. From these liminal positions, Black epistemologies emerge as ways to un-think dominant research methodologies.

Burdick (2018) does not explicitly use liminality, but works with borderlands, misalignment, and friction between humans and technologies. In this case, borders thinking can be juxtaposed with liminality in that it is used to productively suspend categories to inspire design fiction. For example, by co-designing humans and technologies together instead of prioritizing one, and use tensions between them to drive the narrative. Stamato et al. (2024) treat liminality as a quality of an installation space, which, supposedly, further enables transdisciplinary engagement, even though ‘liminality’ remained mainly analytical. In their case, a main concern was to enable engagement across disciplinary boundaries, since the installations (bio-art) used complex knowledge from biology, which they believed liminal qualities helped achieve. Lastly, Kambunga et al. (2023) similarly worked with the notion of *third space*, which closely relates to liminality by highlighting the need for spaces that are neither fully inside nor outside dominant design paradigms, but instead allow for safety, care, and reflection within decolonial design practices.

LIMINALITY AS... NOT QUITE THE RIGHT TERM

The term *liminality* is able to support our language in being not-entirely-inside and not-entirely-outside. Liminality is also often used to explain a linear transition, meaning that instances of liminality are defined as being after ‘A’ and before ‘B’. This is an abstract space that definitely needs its term—but it is not exactly what we are looking to describe and explore in this thesis. Even in some instances, where liminality is used to explain an social or ontological position that someone inhabits for long durations, being outside or ‘between’ categories, the terms is still used to describe a space ‘outside’ those other categories, and is therefore being defined by those spaces that it is not.

The *epistemological spaces of liminality* that we are looking to explore in this thesis are a space of their own. It shares qualities of liminality as described above, but also exceeds the boundaries of being in-between two certain ‘before’ and ‘after’ steps. In this sub-section, I will present another way of understanding *liminality (and similar terms)* to hopefully explain the intent of this thesis work.

CAESURA

In understanding what *caesura* refers to, I first take a step at describing the modern construct and view of linear time. Modern time installs itself as a linear line, an infinite range of “nows” that goes from past, to present, to the future. Martin Heidegger instead argues against this linear “line” understanding as something that flattens our existence and experience, and calls this understanding of time the ‘*vulgar*’ concept of time (Heidegger, 2007; Wrathall, 2025). The modern, or vulgar, concept of time flattens time into continuity, which obscures potentials from the past.



Instead, Heidegger uses the term *ecstases* to describe how time is experienced as one unity instead of being split into past (having-been), present, and future. For Heidegger, the past is something active, something that holds potentials. Heidegger’s understanding of the past contains *tradition*, which is container of possibilities that can be taken up again. The future is not split from who we are in the present and shaped by the past, but is instead what gives direction to the present, and is where the potentials of tradition can be projected into. Finally, the present should be understood as something we actively make, not just a slit in time being a momentary now-point (‘at this exact second’). So from Heidegger, we can understand that time is not just an empty, inert unit, but instead a source that makes meaning possible.

Hannah Arendt uses Heidegger’s understanding of time and tradition, and expands on it. Arendt uses Heidegger’s idea of tradition and the past to say that *when* this tradition breaks down, there is an opening as to what is projected into the future (thereby following Heidegger’s meaning of the present) (Arendt, 1961; Tömmel & d’Entreves, 2025). The break of tradition is where she uses the term “thinking without bannisters”, which refers to a time when we are no longer controlled by tradition to inform our common thinking and understanding (Berkowitz, 2022). For Arendt, this was the Holocaust—for us, it might be the Anthropocene. The breakdown of bannisters also becomes a way for us to move forward and introduce new traditions. A few years later, Arendt uses the metaphor of being a “pearl diver” that dives after “crystallized fragments of the past” (Arendt, 1968). These fragments are not meant to be revived in their original state, but should be reinterpreted and used as a way for us to renew our understandings and traditions. We are interested in Arendt’s breaks in tradition because it informs us of ways to break with the tradition of the modern. The breaks in tradition that Arendt writes about enables us to question the values and epistemological frames that are assumed in the modern. In a break, we have the opportunity to grasp in more intuitive ways something that has been obscured or mystified, and finally enabling us to see from multiple perspectives—and thereby enter into the non-modern.



A BREAK IN TRADITION

Through this brief argumentation, we arrive at *caesura*. The word *caesura* is used to describe a pause, interruption, or break, often used in poetry or music. However, we extend this metaphor through Giorgio Agamben’s work. Agamben’s use of *caesura* is used to describe how a break is taking place in the middle of the ‘line,’ and not the end of it. A *caesura* thereby does not ‘stop’ history, but is an interruption (from within history itself; not external). Agamben argues that a *caesura* is not the end of an era and the beginning of a new one. In other words, tradition does not fully stop and start anew, but experiences a ‘cut’ in which it is questioned. History and tradition continues to flow, but become visible through a *caesura*. Constructs that are experienced as determined continue to exist, but are exposed, and therefore their control is suspended.

This changes the idea of breaks in tradition as something that is (somewhat) destructive to something that is enabling and affirmative, and constantly happening.



CUTS HAPPENING ALL THE TIME

Modern dichotomies, such as nature/culture, subject/object, mind/body, etc., continue to exist because modernity itself is able to stabilize through continuity. This idea that *caesuras* can happen all the time matters for our beyond-the-modern narrative, as in the suspense of a *caesura*, we are able to question modern categories that are continually being reproduced. In each of these ‘cuts,’ potentials from tradition—what was overlooked in the past and deemed not meaningful in the modern—come up.

Lastly, Agamben is critical of indistinctions, which is also important for my argument about liminality: For Agamben, a dimension of indistinction is when everything (in that dimension) becomes the same, which does not address history. Further, Agamben believes indistinction to be dangerous if it is captured to make previous distinctions exist but no longer have any function to orient judgement. This can happen when distinctions are suspended in a *caesura*.

Turning back to *liminality*, it is a moment in which a ‘cut’ happens and where previous distinctions are suspended. However, liminality is not the absence of distinction, but a new state in which exists as a suspension of previous distinctions. In this interpretation, liminality becomes the experience of the *caesura* as a mode of attention and practice.

RENEWED UNDERSTANDING OF LIMINALITY

Zooming back in on the design work for the thesis, what can we now say about liminality?

It would be an arrogation of the project to say that we aim to create breaks in tradition on the scale of the Holocaust or the Anthropocene—that would be ridiculous. Instead, it would be more fitting to say that what this project sets out to do is to create caesuras that can open up and question constructs and concepts that lie as assumptions in the modern. Liminality allows us to enter a state of mind where one is able to reconsider and recognize potentials. However, this lies in conflict with existing literature on *liminality*. The following figure displays how the difference between the current use of liminality in literature differs from my interpretation:

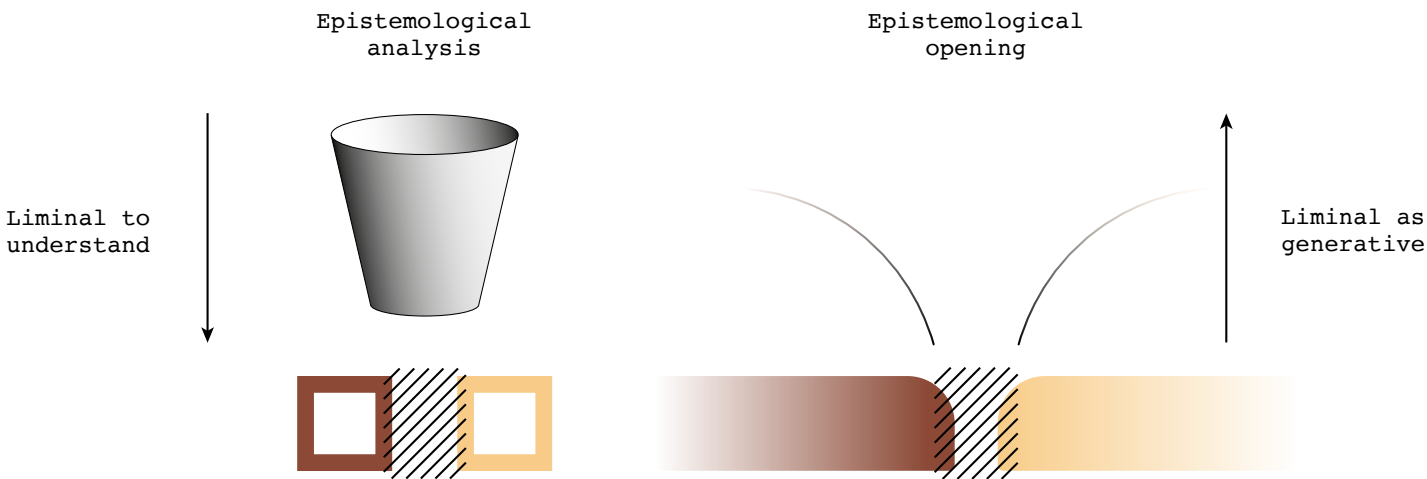


Figure 2: A comparison between two different uses of liminality.

On the left side, liminality is used analytically, using the same epistemology as otherwise in their paper (following Western epistemological traditions) but looking elsewhere (pointing to how liminality is neither A nor B, but an in-between space/state). I call this action '*liminal to understand*'. An example of the left side is how Wakkary et al. (Wakkary et al., 2025) use liminality in their well written article about *Backyard Practices*. In their case, liminality is used in the expected way; as an analytical tool to point out that at some point, while moving from inside your house to outside into your garden, you exist in a liminal space. The epistemological frame that Wakkary et al. uses to understand what is liminal remains the same.

On the right side, I propose that liminality can also become a tool for inhabiting the undefinable; entering a new epistemological frame. This epistemological frame is similar to de la Cadena's epistemological stance of *not knowing* (de la Cadena, 2021). Instead of using liminality as a frame to externally analyse in-betweenness, liminality becomes an active space and state of being that creates epistemological openings. Instead of

inactively analysing liminality (conceptually closing), it becomes a space of generative potential (conceptual opening).

Dunne and Raby has in their most recent book *Not Here, Not Now* (2025) discussed the idea of using "ontology as a conceptual raw material" (p.5) for designers in order to question values and assumptions. Although their example uses of such a 'raw material' remain abstract, such as impossible objects that only exist as words (e.g., "a round square"), it is still valueable to consider ontology as such a raw design material in order to accept how it influences our worlds; and to then consider how we might act back on that ontology. I want to argue that we can see liminality as an extension here, being a state or space in which we are able to get into closer contact with what shapes our ontology. If liminality is a space in which we are able to create a break with the modern tradition of thought, a space that questions assumptions and constructs, then we might be able to directly transform our ontology, which is "home to fundamental shared assumptions about what can and cannot exist, and ways of being in the world" (Dunne & Raby, 2025, p.5).

Caesura, and liminality by the extended understanding, is humble, idiotic, and fallible, but is still able to grasp something which cannot be grasped with/in tradition. Critical fabulation is one such example that might be used to recognize potential, disturb 'temporalities,' and make a different reading of history (recapturing parts of the past) (Rønnest et al., 2026).

In this project, the blurry state or space that is *liminality* will lie as the assumed stance that the various design experiments set out to get into contact with. In addressing the Anthropocene, we use liminality as a design material to enter a break in tradition, allowing us to enter a space of non-modern knowledge production.



Odradek (1994)
by Jeff Wall

TRANSDISCIPLINARITY: A BRIEF REVIEW

In this section, I briefly look into how the state-of-the-art of transdisciplinary work can inform us in using design, and possibly identify gaps in said work. In this section, I set out to answer: *What are the methods used in transdisciplinary work? Are its current boundaries rigid? And if so, where can I position my design work to bring something new into this space?* At the end of this section, I provide a list of inter- and transdisciplinary tools and methods that seem relevant to this project and how these can be used to inform the project going forward.

In broad terms, a discipline is constituted by its episteme, ontology, and sometimes also by methodology, axiology, and/or culture, depending on the author. Shanableh et al. (2022) attribute these parameters to the *paradigms* the different disciplines fall under, while other authors attribute the parameters directly to the disciplines themselves (Chilisa, 2017; Harris et al., 2024)

So what is the difference between multi-, trans-, and interdisciplinary, and which of these three terms fits this work? Making a distinction between the terms provides us with a better understanding of the landscape of the work and research between multiple disciplines, and helps us position this research project. Shanableh et al. (2022) informs us of the differences: Single disciplinary approaches examine something from its own point of view alone, while a multidisciplinary approach examines something from multiple disciplines' point of view done separately. This means that multidisciplinary researchers collaborate between disciplines while remaining within the confines of their own fields. Interdisciplinary approaches also examine something from multiple points of view, but are instead "collaboratively blended," (Shanableh et al., 2022, p. 315) meaning they are studying from the recognition of "the limitations inherent in the compartmentalized system of academic research" (Toomey et al., 2015, p. 1). Interdisciplinarity uses the different disciplines' methods consciously as tools. Lastly, transdisciplinarity is very similar to interdisciplinarity, but is different by going beyond academia and working with stakeholders towards, e.g. products or policies (Shanableh et al., 2022; Toomey et al., 2015). Transdisciplinary research, therefore, focuses on effective communication and reducing hierarchies between academic and non-academic stakeholders (Wickson et al., 2006).

This research project has a particular focus on what it means to step into the space between disciplines, possibly blurring the disciplinary boundaries between design and philosophy (and beyond). In this sense, interdisciplinarity seems to be the most fitting term to address researchers corresponding on (design-philosophical) concepts, since transdisciplinarity shifts focus from research into the production of solutions. However, the differences are disputed in contemporary literature, and since "transdisciplinary" has gained a lot of traction as a term, I will be using that as the umbrella term going forward. Interdisciplinarity and transdisciplinarity should both have their methods, tools, and strategies further examined, as there is a great overlap in both strategies and terminology. We do this to see how they might inform this research, or how this could inform or partly occupy a gap of theirs.

Transdisciplinarity promises to help solve more complex issues through being collaborative and having the researchers' personal interests in mind, enhancing the quality of research, and reducing efforts by sharing knowledge and findings (Shanableh et al., 2022). However, interdisciplinary teams also struggle with rules, conflicts, a lack of agreement on common goals, and communication barriers. Expectations from researchers of different disciplines often range from very tangible to very intangible goals (Augenstein et al., 2024).

METHODS USED IN TRANSDISCIPLINARY WORK

“When it comes to informing strategies for promoting new interdisciplinary research collaborations, the scholarly literature has a problem with operationalization. [...] Existing studies are not contributing as efficiently as they could be to the primary question of how to get researchers from different disciplines to work together productively.” (Newman, 2024, p. 146)

According to Newman, a lot of inter- and transdisciplinary *research* does not record specific methodological frameworks of *how* to perform transdisciplinarity. This trend was also apparent from the literature I reviewed, as research often reported on the challenges and opportunities of transdisciplinarity in abstract terms, but rarely with reference to specific tools and methods. However, later in this section, I will go over tools and methods used in practice from a collection of toolboxes and websites.

It should be noted that much of the reviewed transdisciplinary literature is contextualized around sustainability research as the centre for transdisciplinarity, often not explicitly including design or philosophy as one of the included disciplines. When design methods (such as prototyping) have been used, it leads to “complex and theoretically overwhelming for practical application.” (Augenstein et al., 2024) Still, there is a call to make methods and frameworks easier for researchers to navigate in by Augenstein et al. (2024).

The Gluon researcher is a new role that tackles transdisciplinary challenges, and was developed and departs from the idea of design-thinking. In broad terms, the Gluon researcher is much like other transdisciplinary researchers, as they work in transdisciplinary teams with “complex problems.” (Brand et al., 2025, p. 22) However, what sets them apart—or what makes them the ‘glue’ in their teams—is their main “pursuit of shared hypotheses across sciences.” A key takeaway from their work and approach to transdisciplinary work is that *there exist no concrete tools or methods*, for the simple reason that transdisciplinary teams are so diverse in skills and background that the tools should be chosen and adapted from the participants' backgrounds instead (see also Wickson et al. (2006)). In other words, if a team consists mainly of sociologists and computer scientists, then the transdisciplinary worker should adapt methods used in sociology and computer science. This eases the stress of the team participants, but requires more insight from the transdisciplinary worker.

The reviews by Harris et al. (2024) and Vladova et al. (2025) both make excellent overviews of approaches—but not concrete tools—to various issues in transdisciplinary teams. In the following, I try to succinctly list what they found important and might be relevant to my project: acknowledging plurality; avoid complex jargon; take time to build relationships; use (neutral) facilitators or ‘boundary spanners’ (similar to the Gluon researcher); recognize different epistemologies; engage all partners; make results mutually understandable; work face-to-face; have a flat hierarchy; and “establish systems of coreflection and learning.” Since logics will conflict and tensions will arise between disciplines, they also suggest that researchers need to be able to accept ambiguity—or, as one might say, it’s necessary to *stay with the trouble*. The Gluon researchers’ role encompasses very similar goals, with the most important being *building relations* and *creating shared values and intention* (Brand et al., 2025). Relation building is central to working across disciplines, and some scholars believe that transdisciplinary work should strive to become even more people-centric (Augenstein et al., 2024). An emerging pattern in the Gluon researchers’ work is what they call ‘productive conflict’ or might otherwise be referred to as a patchwork of differences. Similarly, Scholz et al. (2024) believe *socially robust orientations* (co-developed orientation that is understandable, action-guiding, and acknowledges uncertainty) are essential to transdisciplinary work: “All participants should share the guiding question and have some level of concern [...], but they may follow different interests.” (Scholz et al., 2024, p. 2) Furthermore, understanding the epistemological limits and methodological differences of other disciplines will help make the friction productive (Vladova et al., 2025).

TOOLS USED IN PRACTICE

A singular or the best transdisciplinary tool, approach, or method does not exist (Harris et al., 2024). Some general guidelines for transdisciplinary work are given by several authors. “Encounters” or facilitated spaces for co-working create better conditions for communication across disciplines, such as attending workshops, since they close the gap that is both physical and epistemological between workers from different disciplines (Newman, 2024). For optimal transdisciplinary work, communication, proximity, trust, and mutual understanding are essential (Newman, 2024; Vladova et al., 2025).

I have gathered suggestions on multiple websites and databases that contain various methods related to their work in one way or another. Some of these databases have a wide catalogue of tools at their disposal, where I did a targeted search for tools related to transdisciplinarity.

In the “Transition Makers Toolbox” (n.d.), some tools appeared to be very relevant to this project, while failing to do so in the practical manner we seek from this review. One such tool is *Experiencing Interdisciplinarity*, which is a tool to analyse interdisciplinarity in order to gain an understanding of “the power of connecting disciplines” by making a mind-map. Besides showing the power of interdisciplinarity, this tool also aims to train participants in critical thinking. Therefore, although it is a tool used for inter- and

transdisciplinarity, it does not help us directly communicate or bridge actively from one discipline to another. However, *The Volcano of Change* and *Travelling Concepts* both seem like interesting sources of inspiration for tools to use for this project.

THE VOLCANO OF CHANGE

The Volcano of Change is an exercise used to “[find] broader perspectives” by using a Volcano as a metaphor for urgency (“Transition Makers Toolbox”, n.d.). This exercise is similar to the exercise of ‘ask the other questions’ from Kathy Davis (2014), as it includes an aspect of critical self-reflection related to a given subject: “Which issues rumble beneath the surface, erupt into view, lie dormant or are considered extinct? How are [you] connected to these issues?” (“Transition Makers Toolbox”, n.d.) This tool asks you to rate *observations, feelings, thoughts, and responses* based on urgency.

The main takeaway from this tool is to use a collaborative metaphor that can become the framing of a given problem or area of interest and a way to relate to a given subject.

TRAVELLING CONCEPTS

Travelling Concepts, also called nomadic concepts, focuses on “concepts that move between disciplines and take on different meanings along the way” (“Transition Makers Toolbox”, n.d.). Nomadic concepts are a way for researchers to generate knowledge together that does not belong to a single discipline (“Nomadic concepts”, n.d.). Such concepts do not have one fixed definition, but remain in a state of becoming through their use. Instead of closing a concept down, nomadic practices aim to explore where a concept can go and what it can do. In theory, this offers a way to avoid the categorization of concepts, which can quickly become reductive. By encouraging attentiveness to context, nomadic concepts can help research teams produce more nuanced and higher-quality work through a more fluid shared understanding.

As a theoretical tool, nomadic concepts can be difficult to execute within real teams. Different toolboxes have different approaches as to how to engage with nomadic concepts. In general, team members are asked to engage critically and sensitize themselves to a theoretical concept. The examination can be collaborative, but is often based in theory by reading two or three texts and receiving a lecture from an expert on the subject. “Nomadic concepts” (n.d.) suggest using the theoretical grounding as a backbone for participants to share their own work, which is discussed and reflected upon collectively. Peer feedback is subsequently incorporated into the project’s shared knowledge collection. This is all done in the spirit of ‘symmetrical learning’. “Transition Makers Toolbox” (n.d.) suggests creating a material manifestation of the commonalities and divergences between the different disciplines’ understanding and use of the concept in focus to “to practice communicating across disciplinary boundaries.”

Co-designing is something that is more naturally featured in a designer’s practice. However, the inclusion of co-creation in a transdisciplinary toolbox is an affirmation that it does not require expert know-how of the makers, and instead, this motivates co-creation as one of the desired tools to understand and talk across disciplines. Furthermore, this seems to inform us that co-creation can be a good way of closing an event that consists of multiple activities.

Finally, meta-activities that can be fruitful for transdisciplinary work and mixed with other activities are: prolonged engagement in the work or collaborative space; sensitizing activities that help workers get a better initial feeling for the project and dynamics between disciplines; and collaborative art, as a common experience and expression that helps build bridges (“Collaborations for Future”, 2024). These are very interesting activities that could be interesting to include in the project. These activities are not foreign to design research, such as sensitizing activities, being an effective tool for preparing participants for upcoming research sessions, and can be applied in combination with other tools and activities in this project.

FUTURE DEVELOPMENTS OF TRANSDISCIPLINARY WORK: SOME INTERESTING PATHS

In the context of this project, some interesting avenues of future research emerged. Augenstein et al. (2024) believe creating and having narratives and stories in common is a great way of improving collaboration across disciplines. If we distance ourselves from the transdisciplinary review for a moment; this is reminiscent of how a co-speculated critical fabulation can help authors create shared mental reference points—co-laboured to be partly aligned, and partly exist in *Excess* (de la Cadena, 2021; Rønnest & Riemann, 2025; Rønnest et al., 2026; Rosner, 2018)

Chilisa (2017) proposes decolonizing transdisciplinary work by critically assessing and working with the Western epistemology: “western research paradigms are contested and declared invalid, because they are based on a culture that has been made static and essentialized.” Bridging between different knowledge systems in transdisciplinary work has “unclear practical guidance”, and other ways of knowing have therefore been disregarded (Augenstein et al., 2024). To decolonize this work, Chilisa propose using “third space methodologies,” which include looking into “the space between.” In the same context, “moving toward a focus on humility and acknowledging diverse values seems one of the first steps for engaging with diverse knowledge systems” (Augenstein et al., 2024, p. 6) Again, we sidestep the transdisciplinary review to make a meta-comment: We are similarly interested in taking distance from the Western epistemology in order to *think otherwise*—to go besides the epistemological confines we already possess and are restricted by. This positions my research in the middle of a transition inside the transdisciplinary work that also deems decolonization important, as we deem it essential for the future of design.

Lastly, there exists a consensus that long-term engagement is important for transdisciplinary work. Augenstein et al. (2024) believe it is necessary for what they call “transformative change.” A core theoretical idea underlying this research project is the idea of *sensitizing activities*. In brief terms, prolonged engagement helps sensitize a person to a concept; aligning both with the findings in transdisciplinary research, but also informing us that consecutive sessions are important for this research project in order to create more reflections in developing new conceptual grounds in-between design and philosophy.

DISCUSSION OF TRANSDISCIPLINARITY

In this review, I wanted to examine how contemporary transdisciplinary work is understood and practised. I specifically aimed at understanding which methods are used, how rigid their boundaries are, and where this thesis project might position itself in relation to that landscape. Instead of collecting a set of tools that are ready-to-use for my case, this review highlights a tension and possible gap in the literature: while transdisciplinarity seeks to move beyond disciplinary boundaries, it remains limited by those same boundaries and structures.

GOAL ORIENTED

This review, although not exhaustive, suggests that transdisciplinarity remains oriented towards application and making solutions. This is also the case in works where hierarchies were focused on being flattened and ambiguity was used intentionally, or when the work aimed to address complex problems by embracing plurality. This orientation towards common problem definitions and shared goals risks closing down the conceptual space, especially if the work involves vastly different ontologies or epistemological commitments. I call this “goal-driven” in Figure 3 (next page). Many of the methods in transdisciplinary work that are inspired by design come from the lineage of design-thinking, rather than more exploratory or speculative design practices, which could enable entirely different functions. Across the reviewed literature and resources, no tools or methods explicitly attempt to engage collaboration or produce knowledge in non-modern ways. Instead, most orient themselves toward alignment, productivity, and solution-making.

This could suggest that the lack of tools is not coming from an unwillingness to engage in nondisciplinary spaces, but rather, that maybe the discipline of transdisciplinarity is unable to move beyond modern modes of producing/organizing knowledge.

DEFINED BY DISCIPLINARY BOUNDARIES

Transdisciplinary work is consistently used to describe a movement between disciplines in the reviewed literature. That movement between disciplines is often supported by roles such as boundary spanners, facilitators, or Gluon researchers, whose function is to translate, align, and hold together different epistemologies, methods, and values. Those roles only exist because there are disciplinary boundaries. In other words, the transdisciplinary worker or researcher does not work without boundaries, and in this sense, transdisciplinarity is a way of suspending boundaries temporarily (until a project concludes) to enable collaboration, but not to remove them completely. Once a project concludes, participants might be transformed slightly, having gathered new perspectives, but eventually end up returning to their respective disciplines. Transdisciplinarity seems to be a conditional and temporary configuration: a momentary assemblage that is defined by disciplinary difference instead of a continuous non-disciplinary position. Although transdisciplinary work focuses on openness, it is often limited to short durations and relies on somewhat stable disciplinary identities that workers can return to.

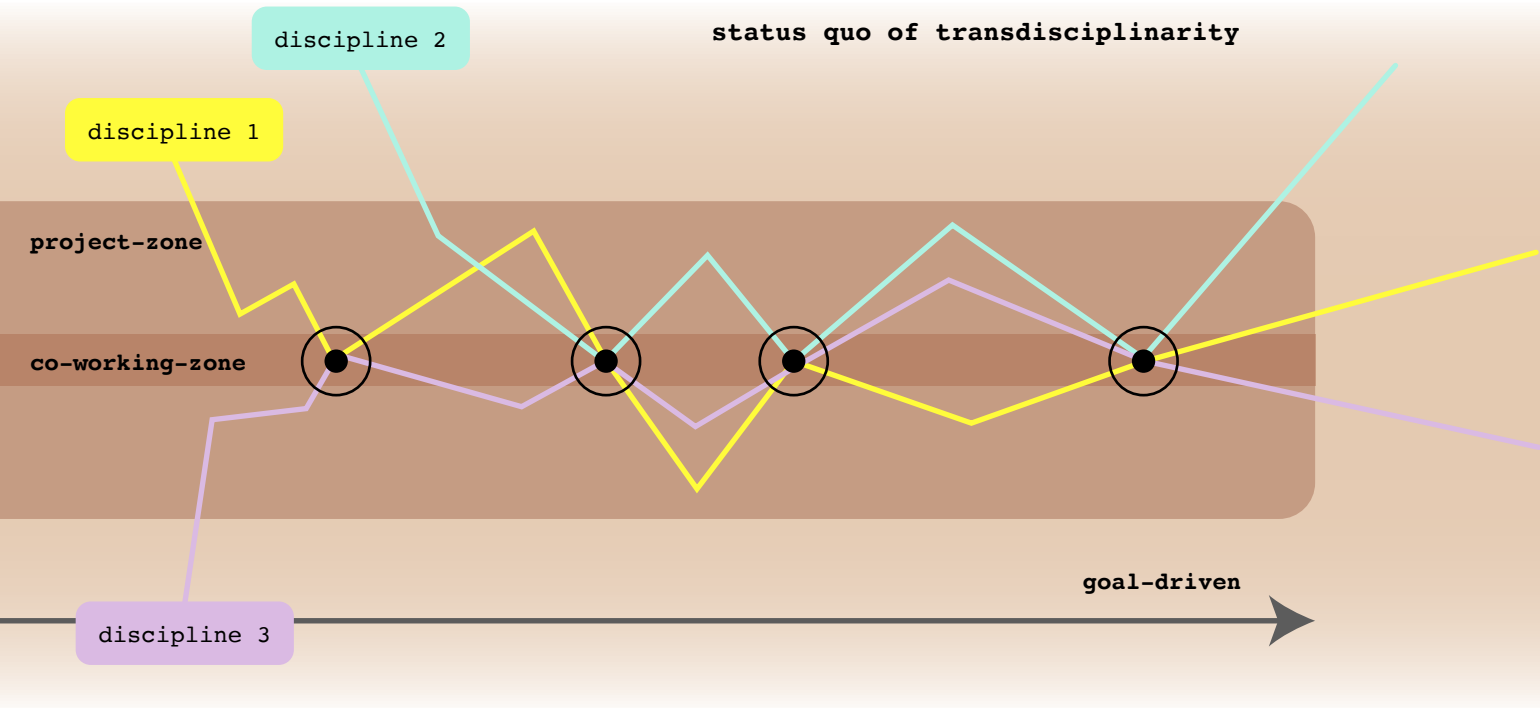


Figure 3: A representation of how disciplines meet to exchange in the middle (co-working-zone) and stay close (within the project-zone) during a project. During the project, they never quite dissolve difference, and stay distanced by their disciplines. When a project concludes, they return to their discipline, albeit with new perspectives. This dynamic is goal-driven, as indicated by the arrow.

REPLICATION OF MODERN DIVIDES

Disciplinary boundaries might be compared to other modern splits, such as the division between theory and practice. Although those distinctions have historically had a purpose, enabling specialization and responsibility across different sectors, they can also become limiting constructs. So a pressing question then becomes what happens when we shift from moving between disciplinary boundaries to open up those spaces that are not defined by disciplines.

Manning and Massumi argue that interdisciplinarity remains limited by the temporality and returning to disciplines, aligning with the findings in the review above: “This existing “interdisciplinary” tendency—where collaboration really means that disciplines continue to work in their own institutional corners much as before, meeting only at the level of research results—would do little to create new potential for a thinking-with and -across techniques of creative practice.” (Manning & Massumi, 2014, p. 88) Simply moving between disciplines and aligning results across them does not move beyond modern separations, but instead reproduces them. From a Baradian perspective, disciplinary

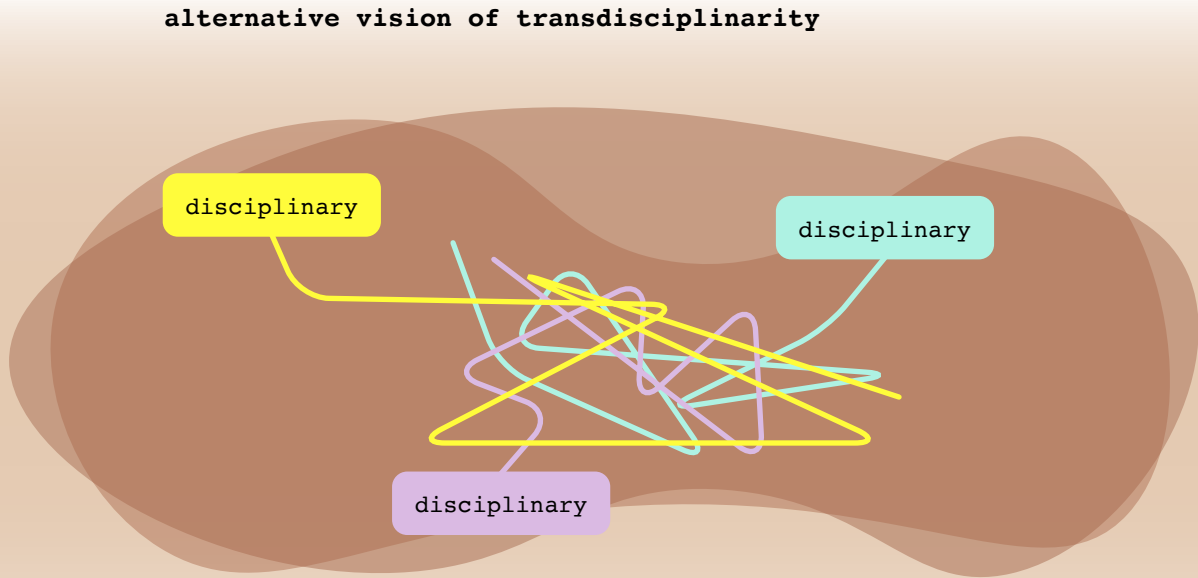


Figure 4: An alternative space. In this space, disciplinaries (people from disciplines) may meet without a specified goal. The liminal quality of being in this space enables creativity and suspension of categories, leading to unexpected results.

boundaries and the division between theory and practice cannot be seen as neutral, but are instead constructs that we use to understand the world through (Barad, 1999). The distinctions we make have material consequences, such as determining what types of knowledge are legitimate, according to what Barad calls 'material-discursive practices'.

This split, Manning and Massumi (2014) explain, is often depicted as theory being produced in one place that is then later applied elsewhere in practice. They argue that the separation between theory and practice is wrongly framed as separate, since their creative works “tend, by nature, to overflow sectorial and disciplinary boundaries, and to fundamentally call into question the traditional split between “theory” or “pure research” on the one hand and “practice” or “applied research” on the other.” (Manning & Massumi, 2014, p. 84) According to Manning and Massumi, it is in neoliberal logics of productivity and deliverables that knowledge production gets flattened into either theory or practice. To them, thinking happens in doing, and doing is already conceptual. Importantly, they do not argue that we should abolish these terms, but that the clear separation between what is 'thinking' and what is 'doing' is when the separation becomes problematic. Theory and practice, or disciplines, become the apparatuses we use to understand and produce the world through, and are made through agential cuts (Barad, 1999, 2007). That is to say: in the Western/science ontology, we are seeing these boundaries as natural, while they are entirely a construct. By suspending and exposing these cuts, we get the chance to question and be critical of modern epistemology, potentially shifting the boundaries.

THIS THESIS FOCUS

In this review, a few tensions have been identified. This thesis project is placed at the centre of these tensions, and will humbly try to question and engage with what it means to work in a non-disciplinary space. However, in this engagement, there will be no claim as to exactly what this type of space looks like. Instead, this project sets out to humbly try to be one of many examples of such a non-disciplinary space—even if we intentionally engage “design” and “philosophy.” In this sense, this project will try to contribute to the field by reorienting towards ambiguity and conceptual and disciplinary openness, not new tools.

GOING FROM LITERATURE INTO MAKING: *THE GAP*

In the above reviews, two tensions and possible gaps are revealed. Firstly, liminality has been used primarily as an analytical tool to *describe* conditions that are “in-between”. Even when authors expand their meaning to an ontological level, it is still used descriptively. This is the first gap this thesis will attempt to occupy:

Can we contribute to design research by understanding and using liminality generatively?

To enter into liminality through a material practice as a space where knowledge emerges, the idea of *material correspondence* is introduced. The idea of material correspondence is properly introduced in the next chapter.

Secondly, transdisciplinarity has established itself by developing ways of working across disciplines. However, these methods are oriented towards aligning people from different disciplines, using shared goals and solution-oriented thinking. The status quo of transdisciplinary methods only temporarily puts off disciplinary roles, only to somewhat establish them again both during a project and after it ends. The review found no tools or methods that explicitly attempt to produce knowledge in non-modern ways, e.g., by entirely suspending disciplinary categorization. In this sense, transdisciplinary work is at the moment not suited for the production of knowledge that exceeds modern modes of organizing knowledge. This thesis will attempt to occupy this gap by asking:

Can we contribute to transdisciplinary research by examining what emerges when transdisciplinary encounters are engaged for epistemological openings and not problem-solving?

The theory presented in the first section supports how we are going to address these questions while keeping our commitments to the presented philosophies. Naming ‘the modern’ in this thesis delimits a particular way of knowing that this research is situated in. Asking ourselves how to ‘think otherwise’ engages seriously with the politics of knowledge regarding questions of power, violence, and possibilities, since modern knowledge is inseparable from the critique of colonial violence. In other words, to ‘know’ or ‘think otherwise’ is to unsettle a universal claim to knowledge that became dominant through a systemic destruction of alternatives. The critique of logocentrism turns us towards a material practice, while the critique of representationalism guides us to not seek conceptual closure. We attempt this through design, however, without supposing that design is *the sole solution*.

Barad’s onto-epistemology provides an ‘apparatus’ for understanding how knowing and being are entangled, while border thinking names the epistemological stance the thesis seeks to practice. However, in this thesis, liminality names the space of border thinking as a generative in-between state where disciplinary, epistemological, and ontological categories can be suspended, questioned, and reconfigured. *This is not a space I claim to discover, but one I seek to enter through design:*

The question is not necessarily what border thinking *is*, but instead what it *feels like* to think from the border and what design might contribute to that practice.

The experiments that are presented in the following chapter are all attempts to approach this space. There is no aim to map it definitively. We are instead interested in seeing what emerges when design becomes a practice of border thinking.

What specific kind of ‘liminality’ emerges from/through designing? What is its particular *taste* or *character* like?

In the discussion following the experiments, I return to ask: *what did design add to this conversation?*

LIMITATIONS OF LITERATURE REVIEWS

In both the review of liminality and of transdisciplinarity, there is a lack of rigour. In terms of the review of liminality, I could have expanded the search beyond design and HCI literature. All alternative terms, such as border thinking, caesura, excess, and so on, should have been scrutinized at the same level to give a better overview of what the different terms describe and how they appear in design contexts. An expanded search would also provide insights into whether or not some terms are used in the same way as I intend to use for *liminal epistemological spaces*.

Similarly, the review of transdisciplinarity is also severely limited by the limited scale on which it was carried out, as well as my lack of knowledge within the field of transdisciplinarity.

In both cases, the reviews should be seen as non-exhaustive and only examine small slices of existing literature. The reviews were restricted by temporal limitations for a thesis project, among other things. In the conclusions of both chapters, some generalized statements are made to make the foundation for the thesis work more uniform and easier to both expand on and communicate.

CHAPTER 3

DESIGN EXPERIMENTS

INTRODUCTION TO DESIGN EXPERIMENTS

In this chapter, a series of design experiments is conducted as part of the re-search-through-design that this project inquires into. Theory and practice are both present in each of these experiments to inform them as well as the results of them.

Each experiment informs the next. The progression between experiments is responsive and iterative, meaning they build on insights from what worked and did not work in the previous experimentation. In general, all of them step toward informing the general research question.

In the following table, all of the experiments are listed in chronological order. Indicated next to each activity are the tools, approaches, tactics, and methods that were part of the experiments or used to form them. These are explained in more detail below.

Walking a Kite	Provotype, co-creation, embodied engagement
In A Box (Prototype)	Provotypes, material speculation, critical fabulation
In A Box (Group-setting)	Provotypes, material speculation, critical fabulation, semi-structured interview
Representation Tool	Provotype, material speculation
Two Professors: Interviews	Sensitizing, provotype, semi-structured interview
Two Professors: Co-Speculations	Provotype, material co-speculation, critical fabulation
Workshop: Monsters & Ghosts	Sensitizing, sketching, enactment, critical fabulation, material co-speculation

Material correspondences

TOOLS & METHODS FROM DESIGN USED IN THE EXPERIMENTS

The experiments are all based on existing tools, approaches, tactics, and methods within the design field, although in many cases, they are bent or hybridized from their defined uses to fit the experiments and what I call *material correspondence* (working definition expanded below). In this subsection, I will briefly go through the different building blocks of tools, approaches, and methods that I use and develop from throughout the experiments.

ARTEFACTS AS PROVOCATIONS

What is called a ‘provotype’ is fundamental to many of the design experiments in this thesis. In contrast to how prototypes test functionality, provotypes provoke a response or conversation through their design as artefacts (Boer & Donovan, 2012). They work with questions, ambiguity, and being incomplete, which opens a space for critique (Bardzell et al., 2012). ‘Conversation pieces’ or ‘conversation starters’ is used more broadly but with a similar intent: to get a reaction and start a dialogue about a subject (“Conversation Piece - Impact At The Core”, n.d.; “Conversation Piece Design”, n.d.; “Conversation Pieces”, n.d.; “Conversation Starters”, n.d.). Both of these methods make use of artefacts as ‘boundary objects’; understood as an object that is shared across communities or disciplines but with different interpretations (Pierre Johnson et al., 2017; Star & Griesemer, 1989; Terlouw et al., 2022). As boundary objects, the artefacts enable exchange and generative friction between different ways of knowing instead of coordinating a shared understanding.

SENSITIZING ACTIVITIES

Traditionally, ‘sensitizing’ refers to how a participant ‘warms up’ to a certain subject or question *before* a (main) research activity (Stappers & Giaccardi, 2014). In design research, participants are often asked to engage with a sensitizing activity a few weeks or days prior to a co-designing activity to be able to contribute more meaningfully.

However, in more-than-human design, the term “sensitizing” has expanded in meaning and intent to instead describe how a participant experiences an ontological shift rather than raising awareness. In this context, the “participant” refers to both the researcher and non-researcher, as the ontological shift *is part of the research*, meaning the researcher cannot pretend separation. In the more-than-human design context, sensitizing activities are often utilized to decentre the human and gain understanding of non-human temporalities and relations. Such engagements also require a consistent engagement over a much longer duration—often many weeks (Hansen & Rolighed, 2024) or months (Bell, Coffie, & Alistar, 2024; Wakkary et al., 2018, 2022). In contrast, other researchers found that workshops were less efficient in gaining more-than-human sensibilities than take-home toolkits (Wilde & Lenskjold, 2023).

Figure 5: A diagram of all design activities and what tools, methods, and approaches were used.

DECENTERING TACTICS

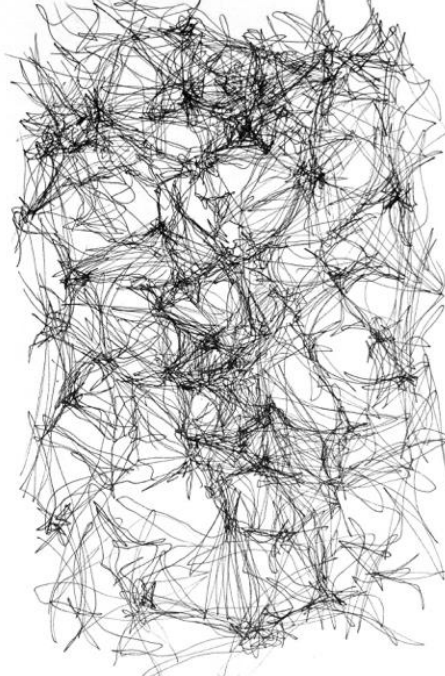
‘Decentering tactics’ shift attention away from human-centred perspectives—*anthropocentrism*—toward relations with more-than-human actors, materials, and environments (Forlano, 2016; Nicenboim et al., 2023). To decenter means to move the human from the centre of the design concern, and instead engage with more-than-human entanglements. Tactics for decentring enable shifts in perspectives (e.g., by sensitizing) and attending to what emerges when nonhuman agencies are brought forward. Nicenboim and colleagues (2023, 2024) have done thorough reviews of decentring tactics and practices. These include “ethnography with nonhumans, practicing ‘noticing differently’, and designing speculations” (Nicenboim et al., 2023, p. 1—the latter of which will be the main focus for this thesis and is briefly presented in the following subsection).

WAYS OF SPECULATING

‘Speculation’ has become central to design research as a way to generate knowledge not bound by what currently exists—it is *speculating* on alternative scenarios and realities. Within practices and methods of speculating, design artefacts are used to pose questions and challenge assumptions in order to imagine alternatives—ultimately acting as “generators of knowledge” (Wakkary et al., 2015, p. 106). In this space, ‘design fiction’ (see, for example, Foster et al. (2025)) and ‘critical-speculative design’ (see, for example, Dunne & Raby (2013) or Mitrović et al. (2021)) are among the most popular methods for speculating. *Material speculation* extends speculating by emphasizing artefacts’ role in critical inquiries, including their weight, texture, and presence in the world (Wakkary et al., 2015), as opposed to images or scenarios. The artefact has agency in creating meaning *with* the participant.

SKETCHING

Sketching has been used in design research as a generative method for thinking, letting concepts emerge, and as an autoethnographical method in “conversations with myself” to produce insights that were otherwise unavailable verbally for the researcher (Gamboa, 2022), or to question and generate insights into philosophical concepts (e.g., Ingold’s correspondence) (Hummels, 2024). In workshop settings, sketching can also be dialogical between participants (Vasconcelos & Gamboa, 2025). Sketching enables externalization of abstract and conceptual thinking and becomes a physical and embodied way of generating theory. In the last design experiment of this thesis, sketching will be used as one of a few methods for decentring and investigating oneself.



A sketch of Tim Ingold’s *meshwork* by Caroline Hummels (2024).

ENACTING AND ROLEPLAYING

Enactment has also been used in design research to practice alternative worldviews and ethical position (Light et al., 2024), to act within a speculative scenario to make abstract futures tangible (Elsden et al., 2017), and to reveal tensions between personal values and professional context (Watkins et al., 2020). Oftentimes, enactments are presented as *live action role-playing* (LARPing). Enactment allows participants to decenter by shifting from being an observer to acknowledging themselves as already part of an entangled system.



As part of the CreaTures project, participants enacted the animals of Finsbury Park to craft “*The Treaty of Finsbury Park 2025*” (2025)

CRITICAL FABULATION

Tied to both embodied practices and ways of decentring are critical and speculative fabulations. ‘Critical fabulation’ is a method of storytelling that engages critically with things that are not fully known, and can be used to reevaluate and critically assess assumptions and stories we tell ourselves. One such example is Saidiya Hartman engaging with the violent and erased histories of enslaved women in the Atlantic slave trade, and critically fabulates experiences that have never been documented (Hartman, 2008).

Critical fabulations have further been extended to design research as a way of speculating otherwise, allowing participants to engage with concept, relations, and possibilities through narrative (Rosner, 2018). Through fabulating, researchers have found it enables relating and entangling with more-than-humans (Søndergaard, 2023). In fabulating, the author embodies the stories and environments that are authored, which further connects them to exceed their ontological standpoint (Rønnest et al., 2026)—enabling further possibilities for decentring.

MATERIAL CO-SPECULATION

‘Material co-speculation’ expands on the idea of material speculation by emphasizing the dialogue and relational elements that happen in speculative inquiry through the material. Material co-speculation also shifts from ‘creation for others to encounter’ to ‘multiple people thinking together through/with artefacts over time’. In Wakkary, Oogjes, and colleagues’ experiments, philosophers engage continuously in their own home with a ‘tilting bowl’ over long durations (2018, 2022). The tilting bowl, designed by the research-team, acted as an agential co-participant in the engagements, shaping the ongoing correspondence.

Speculation opens possibilities that can be used to both question and build new ideas on. Co-speculation builds on speculative work “by creating alternative presents and near-futures [...] in ways that incorporate non-design experts” (Desjardins et al., 2019, p. 699). It is about thinking together without necessarily arriving at a consensus. The knowledge that emerges from material co-speculation is distributed and relational (including both humans and nonhumans), and stems from the encounter.



The tilting bowl used for co-speculations by Wakkary et al. (2022).

MATERIAL CORRESPONDENCE: THESIS METHODOLOGY

Throughout this thesis, I expand on material co-speculation as a methodological orientation with what I call *material correspondence*, while using the tools and methods presented above. The experiments are attempts to think with others through artefacts to see what might emerge in the encounter. This means that material correspondence departs from material co-speculation by not only designing artefacts that ‘become in the encounter’ (artefact agency), but also how participants (designers as well as non-designers) respond materially. It is not a counter-position to material co-speculation, but instead a ‘reactive’ orientation of it.

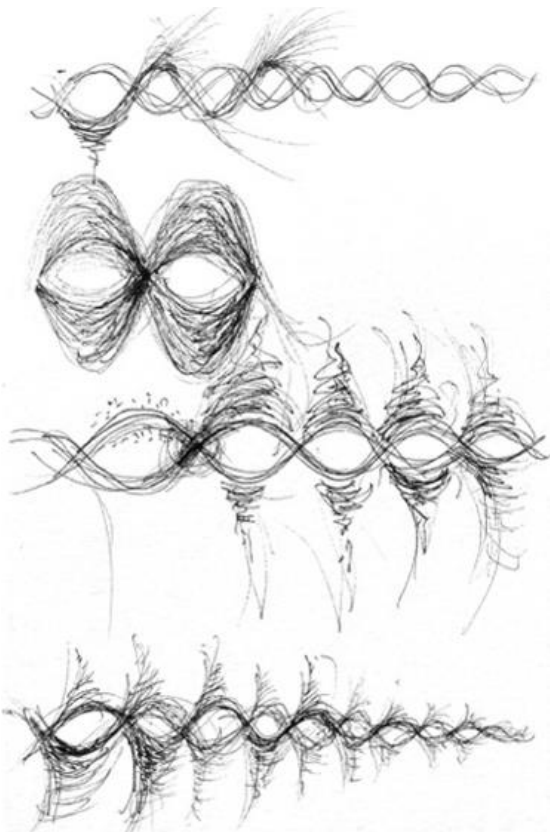
CORRESPONDENCE ACCORDING TO TIM INGOLD

The term ‘correspondence’ is drawn from the philosophy/ontology of Tim Ingold, especially as presented in *Correspondences* (2017) and their chapter on solitude with Sophie Krier in *Designing in Dark Times* (Staszowski & Tassinari, 2021). In their sense, *correspondence* refers not to communication (as transfer of information from one party to another), but instead as *a form of going along together: moving with, attending to, and responding to the world and each other in an ongoing process.*

To Ingold, the concept of correspondence is developed with his idea of meshwork, which describes the entanglement of lines of life and movements. In the meshwork, beings are not statically taking a position but instead move along the lines that interweave with others. In this ontology, knowledge emerges through the movement of correspondence between beings, materials, and environments, instead of being fixed ‘truths’.

MATERIAL CORRESPONDENCE AS AN ‘EXTENSION’

Ingold’s philosophy has a broader history and many more commitments than I go into here. In this thesis, it is used to emphasize the implications the artefacts, researcher, and participants have on each other when knowledge is generated in a process of engagement between the participants. I use *material correspondence* to specify my focus on how artefacts and material practices can become media through which correspondence occurs. I do not emphasize the same kind of movement between lines of life as Ingold’s ontology does. In this way, although the idea of material correspondence stems from Ingold’s philosophy, it is also a simplification of it in order to be more practically applied in design events and experiments.



Sketches of Ingold’s *correspondence* by Caroline Hummels (2024).

MOVING INTO THE DESIGN EXPERIMENTS

Material correspondence will therefore act as a consistent methodological commitment going through all of the experiments. Each experiment will be an attempt to practice and develop material correspondence. It is to see what happens when thinking comes through making, and knowledges emerges from going back-and-forth between people and the material.

The experiments will surprise or ‘fail’ in various ways. In any case, experiments will succeed as long as they provide insights into taking the next step. The development of material correspondence, and how that gives us insight into epistemological liminal spaces, is emergent and unpredictable.

In the following chapters, I present each experiment: what it attempts to do, what happened, and what was learned and taken into account for the next experiment.

POSITIONALITY

It matters what matters we use to think other matters with (Haraway, 2016). In this section, I will try my best to describe my positionality.

Positionality is sometimes seen as something written for the sake of the reader to skim through to understand where the author is coming from before moving on. But positionality is more important for yourself to understand, so you can understand what thoughts and assumptions you are implicitly taking with you into your work. Without this understanding, it is unreasonable to expect to work in non-modern ways. The modern epistemological stance is precisely the one that claims to come from nowhere, and positionality works against this claim. The positionality is, therefore, an ongoing practice of understanding where this thesis comes from, what is shaping it, and what its blindspots are.

I will start simple: I am a white, cis-male, able-bodied Danish master’s student, taught in a Eurocentric industrial design canon. I grew up in Denmark and have only travelled outside Europe on brief vacations. I have a Bachelor’s degree in Design and Innovation at the Technical University of Denmark, and my Master’s in Industrial Design Engineering at TU Delft—both universities being some of the most technically oriented universities with design educations in Europe. These facts shaped the kind of designer I was trained to be, and therefore what I have to unlearn to do this type of work.

My Bachelor’s education prioritized product design and innovation. As in a typical industrial design education, the designer is positioned as the expert (among experts), as someone who can enter a context and spot what is missing. Although this framing is harsh, there is some truth to it. The position an industrial designer is taught to inhabit definitely has arrogance, rooted in an old and functionalist view that treats design as problem-solving for a market. In my Bachelor’s education, the social aspects of design played a small role. I was trained to make things work, not to ask whose world they were working for. During my Master’s education, I was occasionally exposed to a different view with a more exploratory, critical, and speculative engagement of what design can do. Before design, I studied photography, with a particular interest in provocations through art-photography. This interest in provocation to unsettle people or contexts carries over into this thesis, shifting from visual to epistemological.

The work done in this thesis should also be read through my personal sense of urgency. The feminist, decolonial, and posthumanist theory I have engaged with in the past few semesters put into words frustrations I have had about my design education, among other things. It felt like my education had been completely oblivious to the issues discussed by these authors, and through them, my critique and frustrations could take shape.

Theoretically speaking, I think with feminist scholars and writers, such as Donna Haraway, Karen Barad, Anna Tsing, Marisol de la Cadena, Gloria Anzaldúa, and Ursula K. Le Guin. These thinkers have shaped how I understand knowledge and what it means to think otherwise. But I also need to acknowledge that their ideas have histories that are not mine. Feminist epistemology, decolonial theory, and border thinking emerged

from lived experiences of colonial violence, gendered oppression, and racial exclusion. I have not lived these experiences. In fact, I am a beneficiary of the very structures these scholars critique. I have responsibility to take their ideas seriously and try to do them justice, not only extracting when it is convenient—with the awareness that I will likely misunderstand something along my efforts.

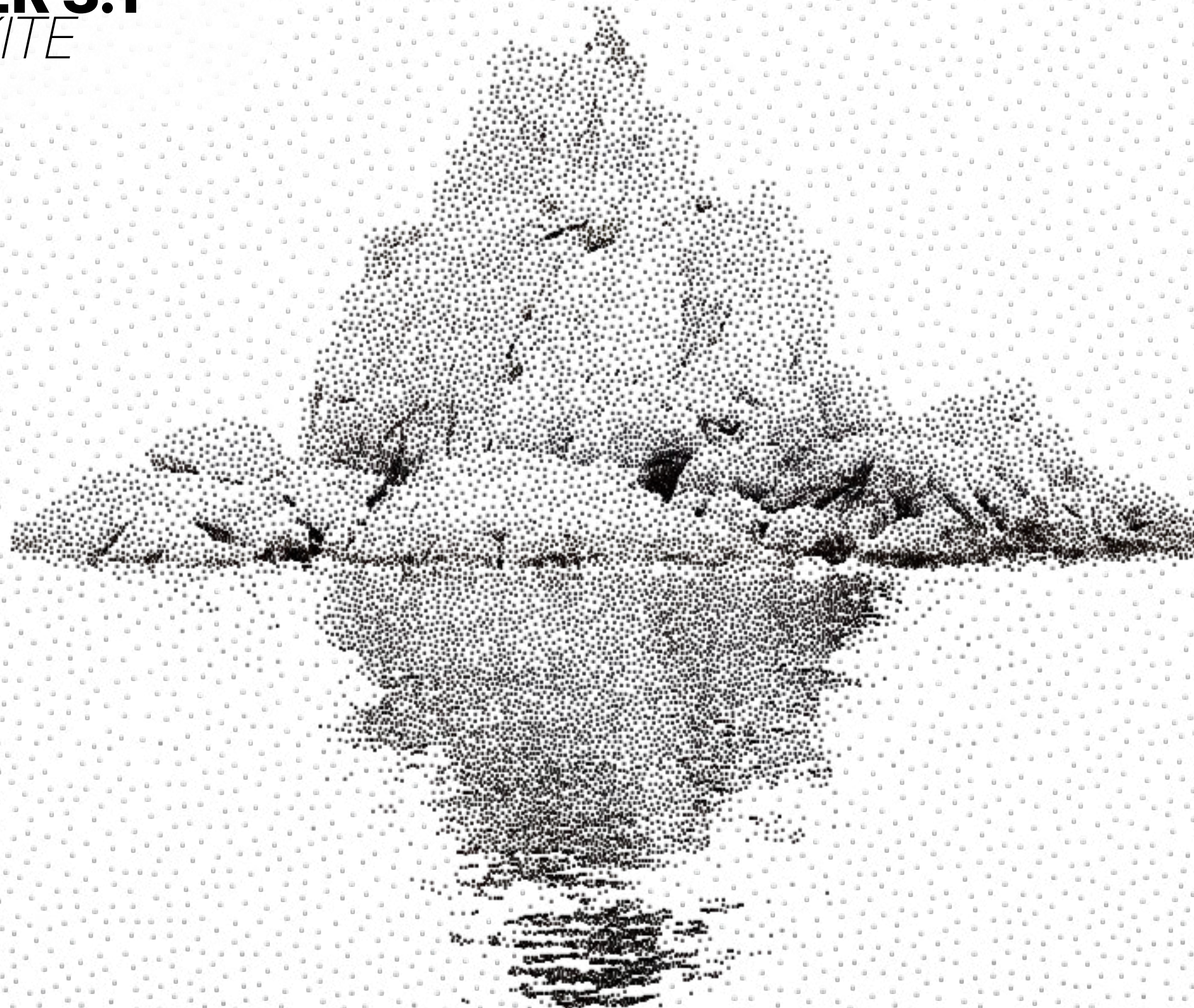
Especially in my introduction of the term “liminal epistemological spaces,” I risk making a shortcut of defining a new concept instead of finding existing work that already holds the same idea. Border thinking, excess, and not-knowing already describe much of what I am reaching for, but come from different positions of margins I do not share. I have tried and will continue to be careful about this. Instead, I aim to humbly build on these concepts, possibly giving them some friction, and hope that I succeed in respecting their lineage. What I can say is that I have spent significant time reading and engaging with these ideas to make sure I take them seriously, and because this work would fall rather flat without that grounding.

I am Danish, and that shapes me in a lot of different ways—some I am still learning to see. Denmark has a self-image as progressive, egalitarian, and humane. Janteloven (the Law of Jane) is an informal code of conduct for social attitude that looks down on individuality and personal success, and lies in the fibre of my way of being a Dane. In some ways, it gives me an instinct towards humility and collective thinking, but in other ways, it flattens difference and makes inequality less obvious. And in this context, Denmark is not innocent. We have colonial history, in both Greenland and the former Danish West Indies, which is often treated as something that does not exist anymore (in public discourse), and therefore not something we should concern ourselves with. But I believe these histories still have traces in our ways of being, even when we tell ourselves they are over. Even the mythology I grew up with reflects patriarchal and violent storytelling. Nordic mythology, as it is commonly told, highlights the masculine Thor and his destructive hammer, or the wars between gods and jætter—but in this mythology, there is also the strength and magic of the (war-)goddess Freyja, and the queerness and shapeshifting that Loki holds. These untold stories actually tell stories about relational, fluid, boundary-crossing figures that are ignored in the dominant retelling (Rønneest & Riemann, 2025). The stories a culture chooses to foreground say something about what it values and what it suppresses.

I bring all of this into the following experiments. Because of the type of work that I will be doing in this thesis—feminist, fallible, embodied, and also situated in both design and philosophy—I take on a very personal tone throughout much of my work. I do so to underline that what I find is neither universal nor stable—the findings are coming from me, and should be read as such.

CHAPTER 3.1

WITH A KITE



WITH A KITE: *HOW TO DO "CORRESPONDENCE"?*

This first design experiment was an artefact-mediated conversation. In it, I used a kite to explore how to extend a conversation by introducing an element of materiality. It was inspired by a decentring tactic presented by Nicemboim et al. (2024)

“The kites were designed to have a (silent) conversation with entanglements of humans and nonhuman, i.e., water, wind, and seeds. [...] the kites made space for material dialogs and for listening-feeling to nonhuman ‘voices.’” (p. 12)

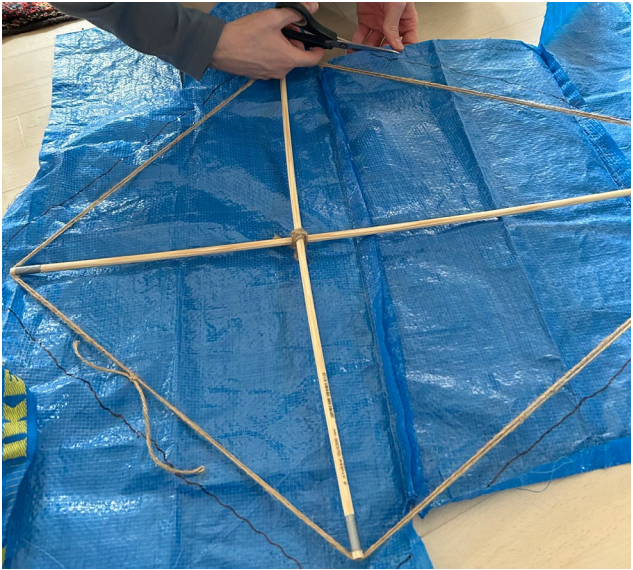
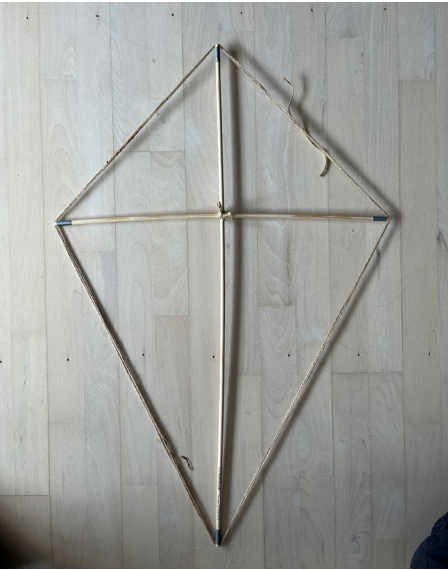
Instead of focusing on having the conversation or listening to nonhuman, I instead focused on what it means to think-through an artefact. I was joined by a fellow Master’s student, who was also trying to sensitize themselves to their own thesis, which was also the focus of the session: Can we extend or influence the thinking and conversation we had—verbally—with or through the material engagement?

This experiment was also a way for me to sensitize myself to my thesis subject; to understand what is and is not included in the scope of the Thesis, as well as what ‘material correspondence’ *even means*, was something I set out to get closer to through this experiment.

The walk took place around the Delftse Hout lake and took around one and a half hours.

MAKING OF THE KITE

Instead of using local materials, like the design experiment presented by Nicemboim et al. (2024), I instead focused on making a kite that would be able to withstand water and would be able to fly, if the weather allowed. The kite was hand-made using wooden sticks, thin hemp rope, some tape, and a classic Ikea-bag. The kite’s tail was split into multiple parts to allow my participant to write resolutions about their own work.



ANNOTATED EXPERIMENT

At first, I asked the participant to ‘put meaning into’ the kite in order for them to relate to the kite and also start thinking about what they wanted to reflect on with the kite before starting to move around with it.



The participant had a hard time figuring out what to write, but ended up being happy about the diversity of reflections and resolutions.

After having reflected on the thesis subject for a bit, we then proceeded to abstract these ideas. Instead of writing specific items, the participant was now asked to create a sketch that represents the story of their thesis best on the back of the kite.

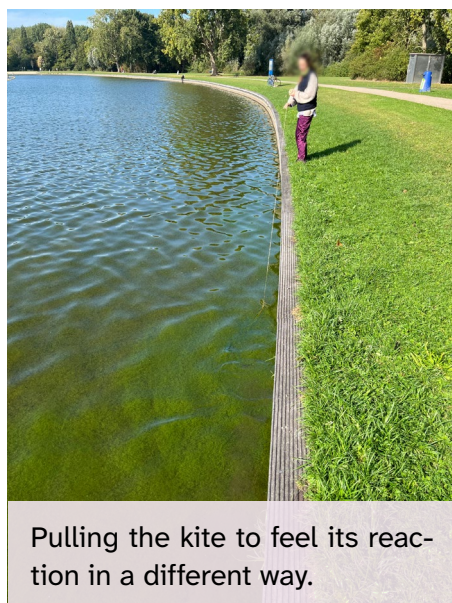
The intent behind these activities was to co-create the artefact before engaging with it. This type of co-creation did not seem to spark a lot of inspiration. This activity was mostly text-based, meaning the medium for co-creation was heavily limited.





Besides the water and wind not being lively during this experiment, we were still able to place the kite in the water and let it drift and have the kite get some airtime by running and biking with it.

However, the participant still had a hard time “getting anything out of [the artefact],” likely because it was disconnected from their context. In this way, the artefact was actually prescribed, imposed, and made the interaction ‘forced’ rather than naturally emerging within their working context.



Following Manning & Massumi (2014), an alternative approach would be to have the ‘event’ structure that helps steer creativity—what they call “enabling constraint” (p. 93)—but without a predetermined conclusion. The outcome would be “improvised” from the “desires and expertise of the event’s particular participants” (p. 92). In this way, the participant should have had a larger impact on what type of engagement and materiality (artefact) we would engage in.

DISCUSSION

In figuring out how the kite was really able to allow us to step into a mode of ‘material correspondence’, I needed to find out if the participant was able to actually extend their thinking about their thesis through the intra-action with the kite and gain any insights.

GENERATIVE IN PLAY: METAPHORS

From playing with the kite, the participant was able to generate multiple metaphors that were interesting on a meta-perspective, relating to both of our works and interests in general: How we need some peace and quiet, and we will eventually come up by ourselves.

- How our issues of modernity are *muddy*.
- The kite not wanting to move, and how we will just have to accept that fact. We cannot stress it or impose a human urgency or agenda onto it. *Action* is something very human, and not something that even exists inside the kite’s ontology (not to be confused with agency).

Further, they also generated some metaphors they would bring into their own work, such as:

- Wanting to be wise or have wise phrases, like a witch or wizard.

The playful interaction did lead to a sense of curiosity about the life of the kite, which was generative for metaphors through a kind of empathic relation to the kite.

IMPERSONAL CO-CREATION

The co-creation aspect did not succeed in inspiring the participant to the degree I had hoped for. So how come? I believe this is partly due to the artefact having been made in advance, and therefore, the participant did not feel any connection to it. To them, this was just a kite with their writing on it. Instead, co-creating a simpler kite, with prepared materials, might have resulted in them feeling a stronger bond to the kite than in this experiment.

SPLIT ATTENTION

The artefact tried to take on multiple meanings (multiple resolutions on the tail), and thus, it tried to become many things at once. This might have limited the potential of the interaction, as the participant and the conversation were then scattered instead of focused on one specific idea. Future prototypes should try not to over-achieve and thereby lose their attentiveness.

IMPOSED AND PRESSURED

As a general rule of thumb with prototypes, it's best not to overly prepare and make them seem too final, in which case, participants might feel hesitant to critique them. In this case, using a conversational piece or provotype, the same rule seems to apply, but for different reasons.

The artefact was pre-made, which made the participant feel pressured to use the artefact in the intended way. Although they were told that they could play around with it, even break it if they wanted to, they still treated it carefully. The participant had a recurring worry about whether they were using the artefact correctly, also asking questions such as “what if I don't get anything out of this?” This pressure most likely made it much harder for the participant to engage with the artefact creatively and let things emerge naturally. Because it was imposed instead of consulted with the participant first, their ownership was reduced, which also reduced the exploration.

NON-CONTEXTUALIZED

In line with being imposed and impersonal, the artefact also felt disconnected from the participant's context. Throughout the activity, we discussed how the kite related to or could be drawn as a metaphor for things relating to the participant's thesis, but felt that a kite was not generative for this. Some parallels could be drawn, but none that felt natural. Instead, the provotype felt random. During the activity, I often returned to what was written on the kite to help motivate the conversation, but the kite itself did not contribute to this conversation.

This leads me to believe that for the provotype to be truly engaging, it needs to relate to the receiver in some way. It could be a personal connection (maybe they played a lot of kites in their childhood?), project-related (maybe they were working with nonhuman persons, such as Marisol de la Cadena's *Earth Beings* (2015)?), fitting to a specific question (maybe if they were more settled or further along in their working context, unlike the participant who was just starting?), or contextualized before it is engaged with (maybe reading a text beforehand or started with an introduction?).

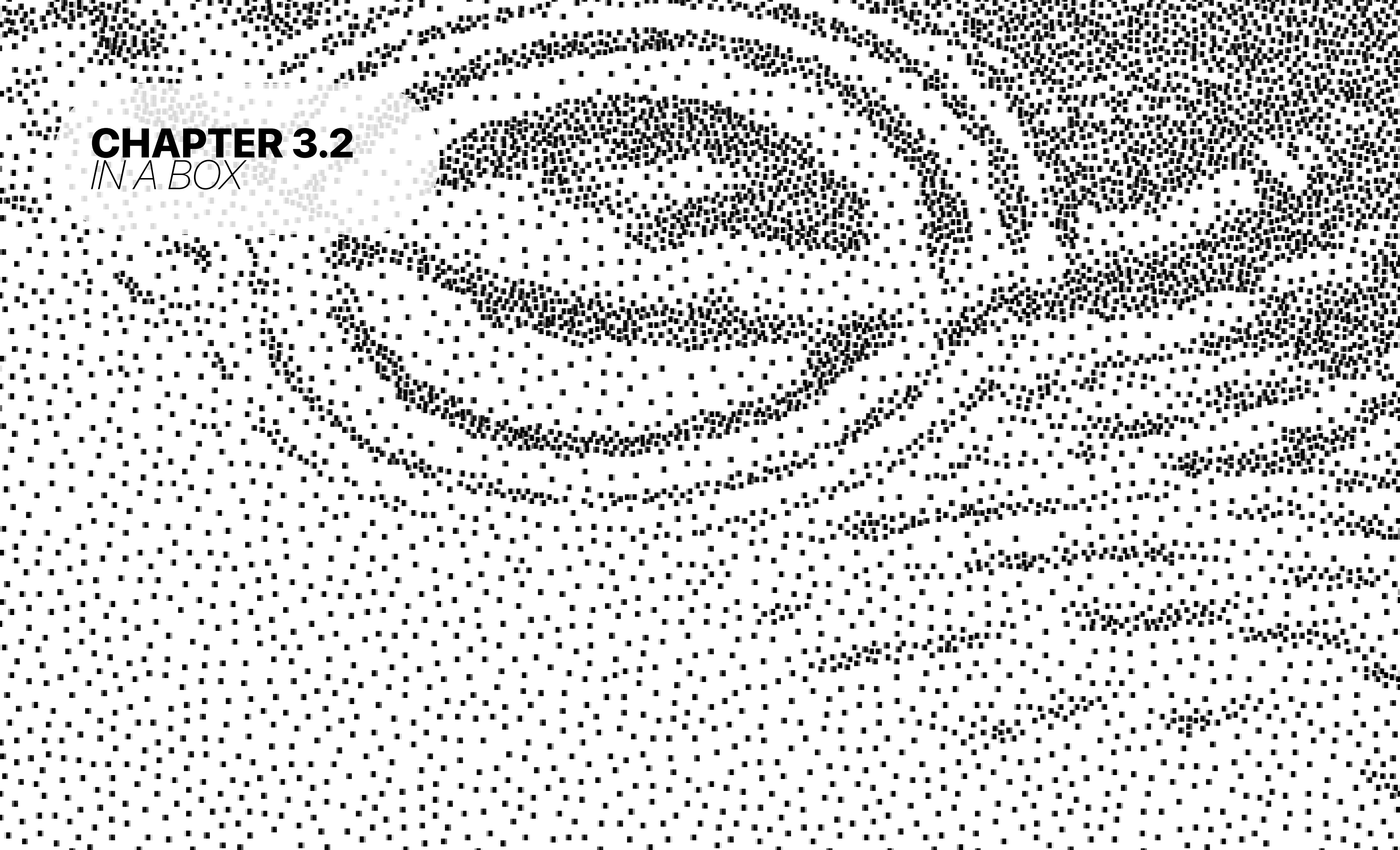
WHAT'S NEXT

It's very possible that many of the insights that I bring up in this discussion are not generalizable, and it might therefore be an error to let them be definitive. However, I choose to value these insights and build on them in the following research activities.

Going forward, it is important to remember that play can be generative, also in unexpected caveats. The medium and contextualization of the artefact seemed to be major roadblocks for the material correspondence, which is why I chose to focus on these aspects in the following activities.



Letting the kite drift into the lake.



CHAPTER 3.2

IN A BOX

CORRESPONDENCE PROJECTS

Besides these two mainly creative sources of inspiration, I also chose to look into a few specific projects that touch on correspondences. It should be noted that for these projects, “correspondence” is used in the more traditional sense, and not as in Ingold’s terminology, nor my own interpretation of Ingold’s correspondence. These projects vary in their function and form.

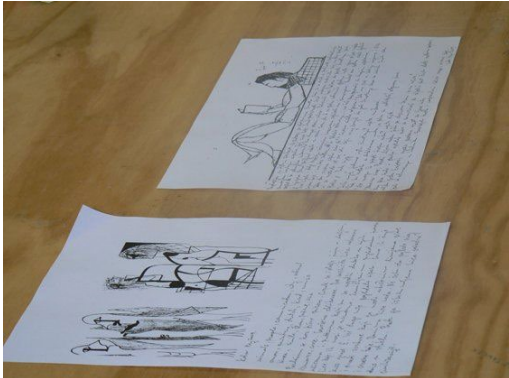
The first project is Sergi Serra Mir’s *Correspondence with Artists*, where mail art is used as a way of developing art projects, as the mail itself is included (Sergi Serra Mir, n.d.). Some of the letters are never sent to recipients, becoming an exercise of reflecting instead, while other letters are sent to wrong addresses to see what happens when the letters take unexpected journeys and strangers respond to them.



Mail art. A part of Mir’s project.

The next project that inspired me was Lee Mingwei’s *The Letter Writing Project*. In this project (often installed at museums), people are invited to enter a small space to write a personal letter they have been meaning to write (Lee Mingwei, 2017). They can choose to leave the letter unsealed, so others can see it, or seal it and have it sent to the person they meant it for. This project was inspiring, as it asks participants to expose a very personal and maybe neglected part of themselves. It does so without asking too much of them, since no one is forced to send the letter or know who it was for. It seems like a good way to create a thoughtful, vulnerable, and highly personal space and interaction.

The next inspiration is a project called *We Correspondents* that ran from 15th of January–5th of June, 2009 (Casco Art Institute, 2009). In this project by Casco Art Institute, correspondence is explored as a concept and artistic method. Instead of focusing on one medium, this project tries to correspond with a variety of media, from postcards to Skype calls, group discussions, and archival data. Some activities were in-person, such as workshops or films (as part of presentations), and were extended into a remote format. Correspondence was used as a critical tool to discuss subjects such as power and identity by connecting histories and viewpoints. What is really interesting about their project is how they corresponded through different means to discuss what the concept of correspondence means; in this case, the meaning changed from being a ‘medium’ to a ‘way of relating’. This sort of meta-exercise feels very close to the structure of this thesis project.

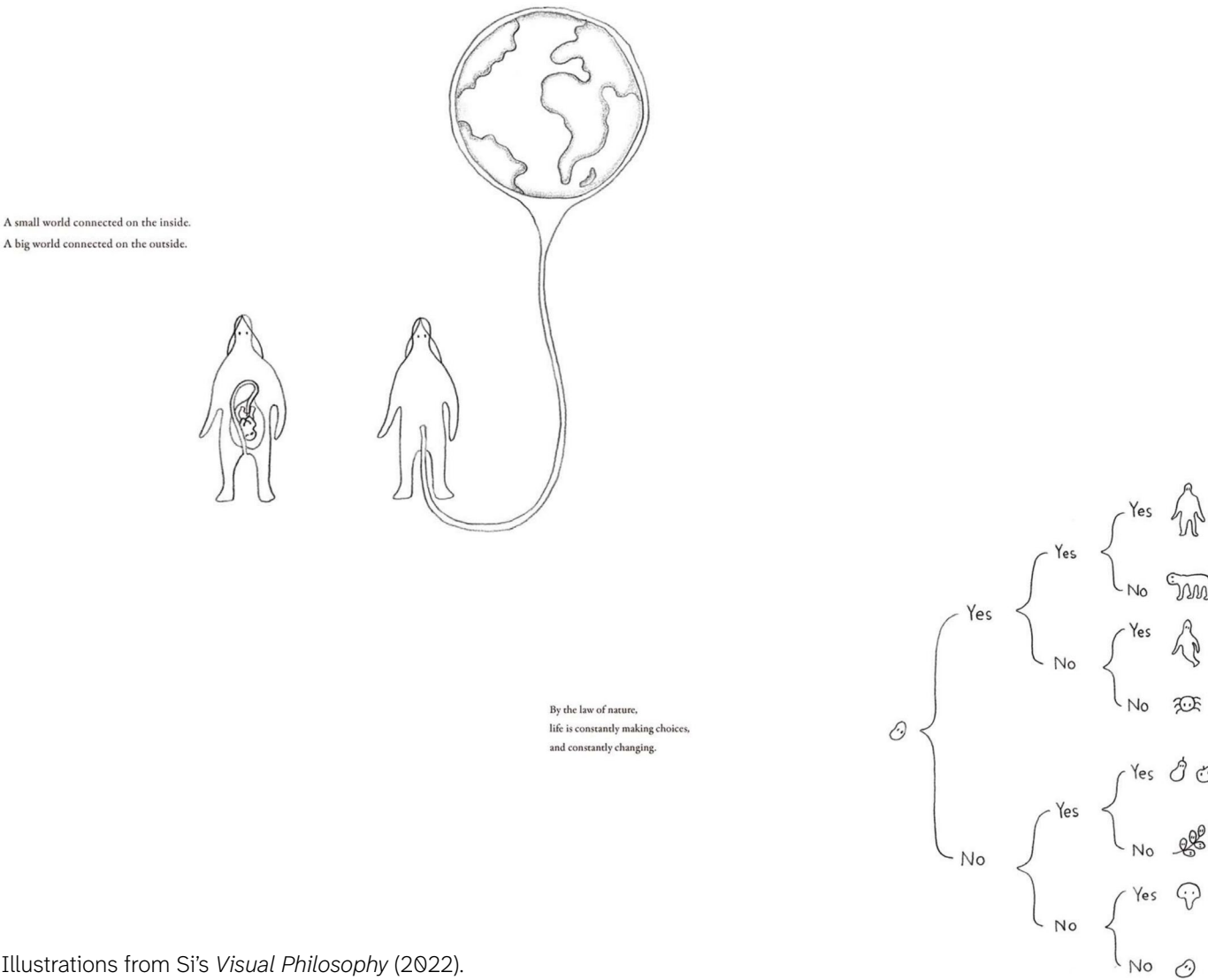


Illustrations from in-person event from the *We Correspondents* project.

Departing from working with “correspondence” literally, my last inspiration is the graphic designer Ruida Si. Especially the book *Visual Philosophy* stands out as interesting (Si, 2022). In this book, Si uses very simple but effective visuals to help us reflect on the written words. In this book, Si reflects on the difference between “I” and “We”. What Si does in this book is also very close to the heart of this thesis:

“By entrusting our thoughts to the imagination evoked by this series of graphics—or, in other words, to a range of meanings that do not exist in natural language—we can reach out to new speculations that go far beyond language or logic.”

In a very simple way, this book was at least partly able to make me reflect on and relate to abstract concepts that are hard to pin down in closed, representational language. Instead, Si’s work uses ambiguity that allows the imagination and thinking to open up.



Illustrations from Si’s *Visual Philosophy* (2022).

INTRODUCTION TO THE BOX EXPERIMENT

Inspired by Fluxus, mail art, and other projects, this experiment is a box containing multiple small artefacts that all relate to the same theme: *agential realism*, and thereunder, *diffraction*. The conversation around this theme is contextualized in a discussion about the intersection between design and philosophy as disciplines, asking *what it means*, and *what your experiences are within this intersection*.

WHY CREATE A BOX?

This experiment builds on findings from the previous experiment. It does so by being contextualized in the field of philosophy and design, relevant to the participants, and using this contextualization to question assumptions and ways of thinking. It also builds on being less imposing by splitting into multiple artefacts and avoiding a prescribed use-scenario, while it retains focus by concentrating the context around a single theme. It could be argued that this experiment does not engage in more personal co-creation, thereby not addressing the last of the four main weaknesses found in the previous experiment.

This experiment does not aim to generate a generalizable output about the intersection of disciplines, as there should be no such conceptual closure. At best, insights generated from this experiment might create a constellation of different ways conversations can unfold and commonalities on what the intersection of disciplines could be.

Ultimately, this experiment aims to inform how to best engage with material correspondence to generate knowledge and unfold what it means to establish an epistemological liminal space. A list of improvements, traps, and next steps will be available to us by the end of this experiment.

WHAT IS IN THE BOX

The box contains four major items: A finger, a poem mixed with diffractive patterns, a manuscript, and a sketch.

A FINGER

This artefact is 3D printed from red PLA filament. The finger is made from a CAD model of a hand by ‘cutting’ out the finger. The ‘cuts’ are clearly visible by the ‘stem’ of the finger, showing how the finger is a categorization we make, but is also a ‘cut’ in categories, splitting it from the hand and the body. This was a literal translation of and inspired by Barad’s *agential cuts*.



A ‘POEM’ AND PATTERNS

This artefact has two sides. One side with a very short ‘poem’ with graphics of a classic double-slit experiment that shows that light and matter have both wave and particle behaviour ‘from above’—an experiment that reveals the fundamental principles of quantum mechanics. The poem reads:

being at one nexus
or the other

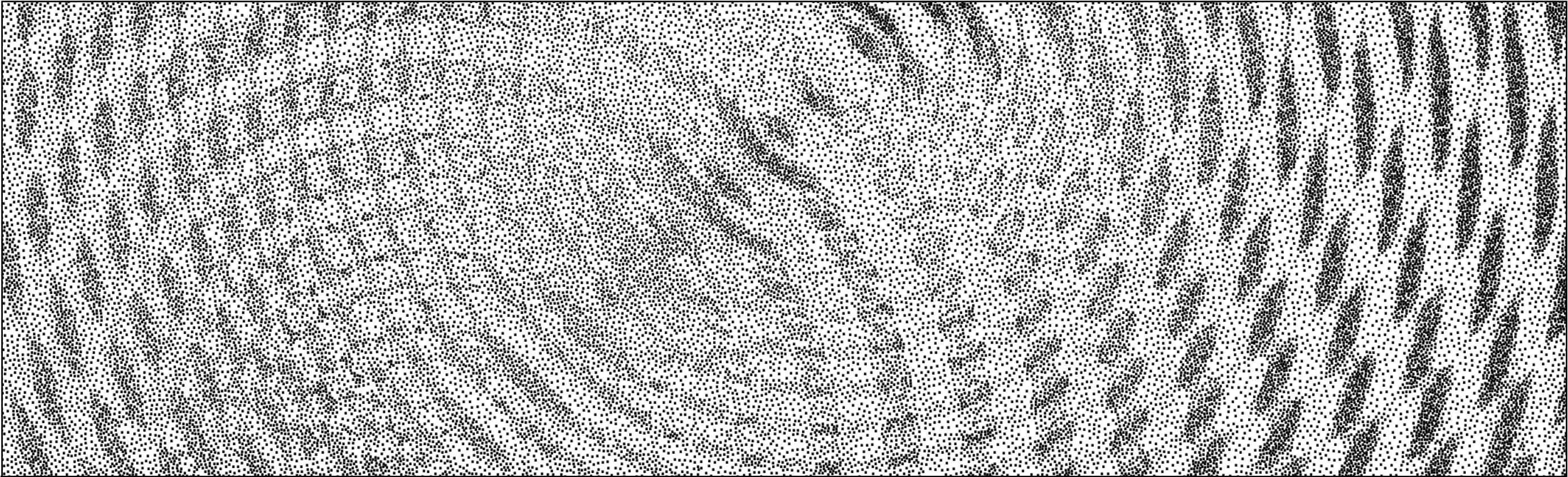
gazing at the patterns
or being the slit that diffracts
[philosophy / designing]

On the other side of the paper is a large graphic that shows ripples from two drops intersecting in water, connecting to Manning & Massumi’s (2014) metaphor of how, in some ways, philosophy and dance (theory and practice) have beautiful interference-patterns like two stones making ripples:

“A stone dropped into a pond produces a ripple pattern. Two stones dropped into the same pond produce two ripple patterns. Where the ripples intersect, a new and complex pattern emerges, reducible to neither one nor the other. At the same time, this is a speculation of how the double-slit experiment looks ‘from the front.’ (p. viii)

The graphics both use scattered dots to display their images, also hinting at how visible everything we see is a reflection of visible light reaching our eyes.





being at one nexus
or at the other

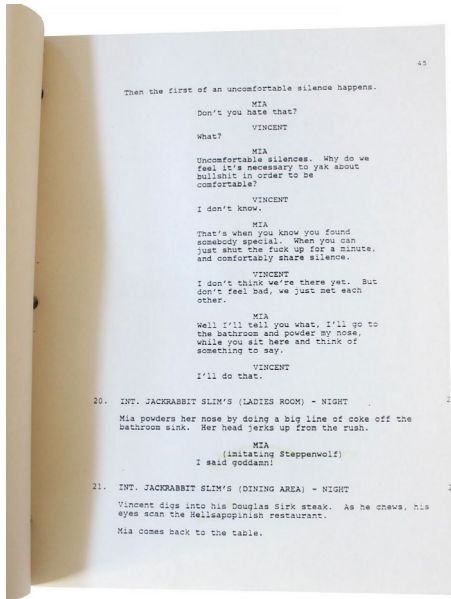
gazing at the patterns
or being the slit that diffracts
philosophy

A MANUSCRIPT

This artefact is a B5 page containing a fictional scenario written as a movie manuscript. It is inspired by a manuscript page from Quentin Tarantino’s movie Pulp Fiction, taking on similar aesthetics and pacing (although with fewer drugs involved). The page has a grey background and backside to give it a more realistic feel, as if written on a typewriter and not ‘just’ a printed text file.

The manuscript was originally planned to be a critical fabulation. The manuscript style enables a very direct language, description of actions and environment.

In the scene, two characters, Max and Renée, chat while it starts raining. This is a short story of two different outlooks on life and friction. The rain breaking the water is also a juxtaposition to the diffracted graphics. Moreover, this story was also added to add a level of confusion and ambiguity that was not easily connected to the other artefacts, circling the common theme of agential realism, and opening up to free interpretation.



Page from Tarantino's manuscript.
Credits: ABAA: <https://www.abaa.org/book/1326801294>

A SKETCH

The final artefact in the box is a sketch of a scenario. This sketch fits in tandem with the manuscript. The sketch is in black-and-white, fitting the other paper-based artefacts. The sketch is based on the view from my apartment window, overlooking a canal in Delft.

This sketch adds a visual element to the manuscript if the recipient connects the two artefacts. The sketch itself shows a simple scene containing two persons shaded in dark tones. The persons have triangles pointing to their heads, either representing speech cones or arrows. This sketch is more loosely connected, partly relating to the manuscript and partly to the theme of conversations or correspondences. It ties to contribute to a common narrative in tandem with the manuscript. Instead of being ambiguous, this sketch speaks to our most dominant sense (visual) and intends to let the reader ground the narrative. The reader is free to interpret, letting this be another frame through which they can discuss.



EXPERIMENT DESIGN CONSIDERATIONS

Two of the artefacts make use of text as part of their main content. Although words are used, they are done so in non-representative ways (poem, fiction script), meaning they are not being logocentric or closing, but try to be open and questioning. Writing was generative for me to understand the depth and perspectives of *diffraction* and being between disciplinary boundaries.

To Wakkary et al. (2018), the tiling bowl artefact was used to challenge their own and participants' understanding of agency. In this research, the provocative piece should instead come from a real concern or urgency of the creator, engaging who they are and the body they inhabit. As an approach, this makes sense because we cannot predict what is particularly provocative for each individual involved. The ideal provocation is something that comes from the creator's (my) personal urgency, but speaks to the recipient; a respectful 'punch.'

CONSIDERATION: SAME BOX VS. DIFFERENT BOX SETS

After deciding to use the box-format again, the question was then whether it was best to use the same box across experiments or create a new one for each encounter, as these would test two slightly different hypotheses. By using the same box in multiple experiments, we create a more controlled experiment to better compare how different participants react differently based on changed presentation and constellations (one person, multiple people from different disciplines or the same). This will turn the box experiments into a comparative study, although not objective. This will make it easier to 'prove' if conversations are more likely to play out predictably or not, and how effects vary based on participants, not the artefact. Nevertheless, we assume this setting to be unpredictable, as no two people are the same. By instead using different artefacts per experiment, the focus shifts to reflexively designing a process of *making conversational artefacts*. In this case, the development process will be iterative, making and testing to examine what this space is and where the boundaries lie. It will also be about understanding the different branches this can evolve towards, and be a push-pull co-design process between the designer and changing participants. The reason this latter option is a co-design

Both of these versions are valid, but they test two different things. By using the same box across multiple experiments, we test *if designed artefacts can prompt people differently, and what different types of discussions can come from this*; while by changing the artefacts in the box, we instead test *how the designer's (my) process develops in response to revealed potentials and is co-designed by each session*.

In order to stabilize some variables, I decided to proceed with using the same box through the following two experiments. Between the experiments, I slightly altered the presentation based on feedback from the first box presentation. Although the

participants are entirely different people, we still test the same instance of the box. This decision was also made to make the experiment more 'real' in the second session, since the first session takes place in a controlled, supervisory setting.

GROUP OF PARTICIPANTS

The intended group of participants for this experiment would be one designer and one person with a thinking-practice (although it is unjust to say designers do not have one as well).

Initially, this thesis aimed at bringing design(ers) and people with thinking-practices (philosophers, anthropologists, etc.) together. However, this would be a task in itself to sensitize all 'thinkers' to design, and vice versa. It is best to assume that, for example, 'thinkers' have little to no knowledge of the design-field prior to the experiment. Instead, to skip the step of sensitizing the designer to philosophy, and the person with a thinking-practice to design, the group should consist of people from practices that are already sensitive to the other discipline or working in an overlap. This group of participants would preferably be a mix of different levels within their disciplines. PhDs, as there might be more of a tendency to explore, while also including professors to have some more expert entries and reflections.

SUPERVISORY TEAM: CONTEXTUALIZED PROVOCATIONS

During this supervisory meeting, we test the box for the first time. The kite was also presented, but was put away quickly as it was not the main focus.

PRESENTATION: UNBOXING

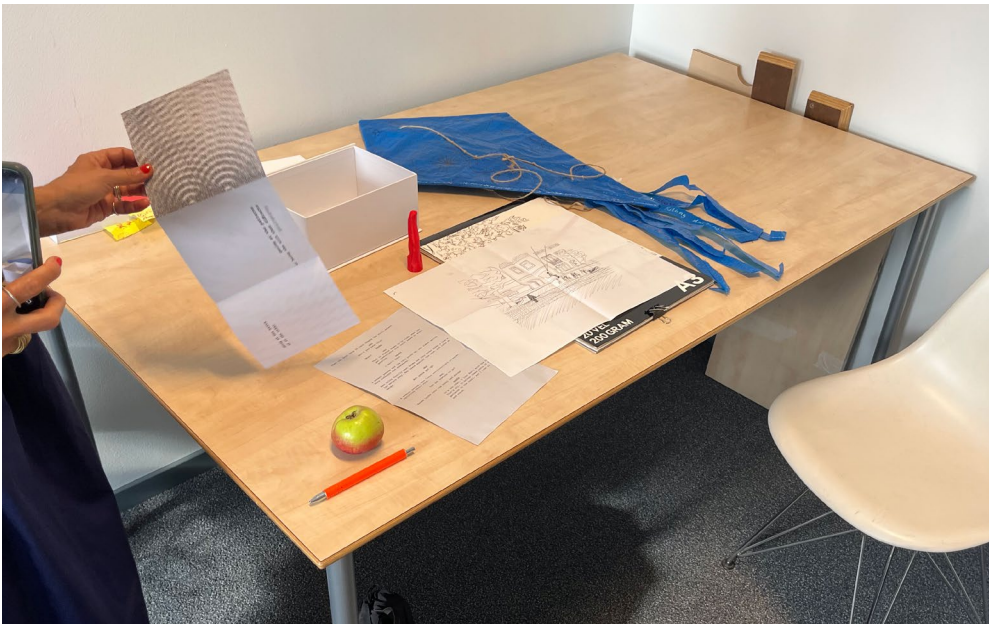
The unboxing was uninstructed with no set order of artefacts. While the box was being unpacked, I presented the thoughts and ideas related to the artefact being unboxed.

The finger artefact brought forward thoughts about abjection (see: Biggs et al., 2021) and a discussion of metrics (such as ‘inches’ and ‘feet’).

The poem and diffractive patterns started a conversation about how we see design and philosophy and their overlaps, using the patterns as frames for that conversation (“like this, or like this”). In this way, the materiality and our interaction (practice) were adding to the thinking (theory); material knowledge as emerging in this intra-action. This was both the case in the meeting between all of us, but also for me in the making of the artefacts, which enabled me to reflect on the thesis itself. In line with caesuras, the ambiguity and images were generative. It is asked *what else there is that the abstraction can’t see if you start making it tangible and material?*

The manuscript was interpreted as a mundane and situated way of discussing abstract ideas, which was grounding. It created some space for doing things a bit differently through ambiguity: It was meta-level content, also in its form (it being a manuscript). It was noted that it was reminiscent of speculative design, but instead of speculating futures or scenarios, its purpose was different—possibly speculating on meaning?

The sketch was interpreted in two slightly different ways, but was also the least engaging artefact. The arrows were interpreted as both speech bubbles and as cones of vision. The speech bubbles were connected to the manuscript, while the cones of vision were interpreted as a display of what a correspondence could look like. This type of correspondence instructions would be in line with Ingold and Krier’s entry on solitude (see: Staszowski & Tassinari, 2021). Finally, it could be a form of annotating people’s interactions in real life.



Snapshot from when I presented the box during supervision.

DISCUSSION

This provotype worked relatively well as a collection of conversation pieces, with the poem and diffractive graphics being the most interesting of the bunch.

WORKS BEST WITH PRESENTATION

We learn that the format of having a brief presentation of the different artefacts and having multiple people sitting with the artefacts works well for discussing and expanding the artefacts’ meanings/intentions through conversation. It is at this point no longer a *material conversation*, but a *conversation that is motivated by the material*. We find that the artefacts might not have been engaging if they had not been presented simultaneously. They possibly only worked *because* of the presentations.

SEQUENCING

We also learn that a collection like this needs intentionality in its sequencing: either intentionally in a specific order, demarked by numbers, for example, or an explicit note that they are in no specific order. Otherwise, the participant might feel like they are doing the unboxing wrong, and therefore have issues engaging fully. This could be included in an introduction letter for the box with instructions, as the Fluxus boxes had.

LEARNING THROUGH THE BODY: EMBODIED ARTEFACTS

What came up as a missing feature in this experiment was the engagement with the body. There is a latent potential of engaging in material knowledge from a different epistemological paradigm in which the body is present, instead of the abstraction we know from modernity. This is the *epistemological liminal space* we are searching for.

How do we mediate this type of knowing or learning? One proposed example is to create a score—a material representation of a performance. In performance arts, this is an improvisational space, filled with poetic pauses and openings that are not ‘filled in’. This space is filled with a tension that is difficult to define. The poem is a good example of this, since it brings up something that is beyond traditional addressing in logocentric language. An extension to this box would be to try to understand how people’s bodies react to a score, script, instructions, or similar artefacts.

GROUP SETTING: INTERACTION WITH MORE PARTICIPANTS

In this session, I met with three PhD students, all working in the cross-section between design, philosophy, democracy, and AI. Two of the participants have been schooled in philosophy (henceforth referred to as ‘the philosophers’ in this section), while the last had been schooled in industrial design (henceforth referred to as ‘the designer’ in this section). The intent with this session is to reuse the box format, but with a different constellation to test how a group reacts to unpacking, discussing, and responding to provocations. To keep the test consistent with the previous test, the box’s contents stayed the same. In this case, similar to the previous one, the provocations came from my personal place of urgency and were not specifically tailored to any of them. However, they are indirectly contextualized by the nature of the artefacts borrowing from and being relevant to their disciplines. These artefacts were not co-created, which is one of the same weaknesses as the *Walking a Kite* experiment.

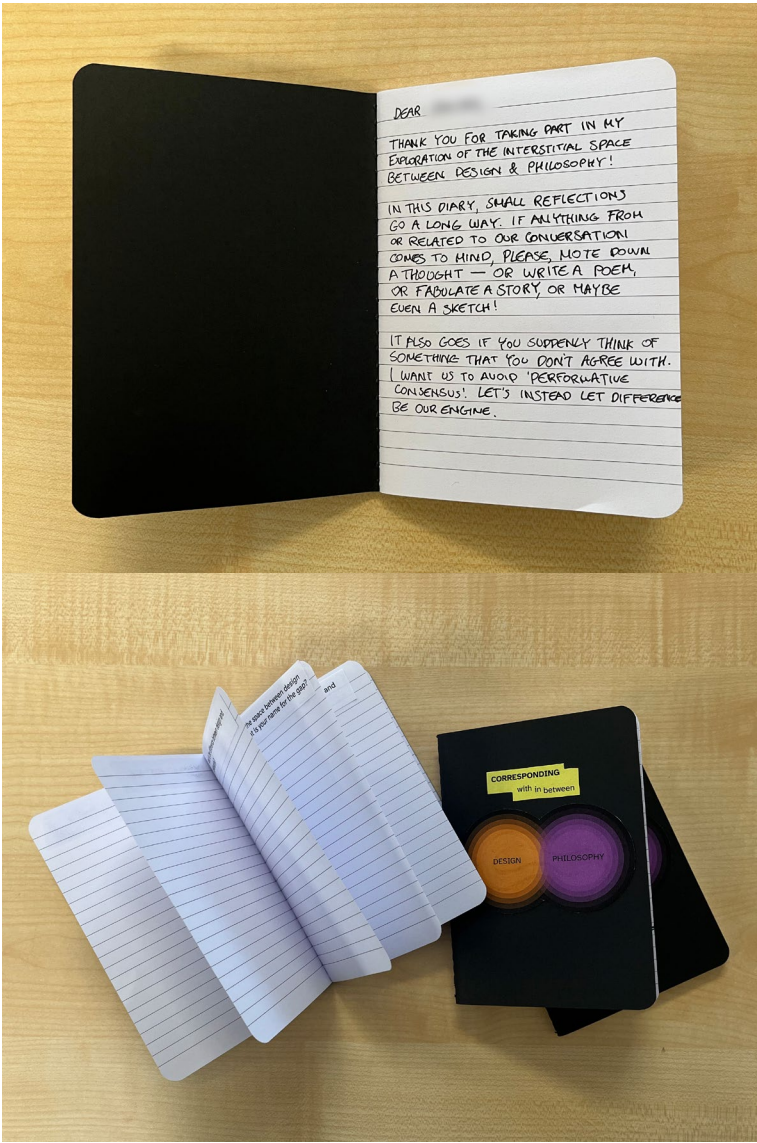
WHAT WAS CHANGED

Although the contents stayed the same, some things were slightly altered or added.

Based on feedback from the previous experiment, an introduction was added to the box. A booklet was made for each of the participants with a handwritten message inside. On the pages following the introduction, a range of questions were added for them to later engage with (also including both questions listed on the next page):

- What is the difference between design and philosophy?
- How do you refer to the space between design and philosophy? What is your name for the gap?
- What does the space between design and philosophy mean to you?
- What tensions lie in the space between disciplines? Is it possible to ‘ignore’ the boundaries and enter a non-disciplinary space?

In the session, I also went over these questions and allowed them to answer them in plenary.



EXERCISE: ASK THE OTHER QUESTION

1. Find an example which seems to be “about gender”. Describe it and exemplify why.
2. “Ask the other question”, thinking of three additional differences (like race, ethnicity, class, sexual orientation) which could be relevant to your example
3. Choose one of these differences and write down how and why the example is “about” this difference.
4. Compare the narratives. Where are the resonances, and where are the differences? What can you talk about in one narrative but not in the other? Why?
5. Return to your first narrative and explain what insights you now have about gender.

ASK THE OTHER QUESTION-exercise from Davis’ chapter (2014, p. 24).

HOW THE SESSION TOOK PLACE

The session took about one hour. It took place in Studio Hatch in StudioLab at IDE, TU Delft. At first, the participants were given the booklets. Although I had planned for them to read them after the session, they were too curious not to read them immediately.

After they had read the booklet’s introduction, the group interview started. The group interview used a semi-structured interview style, following the order of questions as listed previously. At the end of the interview, they took a round at answering—individually—the following question:

- For the two philosophers: *Where or what is the ‘design’ in doing philosophy?*
- For the designer: *Where or what is the ‘philosophy’ in doing design?*

This question is my expansion of the *ASK THE OTHER QUESTION* exercise as formulated by Kathy Davis in their anthology chapter *Intersectionality as Critical Methodology* (2014) (see original exercise in the box above). In Davis’ context, this exercise is about situating yourself and complicating gender, moving intersectionality from a feminist buzzword to an active engagement with how your examined issue (and self) overlaps with other sections.

The first step is addressed implicitly by the theme of the conversation, the preceding interview, and the introduction in their booklet: we are discussing the complications of interdisciplinary work between design and philosophy, and how they inform each other. The second step is where the asked questions enter, and instead of being an introspective exercise, I apply it with intention to gain insight into a ‘specific intersectionality’. The

examples from the intersectionality of design and philosophy came naturally from the participants (step 3), where I also guided the conversation to let the participants speak about each other's examples (step 4). Step 5 is addressed below.

INSIGHTS FROM GROUP INTERVIEW

The participants work specifically with trying to “fade away the disciplinary distinctions between philosophical research and design research.” Instead of thinking of ‘philosophy of technology’, their focus has shifted into ‘technology of philosophy’—what allows philosophers to think. In this sense, ‘design’ and ‘technology’ become interchangeable. These include pens, PDF readers, word-processors, etc., that are all designs that support the thinking.

“Philosophy is something that is not necessarily just thinking in your own head, but something that you do with materials [...] We have been doing design all along.”

Designs have also been used as thinking devices, such as Heidegger using the hammer to think through, or Adorno using the radio. Apart from their work with design, they also acknowledge that ‘design’ as a field has definitely transitioned from being physically designing, e.g., furniture, to having a much more strategic role. The design PhD puts nuance on this space, adding how philosophy is a tool that helps the beginning phase of design to understand an issue, and is used throughout to frame what change they are moving towards. In some cases, this results in goals that are not design-oriented, but instead oriented towards what impact the research might have on the philosophical domain. Philosophy is also drawn on to understand findings made in/from the design process. In this way, the dynamic mainly takes from philosophy to inform the design process, but is not a one-sided extraction.

They believe the key difference between the two disciplines comes down to a relationship to ‘the truth’. Philosophy concerns itself with knowledge and ontology, and at least in Western Euromodern philosophy, arguments move towards getting closer to ‘the truth’. In design, however, the concern is not about building towards a universal concept of truth, but instead lets ‘a truth’ emerge through designing—a more situated and material living in the world. The difference, they believe, comes from the two different histories of the disciplines.

In response to my ‘ask the other questions’ exercise, the philosophers argued that design can be a way of ‘doing philosophy’ as it does not have to be produced through text. Instead, the material ways of ‘doing philosophy’ can be through speech (oral), drawings (to speak about ideas), and similar ways of engaging with thinking outside texts. Furthermore, the materiality of doing design can produce insights into a philosophical subject, such as through critical design or critical making. In the engagement of designing, you have to be in-context, which can be triggers for reflection not otherwise available to you through writing:

“[...] you have to be in the context, and in most times, this implies more people than yourself [...] [which] triggers a bunch of relations that you wouldn't get if you [were] writing on your own [...] and that is essential knowledge—if you think about how technology affects the world, right?”

Alternatively, the designer responds that philosophy can, for example, help make sense of assumptions made at the beginning of a design process. Philosophy can also inform decision-making and reflection when examining the design-contribution.

“I am making my thinking, and thinking my making. These two concepts are entangled.”

The group has no settled name for the space between design and philosophy, but ideas come up. Instead of critical design, which they believe risks “just ending up in art galleries”, the term critical-technical practice fits better the reflections that are required from engaging in this space. Furthermore, and more pertinent to the embodied and situated practice that they believe designing to be, is *knowledge of the hands*, referring to how knowledge co-emerges in engagement and action, and not through thinking alone. Lastly, the term *the in-between* sits well with them as a term that remains neutral by not prioritizing one discipline over the other.

UNBOXING THE BOX

After conversing about philosophy, design, and the intersections, I brought up the (much-anticipated) box.

I intentionally announced that the items had no specific sequence to them, which made the participants engage with different pieces individually. I also did not narrate the items to see how their potential might change when they were unprompted and unexplained.

The finger was the first to be discussed, and returned to the discussion about designing being ‘knowledge of the hands’. At the same time, they interpreted the finger as the way philosophy likes to ‘point things out’ and reflect on them. At the same time, it was unclear to the participants why I chose to focus on a finger or hands in particular. What is special about this? In this way, the artefact generated questions, but did not go very deep into interrogation.



Lastly, it was interpreted to be about a limitation of the hands, since the finger is a cut-out.

On the poem and diffractive patterns, they were particularly interested in the word “nex-us”, as used in the poem. Is that the right word? One of the philosophers had strong military associations with the word, which led us to a different discussion about how that relates to design and philosophy: *Is transdisciplinary research a way of invading each other’s spaces?* The patterns were noted as pretty, but did not immediately stimulate debate. Only after I mentioned that they were inspired by Barad’s philosophy, and why, did the philosophers open up a discussion about the validity of Barad’s claims and their relevance to design. Through that discussion, we were led to discuss whether going between disciplines is something new and how the limits of these disciplines are, in fact, porous. We get vibrations and diffractions across the boundaries.

Lastly, the manuscript and the sketch were not very stimulating for the debate. It was noted that it felt like I was trying to recall a particular experience through those artefacts and bring them up in this session: “It made me think about experience and you as a designer [that] creates experience.”

DISCUSSION

Both the conversation and the unboxing were fruitful activities in each their own regard. The conversation was informative for me to understand the subject in more nuance, while the unboxing helped me understand what might be missing from the desired interaction. From the conversation, I mostly take note of how different views of this space exist, which is especially interesting, as it is not a settled space. I found it interesting how much focus there was on learning through bodily engagement, which is also something that I ended up missing in presenting the artefacts.

SEQUENCING

The open sequencing and individual interactions with artefacts made it so the participant did not discuss the artefacts while unboxing, but only after, where the discussions were subdued. An open sequencing is likely not an issue, but the confusion that came from different sequencing between the participants was disruptive.



EMBODIMENT

During both the discussion and the unboxing, one of the key features the participants saw *designing* bringing to the table was by engaging the body in understanding philosophy, or in general, in the production of knowledge. While this was the clear point of discussion, the actual engagement with the artefacts did not engage the body more than picking the finger up, feeling its texture, and rotating it by hand. The activities could have enabled the body much more, such as by requesting certain actions, reading something aloud, or authoring or enacting a story on the spot.

ASK THE OTHER QUESTIONS

It became clear that some parts of the interview were more fruitful and engaging, such as discussing the difference between the disciplines, but especially the ‘ask the other questions’ exercise. The exercise works particularly well, as it forces the participants to consider their positionality in the disciplinary space by asking them how the other is placed within their field, which forces them to consider the two disciplines as inseparable. Before the question was asked, the participants could easily distinguish between ‘my field’ and ‘the other field I am engaged with’, even if their understanding of the split was not a hard-drawn line.

LEASHING THE ARTEFACTS

During the unboxing, there was a tendency to squeeze out points from the artefacts. We discussed the artefacts on their surface level (how they were produced, what they represented), but unfortunately, not the overall subject of design/philosophy through the artefacts. The presentation became a designer’s view of improving the method instead of engaging with it.

This might be due to several factors. One of those might be that the artefacts were simply not provocative enough on their own, leading to a more mundane conversation. However, I believe another issue was that all the participants were sensitized to design in their own ways, and therefore had a preconception of what this discussion was about. This can be due to their fields of study or to the preceding discussion. In any case, this led the unboxing to become an analysis of the artefacts, such as discussing what I wanted to present or discuss from the sketch, instead of ‘using them’ to talk about what is triggering them.

This issue can possibly also be tracked down to how the box and artefacts were presented, and therefore their approach to the engagement. We can speculate what led to this dynamic, but I suspect it was done in the good spirit of trying to help me improve the method, as experts providing feedback, rather than engaging with the artefacts as users.

NEXT STEPS

It seems two main issues arose and are worth considering: engagement with the body, and changing or improving the presentation of the box. Going into the next experiment, I need to decide if I want to improve on the presentation of the box, go further into this path, or try a different approach.

In the box experiments, engagement with the body and bodily knowledge production, or focusing on accessing corporeal knowledge (*Intelligence is Corporeal* (Kristina Höök), 2025), has come up multiple times. Until now, the focus in the project has been on how the designed artefact can be used for generating knowledge, skipping the body's role in thinking by acting. Actions, rather than interfacing with something material, are also a key feature in Ingold and Krier's correspondence. Their instructions required movement and action, not a stationary thinking-process. Including ways in which the body is more actively engaged becomes one of the main focuses going forward.

I step away from the development of the box and its artefacts, as the track I was leading down felt like it was becoming a way of optimally designing one kit of artefacts to trigger a specific conversation. As previously mentioned, the outcome of this project does not have to be generalizable—but in this case, the box's contents ended up being project case-specific. This is not to say that there were not other ways of going forward that do not make this mistake, but I chose to lead down a different path: Instead, I would rather follow my intuition to gather insights to a method that is more able to be tailor-made to a wider set of intentions. If I stayed with the case-specific box, it would still have been possible to generate transferable knowledge; I chose not to go down that path.

This new path will focus more on what it means to engage the body in entering the epistemological liminal space we are seeking. I will also be inspired by the 'ask the other question' exercise, as it was a fruitful way to let the disciplinary boundaries dissolve.

3D SKETCHING DEVICE: *WHOOOPS... A MODERN TRICK?*

In preparation for the following experiment, including interviews and an in-person meeting, I began preparing a provotype that would enable the participant to make a 3D sketch from two handheld devices.

These devices were made using ItsyBitsy microcontroller units with buttons and a 9-DOF (nine degrees of freedom) sensor, logging movement data onto a .json-file on a microSD card that would be later translated into 3D models using TouchDesigner. The ItsyBitsy was programmed in CircuitPython (programming language), and if holding a button, would save position and movement in 3D-space onto the .json-file. The TouchDesigner program was made using nodes, with some nodes programmed in Python (programming language).

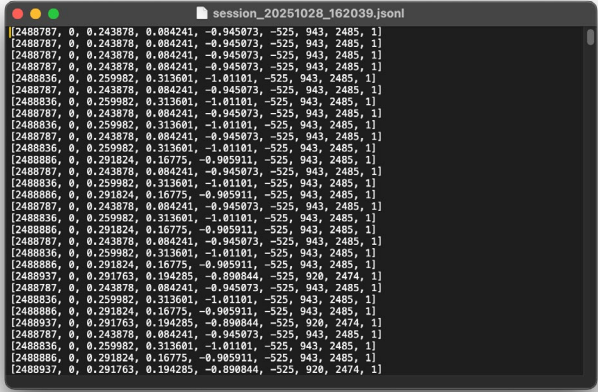
After engaging with this for about a day, almost making the provotype work, and after having planned out all components and a general idea of the 3D model to be printed, I realized that this model could possibly be leading to a *modern trick*.

The intent with this provotype was to let the participants draw out how they see design and philosophy intersect in three dimensions while engaging their body, as they would have to make broad arm gestures to get the sketch into the program. I realized that this might be a precarious exercise, as it risked flattening their abstract understanding of the relation between disciplines into a static object. This objectification stabilizes and closes the conceptual space we are interested in, and forces reasoning to come from a place of abstraction instead of situatedness. Furthermore, it translates and reduces bodily feelings into spatial units in a euclidean three-dimensional system.

It is not to say that this provotype could not work. It is entirely possible to keep the exercise without producing a representation, but its main value is in the exercise of explaining one’s view. The danger exists in how we treat this representation: as a non-stabilized frame to relate to, or as a stabilized truth that pretends to fully represent reality.



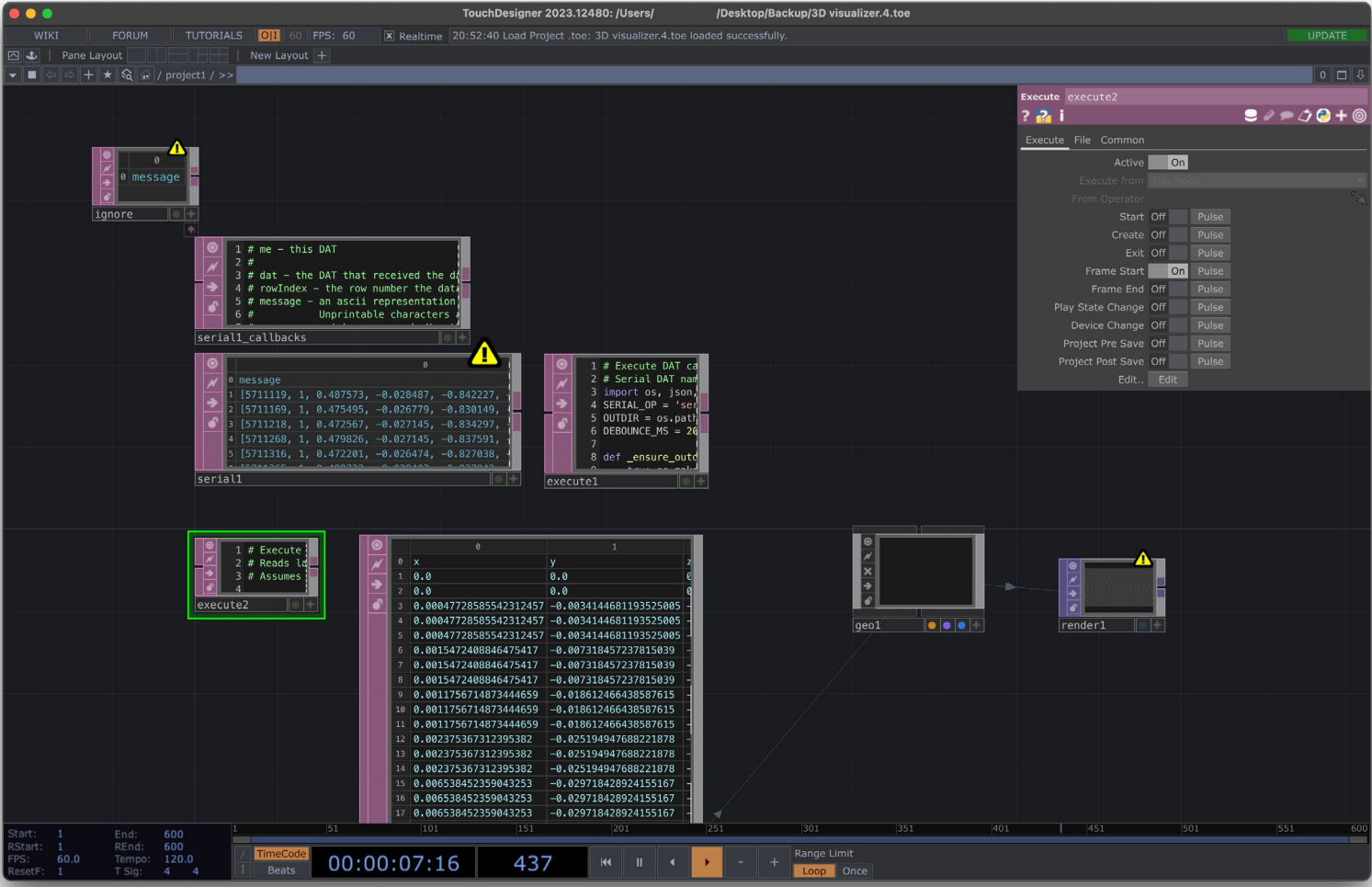
Components gathered and connected.



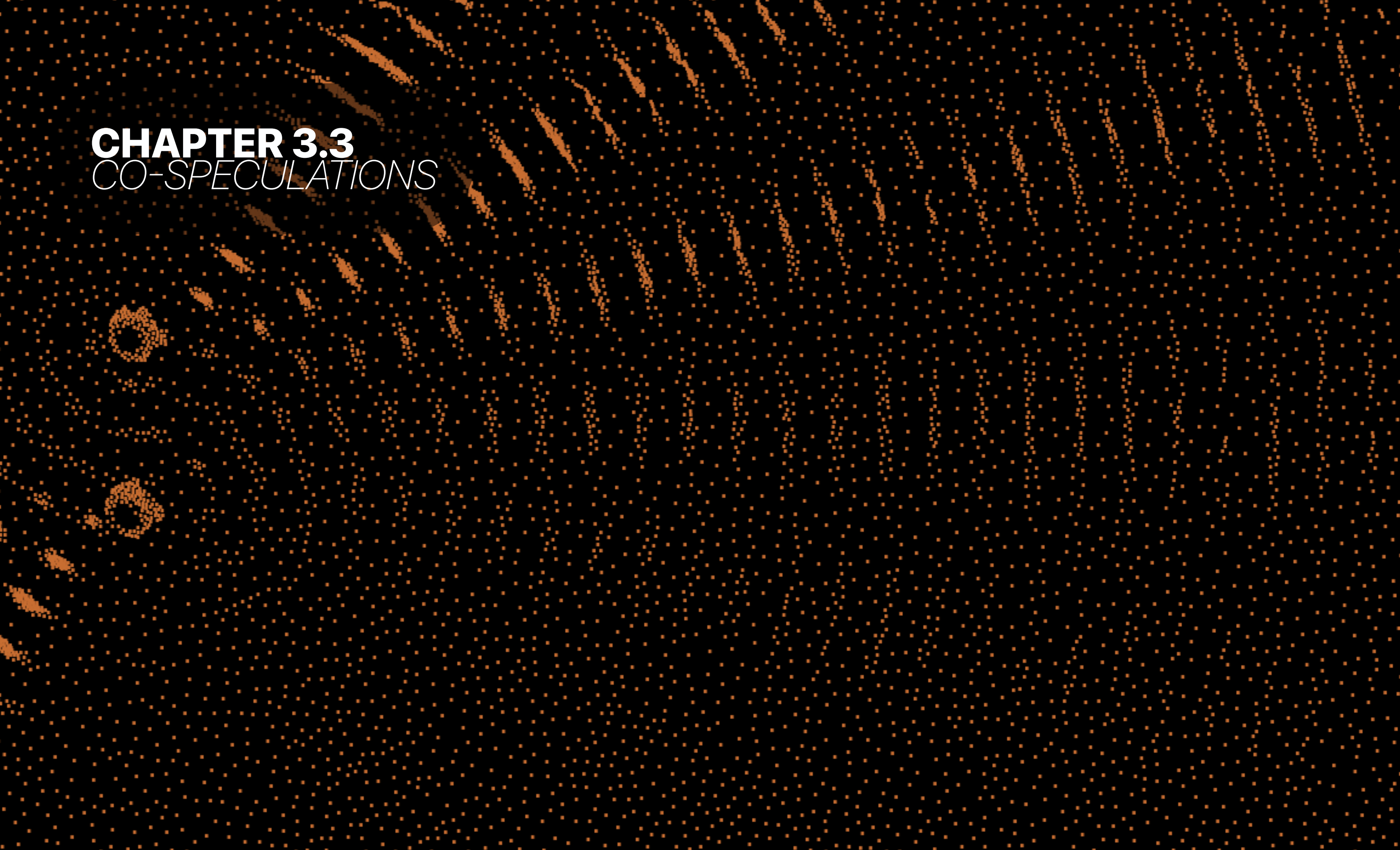
Snippet of .json file showing log of 9-DOF.

This leads to another reflection: the struggle in working “beyond the modern” is that it is in-between. I am never fully outside the modern, since I am (in this case) being radically avoidant of anything ‘representational’. This is also being modern. In other words, *I am being modern in my way of trying not to be modern*.

This is probably unavoidable. What is in the DNA from my design education is part of the constituents that make me up both as a person and as a designer. I cannot avoid these; but I can stay critical towards occurrences where I end up acting modern.



Screenshot of TouchDesigner application under development, including logs and code in some of the nodes.

The background is a solid black field covered with a dense pattern of small orange dots. Overlaid on this are several diagonal streaks of slightly larger, more concentrated orange dots, creating a sense of motion or data flow from the top-left towards the bottom-right.

CHAPTER 3.3

CO-SPECULATIONS

INTERVIEWS AND CO-SPECULATIONS

My interactions with the two professors include interviews and co-speculations. Prior to the interviews, which were held remotely over MS Teams, the participants received a sensitizing activity in the form of a letter and a ‘box’ to be filled out. A few weeks after conducting a remote interview, I met with them in person to extend the conversation in a co-speculation session. The co-speculation sessions started with me presenting a provotype specific to our previous conversation, followed by co-creating a theoretical speculation. The experiments took place in November, with additional correspondence via email. The insights from these sessions were used to inform the next experiment and the research project as a whole.

At this point, it feels fitting to remind ourselves of the success criteria for this project:

Can we create a method that is able to generate transferable knowledge that not only allows correspondence between people with thinking-practices—for example, designers and philosophers—but also allows for critical reflection on their positionality and epistemology (and the intersection), allowing them to talk about their positionality and break through biases.

The project exists as a prototype in itself, through which we wish to shed some light on a space of other forms of thinking (non-Western-centric thought).

So, to move towards creating this method, one of the main questions I asked myself going into these sessions was: how do I make these different from the box experiments? And what do I want to dive further into from the previous experiments? Although I want to go down the path that leads to the best possible result, it was also important to me to remind myself that nothing is the ultimate tool or method. I will not be making it now; everything I do will just help inform it.

I use the idea of ‘critical praxis’ to guide me in improving the ‘method’ that I am building throughout this thesis. To engage in critical praxis, two major components need to be engaged: a critical and an affirmative aspect. In short, critical praxis, for our case, can be explained with the following: It’s needed to engage with one’s own self-critique (critical aspect), and only once you have engaged with that—in this case, how modern the disciplines are, and the way in which we are being taught and socialized with(in) them—you can look for ways to make the disciplines less modern (affirmative aspect). A less modern meaning, for example, is envisioning other epistemological frameworks and how those translate into practice.

This leads us to ask: Will the disciplines stay the same? Do we need to fade their distinctions, because they are searching for the same—becoming indistinct? Or does this liminal epistemological space exist in which we both look for exactly the same, and by producing knowledge otherwise—through engaging with the different epistemological paradigm(s)—are we able to be ‘less modern’? Following the logics of critical praxis, I intend to use the intersectionality exercise, ‘ask the other questions’, to let the participants be critical and ask themselves how they themselves and their disciplines are positioned within the modern.

By engaging with critical praxis, we avoid letting our work contradict our intentions: If we are only being critical, we end up limiting the possibilities, paralyzing ourselves and our disciplines. If we are only being affirmative, for example, creating futures scenarios without any critical aspects, we are directly reproducing modern logics and worlding practices. That is why both sides of the engagement need to remain in balance.

These engagements are based on the assumption that the participants are both part of groups within their disciplines that are working towards working outside or ‘escaping’ disciplinary boundaries, possibly searching for in-between spaces or something similar to our liminal epistemological spaces—are also struggling because of some blockers that keep them from doing that. These blockers could, for example, be linguistic, epistemological, or institutional. We are interested in understanding their struggles and identified blockers. Therefore, the experiments have a rather straightforward goal: get the participants to share their own experiences.

This also required me to steer the experiments less, stay humble, and be more open to what is important to the participants. For example, the professor of philosophy is already aware of the limitations of their own discipline in terms of modernity and the recent history of philosophy in escaping such a paradigm. The focus should therefore be on them engaging in affirmative exploration; reflecting on why they look into design and if that is a way to develop their thinking-practice further, e.g. through bodily ways of knowing. In the engagement, I need to humble my position, as I am speaking to an expert. They are most likely far more aware of the issues and limitations of their own space than I am. I assume that most philosophers consider how to exceed their disciplinary boundaries, such as by engaging the body in the knowledge-production. For some, it is to address an issue of being unable to “intervene in the real” (Leonardo M. Kussler, 8th of Oct. 2025, during a Justice by Design ‘Lab Talk’ on decolonizing design). It is therefore highly relevant to me to understand to what degree the experts are exploring making as part of their thinking-practices, and if they engage their body at all to generate knowledge.

I hope these engagements can help inform the project about how design, so far, has been able to produce non-modern knowledge, how design can help us move towards an epistemological paradigm to produce non-modern knowledge, and if design can enable this better than what has been done so far through language. I am also curious to see if design can support our hypothesis about language having its limitations by being representational in epistemology.

I need to underline that this is a tailor-made process. The engagements, questions, and artefacts that I use are not generalizable. However, this is the direction I am leaning, coming out of the box experiment. Besides being a tailor-made process and improving the ‘ask the other questions’-exercise, I also focus on engaging features of embodiment and making. To address the issue of “leashing the artefacts”, I will impose fewer artefacts and introduce their meaning or intentions more directly, not letting them float by themselves.

SENSITIZING ACTIVITY

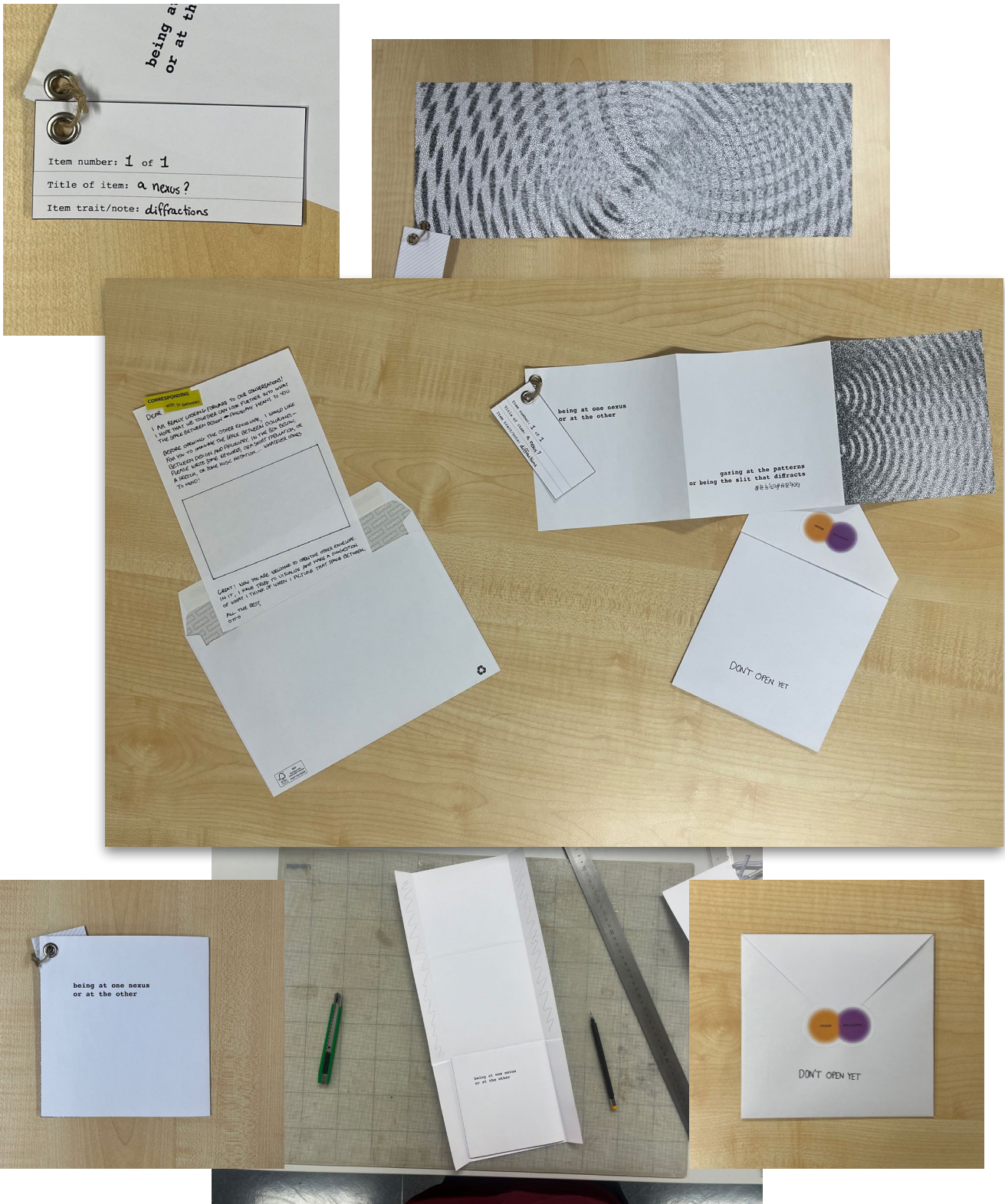
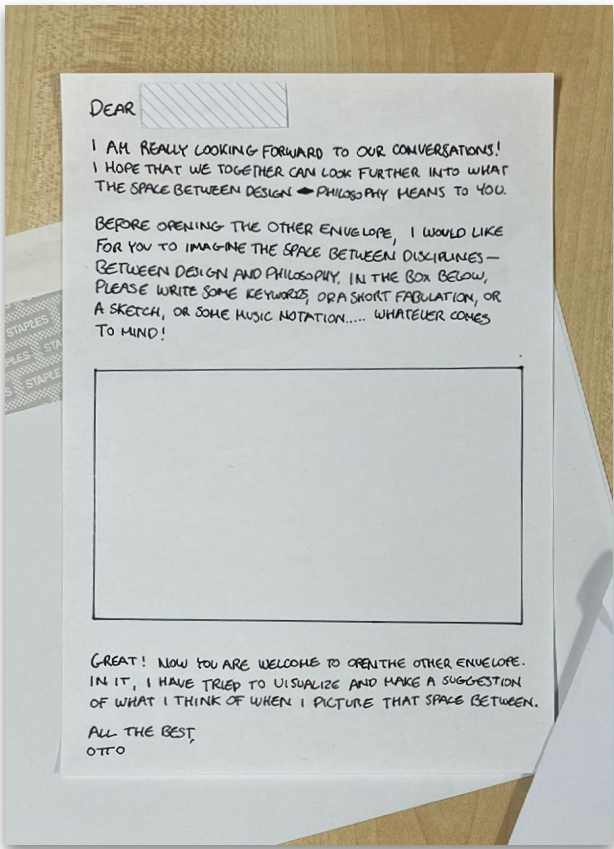
As mentioned, prior to the first interview, the participants received a letter as a sensitizing activity. In the letter, I made sure *not* to mention positionality in advance, although that was one of the primary themes of discussion (relating to ‘ask the other questions’). Instead, the letter leans on the participant thinking about the space between design and philosophy, how they behave in that space, and their own expertise. At the end of the letter, the participants are asked to fill out a box with the following text accompanying it:

Before opening the other envelope, I would like for you to imagine the space between disciplines—between design and philosophy. In the box below, please write some keywords, or a short facbulation, or a sketch, or some music notation..... whatever comes to mind!

It is interesting to see what type of medium the two experts choose to respond with. However, how they chose to respond to the letter, be it a sketch, a quote, or something else, does not matter by itself. What matters is how that leads into the interview, and how that leads into the co-speculation. The letter is the first of a range of activities that opens up the (discussions about) the epistemological space. That being said, I also use the box to later compare their response to a similar exercise at the end of the co-speculation as a kind of evaluation.

ADDED PROVOCATIVE ARTEFACT

Added in the letter, after reading the sensitizing letter and responding to it by filling in the box, another envelope awaits the participants. Inside this envelope, my previously presented artefact, “a poem and diffractive patterns”, is waiting for them. This is meant as a provocative artefact that allows the letter to stay open-ended and leave the participant with questions and thoughts for the next meeting. I chose this artefact because (1) it could fit inside a letter, and (2) it was the most interesting and successful artefact from the box experiment. To contextualize the artefact and not leave the participants guessing, as we have found to result in less engagement, I added a herbarium-inspired entry attached to the corner of the paper. On this herbarium note, I added the name of the artefact and what it relates to. The context, “diffraction”, is an obvious reference to Barad’s philosophy, if you are familiar with it.



INTERVIEWS

I had interviews to learn from their experiences working in the crossover between design and philosophy. Through the interviews, I hoped to get insights into what had and had not worked for them in trying to connect to the other discipline. It was important that I did not enter the interviews with preconceptions or steer the conversation too much, but the conversation should be steered by their experiences. Prior to the interviews, the participants received the sensitizing letter to prepare them for the interview and start the conversation.

Before the interviews, I made sure to read some of their respective articles to sensitize myself to where they are positioned within their fields. Through the interviews, I was also interested in understanding their position and interests better than I would be able to through their work. This position includes what they are working on right now, and what frustrates them or excites them. Their position and feeling highlight tension-filled aspects of this intersection, and it is a great place to start a provotype.

I was particularly interested in seeing how I could improve the ‘ask the other questions’-exercise through design. I wanted the improved exercise to be informed by our previous findings in various experiments, while being an interpretation of the ‘ask the other questions’-exercise, to engage materially in critically assessing positionality and modern disciplines. My goals, then, were to make a more designerly, embodied, and experiential format of the exercise. To do so, I decided to build upon the exercise by asking them to sketch, write, or otherwise show how they perceive the relationship between disciplines as part of the sensitizing activity. During the interview, I would then ask about it to dive deeper into what their creative output meant to them. I built further on these aspects in the co-speculation, giving this exercise and our interaction another layer.

INTERVIEW STYLE & STRUCTURE

The interviews start from a sensitizing letter, introducing the first ‘designerly’ element. Follow-up questions from what they created in the letter are used to expand the interview in an unstructured style. After engaging with the sensitizing activity, we go into a semi-structured interview with the following structure and questions:

- Introduction and a short description of what motivates me in this research.
- Ask them to explain what they did in the sensitizing activity.
- What are you currently working on?
- How did you get into working across the disciplines and with the space that crosses into [design/philosophy]?
- Where do you see the potentials? Where do you see possibilities?

- What are the burdens? Are there limitations that you have identified?
 - Epistemological, ontological, methodological, institutional, linguistic, axiological, etc.
- What excites you about this space?
- What is the next big thing that could happen in this space?

Implicit in the questions is my general concern about representationalism and logocentrism, and what potential issues can arise—but they might not have experienced yet—in the intersection between the two disciplines. This is not to bring pre-determined issues into the conversation, but a way for me to frame the conversation around my own conceptual framework and urgency, and hear if they agree or experience similar concerns.

INTERVIEW 1: PROFESSOR OF PHILOSOPHY

My first participant and expert is an assistant professor of philosophy working with ethics and philosophy of technology, with a specific focus on resilience in decision-making and ethics of making decisions that are hard to predict the outcome of. They are also active in the overlap between design and philosophy. Henceforth, this participant will be referred to as ‘the professor of philosophy’.

We started out by discussing their response to my letter (see next page). It resembled a bridge between two mountains—a devil’s bridge. There is play along the bridge: “I think the crossover point between design and philosophy is when we explore through play. Messing around with ideas and things.” Play here can mean both the act of playing and that there is wiggle room. The devil’s bridge (a naturally occurring bridge of stone) symbolizes something mysterious, something that exists before time and is “really cool”. Interestingly, the participant also means this as something that seems like it is naturally occurring, but in reality, it is man-made. There is a type of mythology surrounding the bridge as having been built, and so is transdisciplinarity. It is a bridge between two things, but originally, the sketch only contained the bridge—not the two mountains. They were added later to complete the sketch. So in fact, the participant’s response focuses on the play-bridge, not the sides.

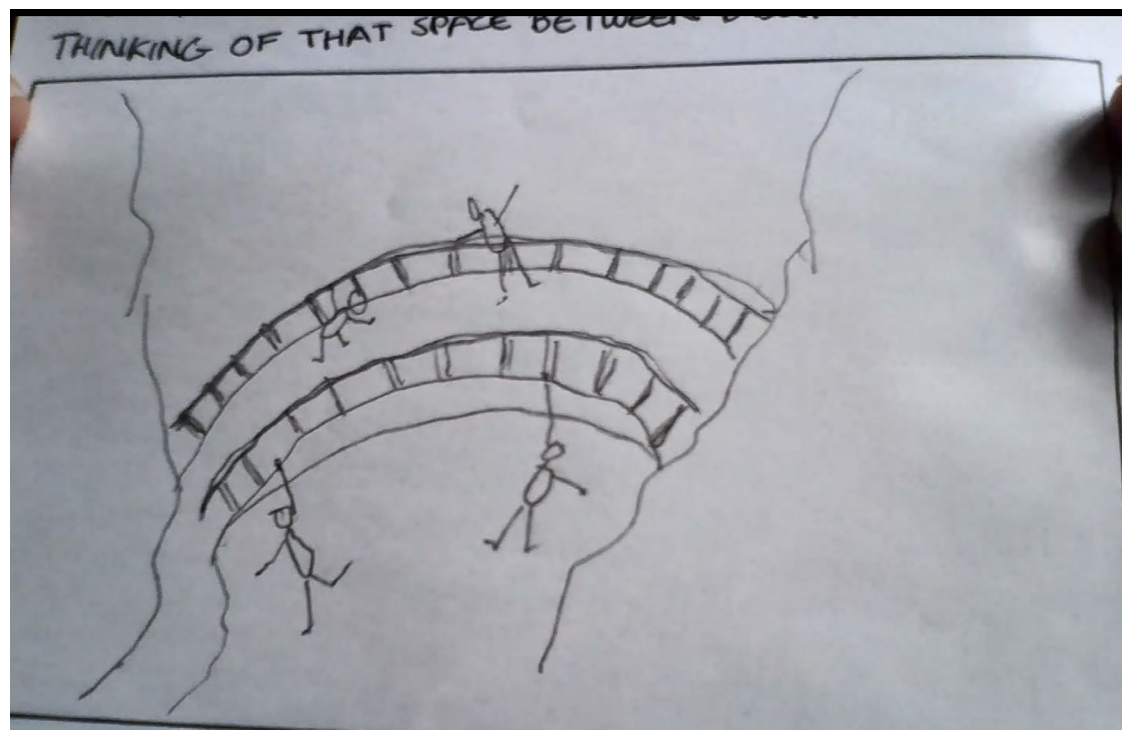
Instead of providing a recap of the interview, I will briefly go over some general points before going into more detail with some of the things that piqued my interest, and I used to further the project and the provotype for the following session. During the interview, we discussed a range of topics, such as:

- Ethics and epistemology, and a search for ‘completeness’.
- What ‘rationality’ is, and how humans might be rationally irrational in their behaviour.
- ‘Designing’ means to “explore the interaction and say what it can create and reveal”: Philosophy, in general, does not handle this well in its search for ‘the

ideal and the truth’.

- The nature of “rationality”. Are humans just rationally irrational?
- Human beings as social beings.
- “When you step into the embodied, I think people exchange more truth than we tend to bother observing”
- How philosophy is often taught as priming (preparing) the students for ethical ‘traps’, but they want that teaching method to turn into a type of sensitizing.
- Transdisciplinary research is exhausting, as the boundaries between disciplines are hard to get through, the language is not the same, you only have short meetings, and grants are hard to come by. However, the disciplines are maybe not so far apart as we think they are; it is just the structures around them that do not allow transdisciplinary work to be smooth.
- The world is always changing, so there is a constantly new theoretical context to engage with.

Their reaction to my initial provotype made them think of the bridge (which they sketched immediately prior to opening my envelope). The fact that my graphic was to the side and



A bridge between two mountains with people playing: Design and Philosophy as a *play-bridge*.

not centred made them question if I meant the same as their bridge, or had a different intention. The same core elements were identified: two sides and a space in-between, so they saw their own understanding reflected in the provotype. The most productive provocation was the ‘poem’ that made them think about how we might transition to that in-between space: “Should we look at that space like the magic pictures, where you have to fade out until you can see the picture [...]?” These pictures are called ‘Magic Eye’ paintings, where only if you stop focusing, your eyes can relax, and you see a three-dimensional space emerge from it (see next page for example). The experience you feel as you let go of control and only then, a new image emerges, is a very fitting analogy to what it might mean to enter a liminal epistemological space.

It was interesting to me how difficult it is to understand the other person’s perspectives and the theory behind their work. How long does it take before two people can do really provocative material correspondence? Do they both have to be experts in adjacent fields? Maybe it is always possible, as long as it comes from one’s personal sense of urgency, and not the other’s? In transdisciplinary work, it is unrealistic to expect everyone to spend loads of time to understand everyone else, personally, in-depth. So design should maybe not be framed as a transdisciplinary ‘tool’ but instead as a way for disciplines to expand beyond their boundaries (outside the transdisciplinary context).

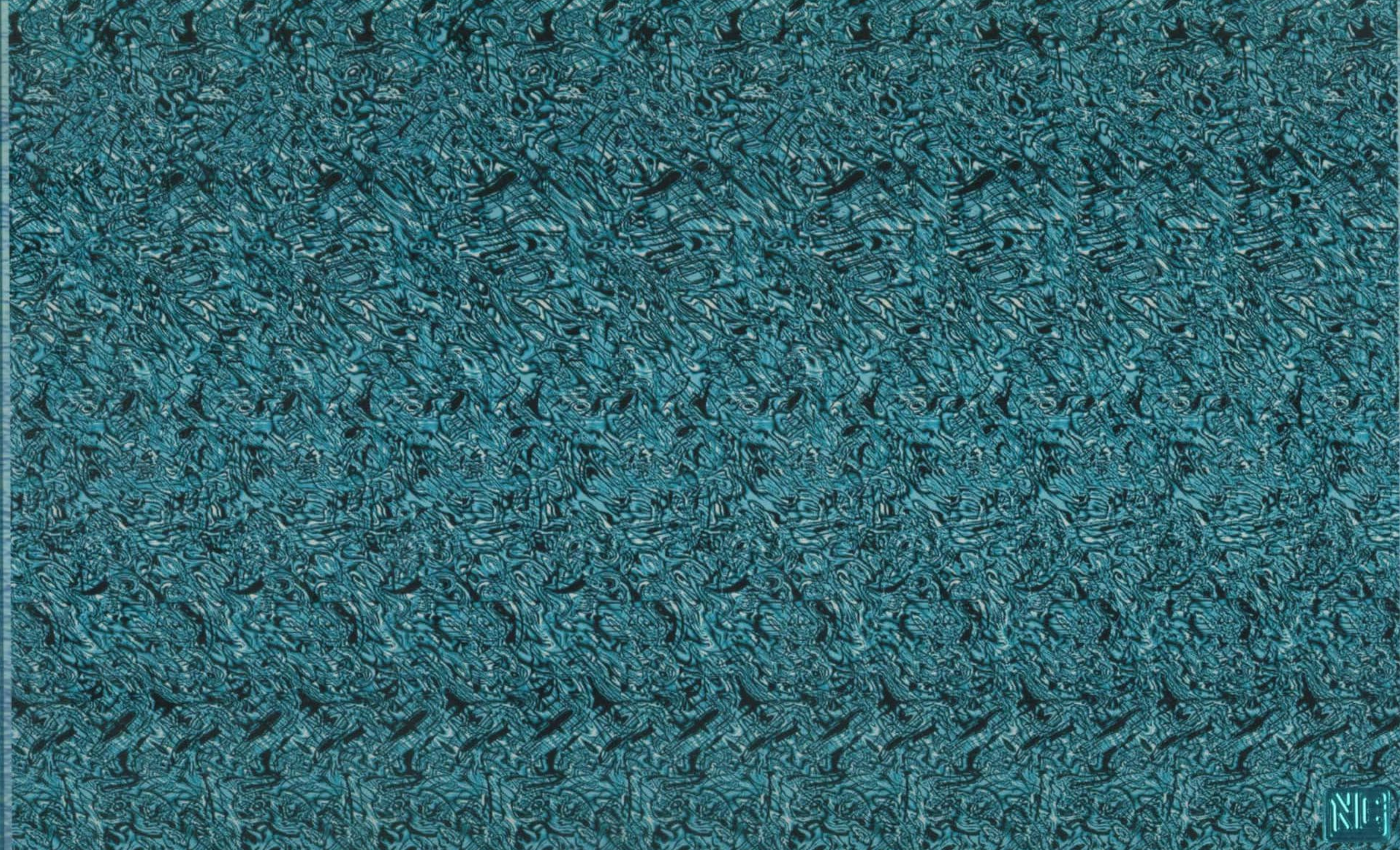
We also discussed the role of language. They believe that language is a behaviour like any other. It is not just its linguistic content that is important, but also what is conveying our ontology, such as stories, poetry, lies, narratives in film, or slang. They critique propositional language (what is said is true), since they believe that what people are saying about the world is much more than what is said with words. This reinforces fabulations and poetry as tools for working with ambiguity as a creative force in, for example, provotypes.



“Magic Eye” Instructions: You need to relax both of your eyes and look into the distance (not cross-eyed!). At some point, both of your eyes find a similar looking focal point in the image in two different places (left eye finds one on the left, right eye finds one on the right). For me, I was able to see this image in full-screen on a 13 inch laptop screen by sitting about 50 cm away. If you do it correctly, the Magic Eye picture will reveal a very convincing 3D environment!

It might take your eyes a few minutes to adjust before you can see the new 3D space. You will know when it happens—it is not subtle.

To make it a bit easier, I have tried to place some dots to guide your gaze in the places I find the image: In full-screen, try letting your left eye find the left dot and your right eye find the right dot by relaxing your gaze. Then, while keeping that focus, press a button to change to the next spread.



INTERVIEW 2: PROFESSOR OF DESIGN

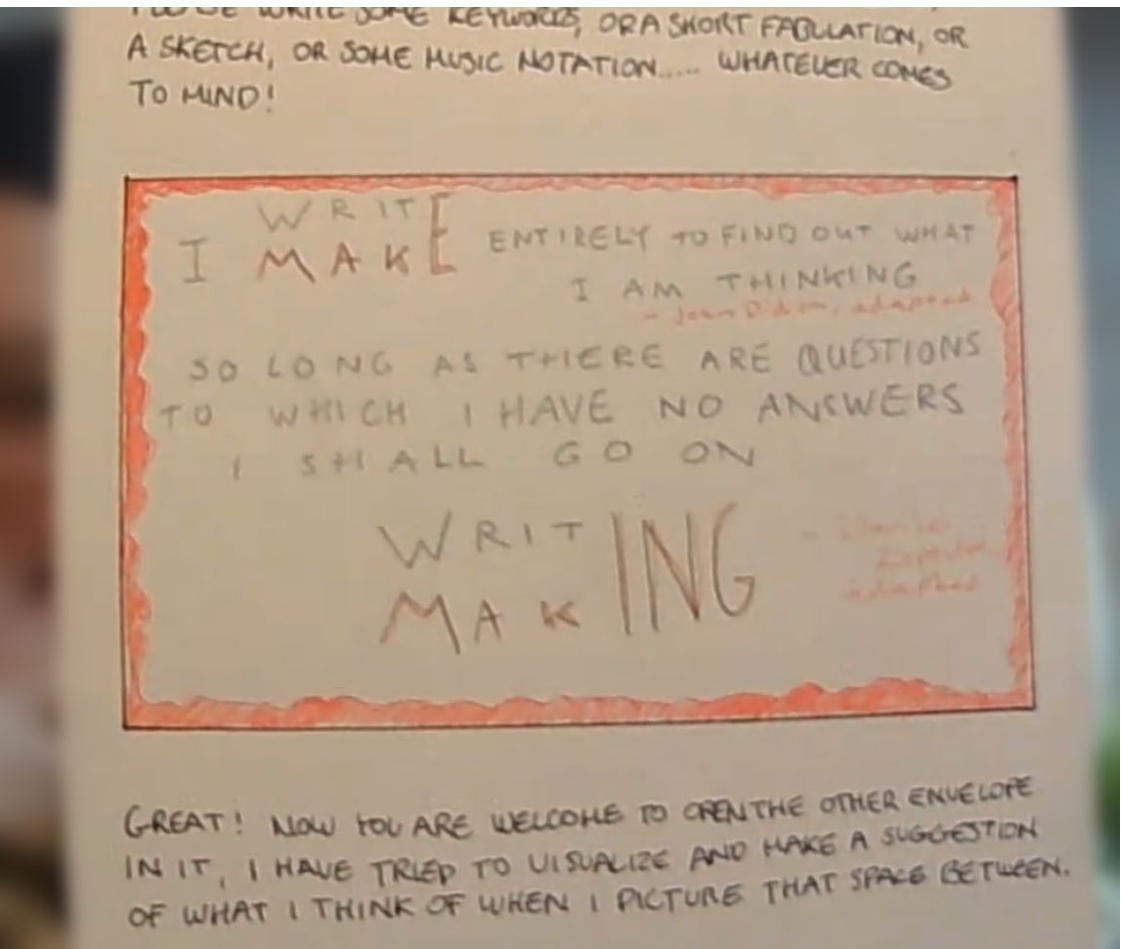
My second participant and expert is an assistant professor of design working with human-computer interaction and more-than-human design, with a specific focus on digital textile fabrication, ecological approaches, and interaction design, using research-through-design in their research practice.

The participant's response to the letter contains two adapted quotes from Joan Didion and Clarice Lispector:

I WRITE/MAKE ENTIRELY TO FIND OUT WHAT I AM THINKING

SO LONG AS THERE ARE QUESTIONS TO WHICH I HAVE NO ANSWERS I SHALL GO ON WRITING/MAKING

In the quotes, they talk about why each of them writes. They work, although they are authors and not philosophers, often cross into the philosophical space. The participant resonates with these quotes as they themselves engage in philosophy through design(ing):



Quotes that were inspirational, becoming a poetic way of reflecting on their design practice.

“How design/making things can be a way of inquiring or probing into philosophical questions, rather than just design questions, like ones of user functionality. And that’s very much where I would position the work that I am doing.” They go on to also position their work as “a practical application in the theoretical space”, aligning with my project. They chose to work with writing, instead of, for example, sketching, since it was the first thing that came to mind; but they did not just write them, but also ‘designed’ the letter (edges and double-wording). They end by making a very relevant note to this project: “I think sometimes drawing can become so representational. I think text too, of course, but maybe what I tried to do with this was to kind of allow myself to interpret the text or something, or to tweak it.”

Similar to the previous interview, I will provide a brief recap and only go into depth with the most interesting points for further work and provotypes:

- What are events, and what vocabulary do we have for them?
- Currently experimenting with using rhizomatic-inspired research approaches, inspired by Deleuze and Guattari.
- Why they went into the design and philosophy space, and their frustrations, such as how design is viewed as simply functional with no other, deeper dimension.
- Their previous research projects that involved design and philosophy in different ways, and what specific challenges those brought.
- Their most recent work includes co-speculation with philosophers and other disciplines.

In their practice, they use writing as a creative tool outside publications. Their writing is inspired by feminist auto-theory, such as *The Argonauts* by Maggie Nelson (2015), which allows blurring and dissolving boundaries between the personal and the philosophical, and in their case, with feminist posthumanism. A way of doing this is by writing autobiographically and adding theory as sidenotes in the margins, relating real-life to theory. This is a way of not losing the nuances and entanglements of everyday events, and instead admitting that theory, practice, and ‘real-life’ are not separated.

Sabrina Hauser does post-phenomenological research in design and talks about how taking theories from philosophy and applying them in design is an extractive one-way street. In working with that, the participant hopes to position their work as doing the opposite: informing philosophy or post-phenomenology. It’s not just about giving back for them, but also “about taking design more seriously”. Design, as a field, has struggled with being taken seriously by other fields outside of making things look pretty. The participant’s concerns and actions align perfectly with one of the calls for research we are trying to address.

In the participant’s own work, they work with maps and representations of nature. The research is interesting, as it is trying to map a more-than-human system of entanglements that simply resists numbering and being mapped. Living nature on maps becomes a strange concept, as some exist as “unknowns” because, simply, the mapping is not able

to keep track of everything. The nature is “trying to unmake the map.” They engage with alternative mappings, such as weaving the data into patterns. I, personally, find the counter-mapping very interesting and will try to implement this further into the project.

Within design, philosophy feels too complicated to both students and researchers, since it is not straightforward. Therefore, it loses attention and people shy away from it, even though it is not necessarily more complicated but just “more of a fuzzy line rather than design’s more straight one” (paraphrased).

Lastly, we spoke of what excites them: “The way of working through concepts and questions in a much broader sense.” The potential of this type of research is that it might enable design-research to mature as a discipline as well. This would become an alternative to how design suffers from having to show the trajectory of how produced knowledge needs to be useful right away (in funding, publications, etc.). The exploration that is enabled by design is only getting more important because of how much we are being shaped by the technology around us. There needs to be more substantial collaborations than just overlaps with other fields. There needs to be a space “for design scholars [to be] a space for that type of thinking.”

EXTENDED CORRESPONDENCE OVER EMAIL

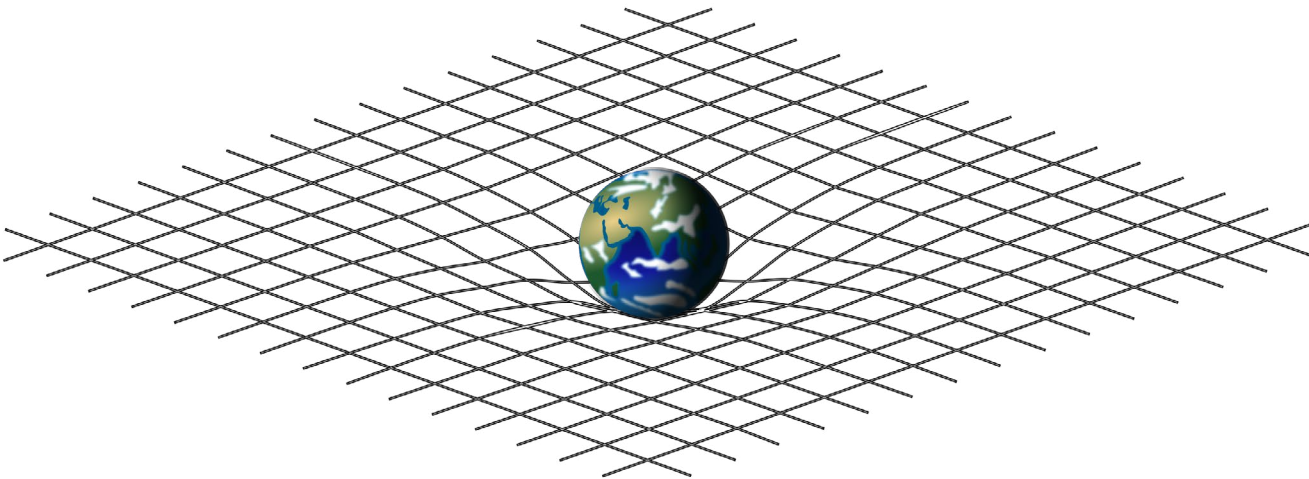
During the interview, I simply forgot to ask about how they had interpreted my first provotype inside the letter. They were so kind as to write an in-depth answer by mail, which transformed into a short correspondence.

The graphics represented well how dialogues are generative and not one element overpowering the other. However, they had questions about the word choice: ‘nexus’. This is not the first time ‘nexus’ has sparked some questions, as one of the PhD students in philosophy had military connotations. I explained that I used nexus to differentiate from a singular centre, and nexus, to me, meant a kind of assemblage or, in this case, whatever we choose to align with the words ‘design’ or ‘philosophy’. Their connotations were instead tied to the tech-industry and innovation. Instead, they would have chosen terms such as knot, twist, braid, mesh, or warp. This, in turn, triggered me to consider how some of those terms, although aligning with Ingold’s philosophy, might “lock” themselves. In this case, it felt limiting, so I wanted to expand on the ‘meshwork’ idea. Meshwork is a key term in Ingold’s work. To me, it has always felt limited to a three-dimensional space, which I wanted to challenge. I responded with a question: What if we look at meshwork in four dimensions rather than three dimensions, adding a quality of gravitational pulls to the meshwork?

In Einstein’s general theory of relativity, gravity is added as a fourth geometric dimension in space and time, which is where we introduce ‘curvature of spacetime’. This is an extreme simplification, but I wanted to introduce this idea into Ingold’s ontology: What if the meshwork experienced a similar curvature? How could we understand those? I propose that such a curvature could happen with larger, external events that seem to

affect agencies (of people, especially), becoming conceptual spaces of higher intensity. One such centre of gravity could be the intersection we are looking into in this thesis.

Using a contested term like this was, surprisingly, very generative. I believe the reason that both the Professor of Design and one of the PhD students in philosophy reacted to it is because it describes their position, as well as mine, in a way that they disagree with.



“Lattice analogy” of spacetime curvature according to Einstein’s general theory of relativity. Image credits: Wikipedia article on *General relativity*.

CO-SPECULATIONS

In the session following the interviews, I bring another tailor-made provotype based on the preceding interview and on some key publications from the participants that stood out to me as relevant to the conversation (in order to keep the participants' anonymity, I will refer to but not cite the works that I read as part of making the provotypes). The session begins by briefly bringing up our conversation from last time, followed by a presentation of the new provotype. By engaging with the provotype, I ask about what thoughts it triggers for them, and if they can see their own work relating to or reflected in it.

The purpose of this provotype is just that: to provoke. The artefacts are trying to represent the ways in which the participants 'see the world' (based on the conversation), but intentionally in combination with a perspective they will have friction with. In other words, the provocations do not seek a pure and correct representation, but to challenge and question them. Additionally, the alternative—trying to correctly represent them—would be a highly arrogated position after just one hour of interview and some desk research; so by engaging in friction with intention, I also remain more humble in my approach. How the provotypes are interpreted, and what comes of them, are subjective and interpretive, and therefore highly unpredictable. In questioning the expert in trying to deepen my own understanding, the humble approach is not only more respectful, but also more informative to the project.

I want to leave the conversation undetermined and open to surprises, so that whatever emerges from the interactions can be fuel for the rest of the session. Following my provotype and the conversation around it, we move onto co-speculation. The co-speculations use different media in the two sessions: one session uses a bunch of random prototyping-things from IDE's Studio Lab, while the other session keeps things simpler with clay and thread. The co-speculation is, in the name of *material correspondence*, a response to my provocation. The response is emergent and entirely up to the participant (within the given means), as I will do minimal interventions and let the participant be the main driver. Different dynamics and constellations could be tested, but for this experiment, I am interested in specifically testing how an expert—or anyone with stakes in the discussed matter—responds to a provotype that is situated in their work and concerns. The motive behind the co-speculated artefact is to see if anything emerges or is evoked from co-creating a response to a provocation.

I am present because I want to better understand how a recipient chooses to respond: What are the triggers? What are the focal points of the recipient? Does it make any sense to them? This can hopefully let me get closer to understanding how the method can enable a more 'true' correspondence towards *thinking otherwise*, and not a forced or imposed exercise. By being present and occasionally intervening, I am a direct influence on the behaviour and therefore result of the making-process. In this way, this experiment is an ethnographic study of being *in material correspondence*. Opposing traditional ethnographic research (observing with no interference), I am not appearing

as a neutral observer, but as an active agent in the observed environment. I am deeply engaged and diffracting-with the participants. In other words, *I am engaging with the 'subject' of research, admitting my inevitable influence*. My non-neutral admitted position in the research is in line with both Marisol de la Cadena's concept of *Complex "We"* as well as how Anna Tsing engages with non-humans:

“This “complex we” implodes the possibility of a single locus of enunciation of the “self” because “us” and “them” occupy it, always considering that even in divergence “we” affect each other. Unlike the simple we, the “complex we” is with what exceeds what the usual “we” is not.” (de la Cadena, 2019, p. 478)

The “complex we” from de la Cadena, along with Tsing, subscribes to a non-anthropocentric and decolonial philosophy of escaping the split that the anthropos makes from non-human and nature, and how the white European man has established himself 'at the top'—an intersectional crisis that requires a different epistemological approach (among other things). I also draw on de la Cadena's ontological stance of excess in order to accept a counter-stance to rationalist thought in what she calls *co-labouring*:

“Co-laboring was my name for the practices among us (conversations, sensations, feelings, observations, intuitions that composed a complex togetherness: a contact zone in which we understood each other and did not understand each other. This second ethnographic mode, which I call “excess,” was as important as understanding and could be simultaneous with it.” (de la Cadena, 2021, p. 248, original citations removed)

Anna Tsing aligns herself with this idea by engaging with encounters that never fully resolve. This is where Tsing's famous method of “noticing” comes in: a practice of being present and giving attention to responses, frictions, and coordination among species without ever seeking true representation. Tsing “arts of noticing” is actually a direct counter-practice to modern narratives of growth, but instead questions and opens up the logics of modern Science:

“To learn anything we must revitalize arts of noticing and include ethnography and natural history. But we have a problem with scale. A rush of stories cannot be neatly summed up. Its scales do not nest neatly; they draw attention to interrupting geographies and tempos. These interruptions elicit more stories. This is the rush of stories' power as a science. *Yet it is just these interruptions that step out of the bounds of most modern science, which demands the possibility for infinite expansion without changing the research framework*. Arts of noticing are considered archaic because they are unable to “scale up” in this way.” (Tsing, 2015, p. 37–38, italics added)

This can sound rather epic or frightening—this small engagement being a decolonial one. But I believe my engagement here is simple. What I need to underline here is that we are *not* pretending to be objective, but instead a subjective being, which is itself a radical move within Western epistemology. By resisting that same epistemology, we are in fact taking part in shifting the epistemological paradigm. A last announcement is that

I will not stand at the other side of the co-speculations and suddenly have ‘figured out’ how to remove colonial violence in epistemology—not even close. This brief presentation and quotes here are theoretical frames that I can use to further engage my research in the right direction towards finding *liminal epistemological spaces*.

At the end of the co-speculation session, I asked the participants to fill out a box on paper using the same instructions as I did in the sensitizing letter. I do this to see how their perception of the space we are exploring might have changed. This comparison is, however, very fallible, as a lot can affect how they would respond. Therefore, this final exercise is accompanied by a conversation and questions about *why* they chose to fill the box out similarly or differently than the first box.

CO-SPECULATION 1: PROFESSOR OF PHILOSOPHY

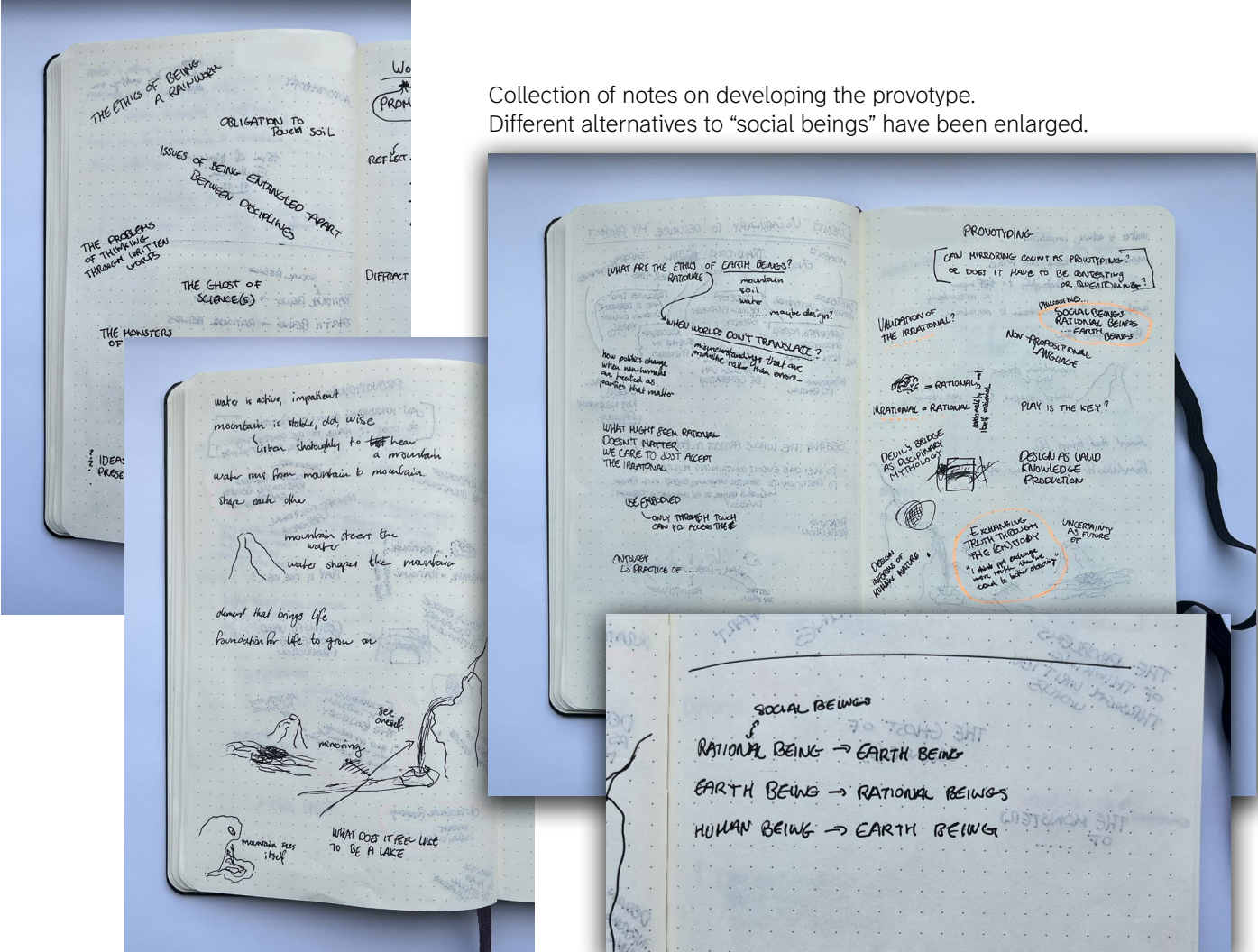
The co-speculation session with the professor of philosophy took place a week after the first interview. The co-speculation session took place in Studio Lab (IDE) and lasted about one hour.

In reading about their work, I learned about serendipity, which is a very fitting concept for this project. Although most of their work relates to resilience, serendipity is where their work starts to overlap most with my research. Serendipity is, in its more basic explanation, a mix of skill, luck, and timing. Serendipity can be seen as a relational phenomenon that unfolds through doing, and is very relevant to creative practices that ‘produce’ something creative, but is questioned in scientific communities since it needs to point to a ‘finding’, and it is unknown how to exploit it. Serendipity can be viewed as an ‘event’ where accident and sagacity (a kind of wisdom) meet, and is a destabilization of structural control in knowledge-production: it is partly accidental. Sagacity is important, as it is what makes the person experiencing serendipity able to recognize the potential that comes up instead of overlooking it. Some therefore argue that it is those who are deep in theory that are also best able to recognize when a serendipitous moment happens and bring new ideas together (within a domain). Their work on serendipity is very interesting to us, as it puts into words parts of what we are hoping will happen in those *liminal epistemological spaces*. However, our hypothesis builds on this further by proposing ways of suspending modern categories in order to let the serendipitous moment inform a non-modern episteme.

PROVOTYPE AND PROMPT: A FABULATION

As a response to the first interview, this provotype builds on a conversation about the nature of epistemology and rationality.

At this point, I wanted to work with fabulations in one form or another. I needed to base the fabulation on what we spoke about in the interview, so I went through my notes and



Collection of notes on developing the provotype. Different alternatives to “social beings” have been enlarged.

highlighted the most pressing concepts we had discussed. Among other things, a brief but underlying part of our conversation was human nature and how humans are social beings. At the same time, my participant explained in great detail about rationality, and how irrational behaviour is fully expected and therefore rational—irrationality is rational. I was left with questions about what it even means to be rational, so I used this as fuel for my fabulation.

I struggled to find a good angle for the fabulation, so I started seeking inspiration elsewhere—which I found from de la Cadena’s Earth Beings. I wanted to question: what does it mean to be a social or a rational being in comparison to an earth being? How can I challenge rationality in Western epistemology? To get my mind going, I went for walks to think (with my body) and get inspired by nature, where I began telling stories in different ‘directions’ to myself. I ended up creating a short fabulation based on the above, mixed in with my participant’s first sketch of a devil’s bridge in between two mountains. I call the fabulation *The Mountain and the River* (see next page).

I needed the fabulation to be in an appropriate format for the interview, so I made it into a kind of manuscript. The fabulation was an improvement over my previous manuscript (artefact in *In A Box* experiment), as I made two characters speak to each other to



THE MOUNTAIN AND THE RIVER

Before we heard what they were saying, we tell them what we are thinking. In movement, in tremors, in vapours, they exist. As the land began to rumble, the ice began to thaw, thinking-whatever that might mean—was unsettled.

Mountain:

[slow shivers; then speaking slowly and articulated]
Hello, child. Restless child. Each season, your kin come to bother me. Tell me, have you found the truth in all your wandering?

River:

Truth? I find it, lose it, and find it again. Why would I hold it still, when it dances so beautifully?

Mountain:

What endures is what can be known. Look upon me; feel me. I have stood since the dawn of wind. I have watched countless suns be born and buried. If anyone, I know the measure of things. It is only by the bothering of you that my shape shifts.

River:

[snickering, like splashing water]
And yet, old one, you have never seen the sea.

Mountain:

[deep grumbles, like the earth is moving]
The sea is chaos. It is no place for reason. It devours form and makes mockery of shape.

River:

Or maybe, it remembers what form forgets. My sisters have carried your dust to its depth. Even in your stillness, you move through me.

Mountain:

And yet, my wisdom, my knowledge... It is all carved in stone.

River:

Line by line, it was us who carved your wisdom, with patience and play. You wear my flow as valleys on your face.

Mountain:

Perhaps. But I remain when you are gone.

River:

And when my sister passes next, you have forgotten me, old friend. This is our rhythm. Your stillness, my song. Without me, your silence would never reach the sea. Without you, I would not know where to begin.

As Earth Beings, we are as kin. Although ages have passed, the same conversation can be heard again each time a new sheet of ice thaws. Each time the freezing water flows down the neck of the Mountain, dancing down its back, to finally settle in the pool at the Mountain's lap. Settling for just a moment, before the mountain shape-shifts into land.

give us the option of collaboratively performing and reading the fabulation. In this way, we could enact the fabulation, using our bodies. By including certain sounds, such as “snickering” or “grumbles”, I also made the exercise a bit silly. This way, we would loosen up and invite some vulnerability before starting the co-speculation. The manuscript is wrapped by a preface to set the scene, and a postface to exit the story.

When enacting the manuscript, I gave the participant the option between the river and the mountain. They picked the river, making me the mountain. I went first, which also gave me the opportunity to speak with as deep a voice as I could and move my body, thereby inspiring them to do the same. They embodied a frisky and quirky character, as evident by their tone of voice and lively body language. I read the pre- and postface in a normal voice, such as a narrator. We read the manuscript from paper while sitting, making the exercise partly inactive. The exercise could have been slightly improved by standing up and having more voice lines. However, this was otherwise a great way to start the session.

Immediately after enactment, we began talking about the provotype. They critiqued it for having some elements of anthropomorphism, which it definitely deserves. The mountain and the river both take on anthropomorphized roles and concerns, the latter of which reflected our previous conversation. It’s difficult to translate human concern into non-human contexts—and it probably should not be done in a ‘serious’ application. For this application, however, it worked well, since the whole point of the manuscript was to *be provocative*. Beyond this conversation, we also discussed the importance of not making our understanding of nature more human (like the manuscript here) but instead to decentre the human in our narratives.

CO-SPECULATION: RESPONDING TO THE FABULATION

After our discussion, we began ‘responding’ with a co-speculation. This participant was asked to make their response using semi-random prototyping stuff from boxes of Studio Lab. To start off the making, I ask them about their reactions and emotions tied to our co-enacted manuscript. Within minutes, the participant is creating their own vision without telling me exactly what they are making. I avoid bombarding them with questions to allow them time to think and collect things from the boxes, but they tell me they have an idea before they start making.

When they stop collecting and start assembling, I begin asking what they have in mind for the artefact. I focus on never directing the making process, only asking questions so they have something to react to, and I have a way of following their process. I am interested in their vision and what considerations they have for the artefact, not the material representation they make itself. I set 30–45 minutes aside for the making exercise, so I emphasize that the artefact needs to be rough—it is supposed to make you reflect and give you an interesting insight, not to be anything final. Although I presented the exercise as co-creation, I *only once* added anything to the model.



The representation is somewhat literally what the manuscript was about. Before and during making, they explain that they wanted to make something tall, something ‘flowy’, and finally, something that represents the “world”. The model itself represents a system containing a figurative representation of the “world” and something beyond it. When they are finished, they tell me that it is not a map, but a frame: A topology, seen from above. The tall part is the mountain, and the river is what goes back and forth between “mountain” and “world”.

To finalize the artefact, we put on a tag and give it a name to make it ‘real’:

1 of 1
RiverMountainWorld
Extension

In the discussion of this co-speculation session’s subsection, I will go into more detail about how this session informs the project.

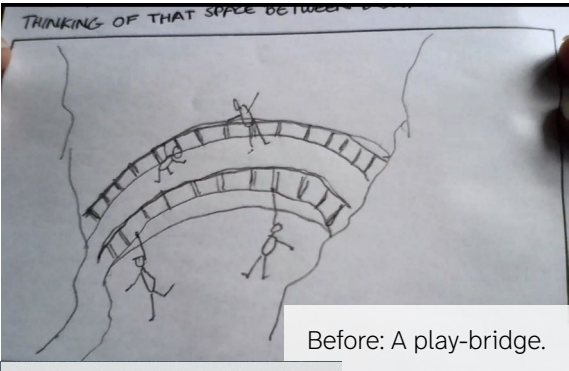
EVALUATIVE FRAMEWORK

To evaluate our sessions, I once again asked the professor of philosophy to fill out a box in whatever way they see fit—be it a sketch, poem, keywords, music notation, or anything else that comes to mind.

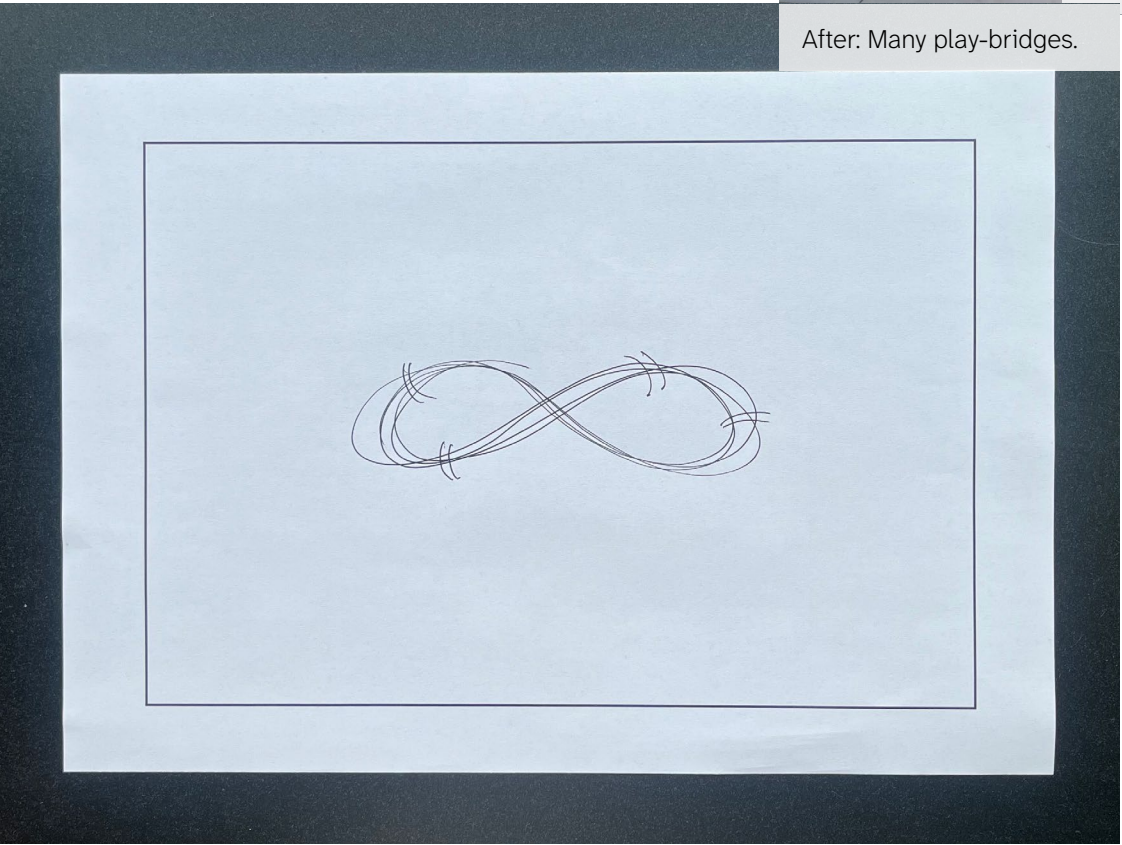
They started by drawing an infinity character, symbolizing an infinite flow like water, going between “mountains”. The lines crossing the character are devli’s bridges between mountains; bridges that go back and forward between mountains (disciplines).

“More interestingly, there are more spaces for devil’s bridges in this river. You can almost imagine one here and one there. So then, if you think about design and philosophy as playing on the bridge.”

I then ask how that relates to the artefact they made, to which they begin translating the dynamics in the artefact into the sketch’s ‘language’. The representations made here stopped being about only design and philosophy, and transferred into being about the meta-theme of working across disciplines:



Before: A play-bridge.



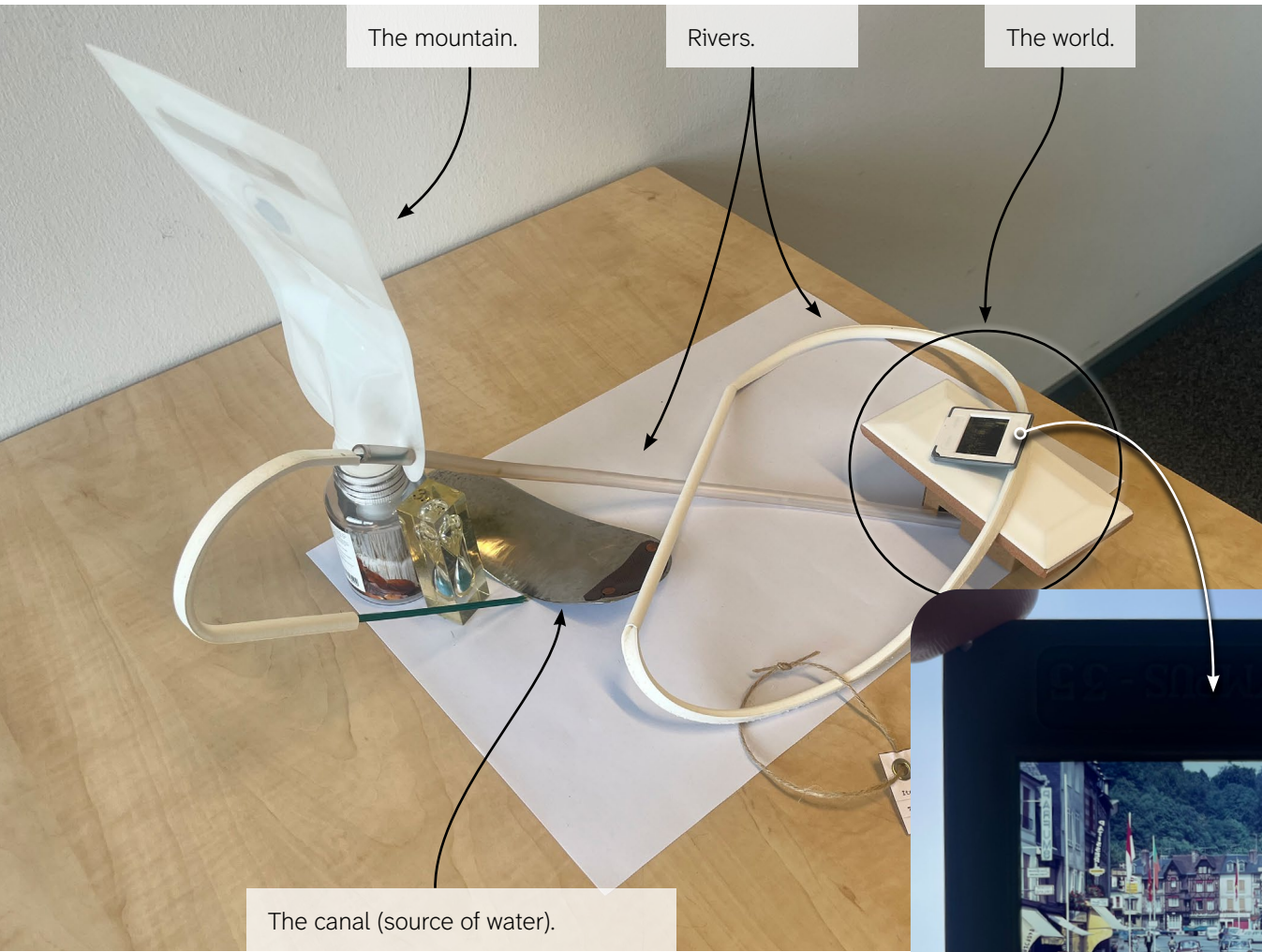
After: Many play-bridges.

“And yeah, it’s up and down, and in the ground, and through the mountains, and then, I don’t know, you could add bridges over top of it wherever you like, basically. But that could be in keeping with the design-philosophy play-bridge.”

In the form-language of the artefact, the rivers and bridges are there whenever the rivers meet each other, or the rivers meet something else, or even in the middle of nowhere.

“The bridge that we’re playing on, so it’s really more of a play-object than a functional object. But yeah, definitely the in-between space is what’s important.”

In this way, not only did the manuscript help resonate a further reflection on their initial thoughts, but so did the making exercise. Their response to the same question as in the original letter went from being a singular bridge into an infinite space of crossings and cross-disciplinary works.



DISCUSSION AND INSIGHTS

The co-speculation was very verbal, as the participant took a lot of pauses to explain surrounding theory, oftentimes jumping from the making and wanting to share with me in order for me to catch up on the deep theory that lay around what they were talking about—a great sign that the act of making was able to trigger thinking. This also meant that while they were talking, the making was paused. Although the talking was a sign of the making being generative, it often felt like premeditated arguments being brought up rather than new ideas—not a bad thing at all, but also not what I believe we are looking for. In the session, I therefore oftentimes tried to turn back into making after talking for a while, prompting questions such as “how do we materialize these considerations?” In general, my insistence on returning to materializing the subjects we discussed were unfruitful, and was instead a trigger for discussing other aspects of the model in making.

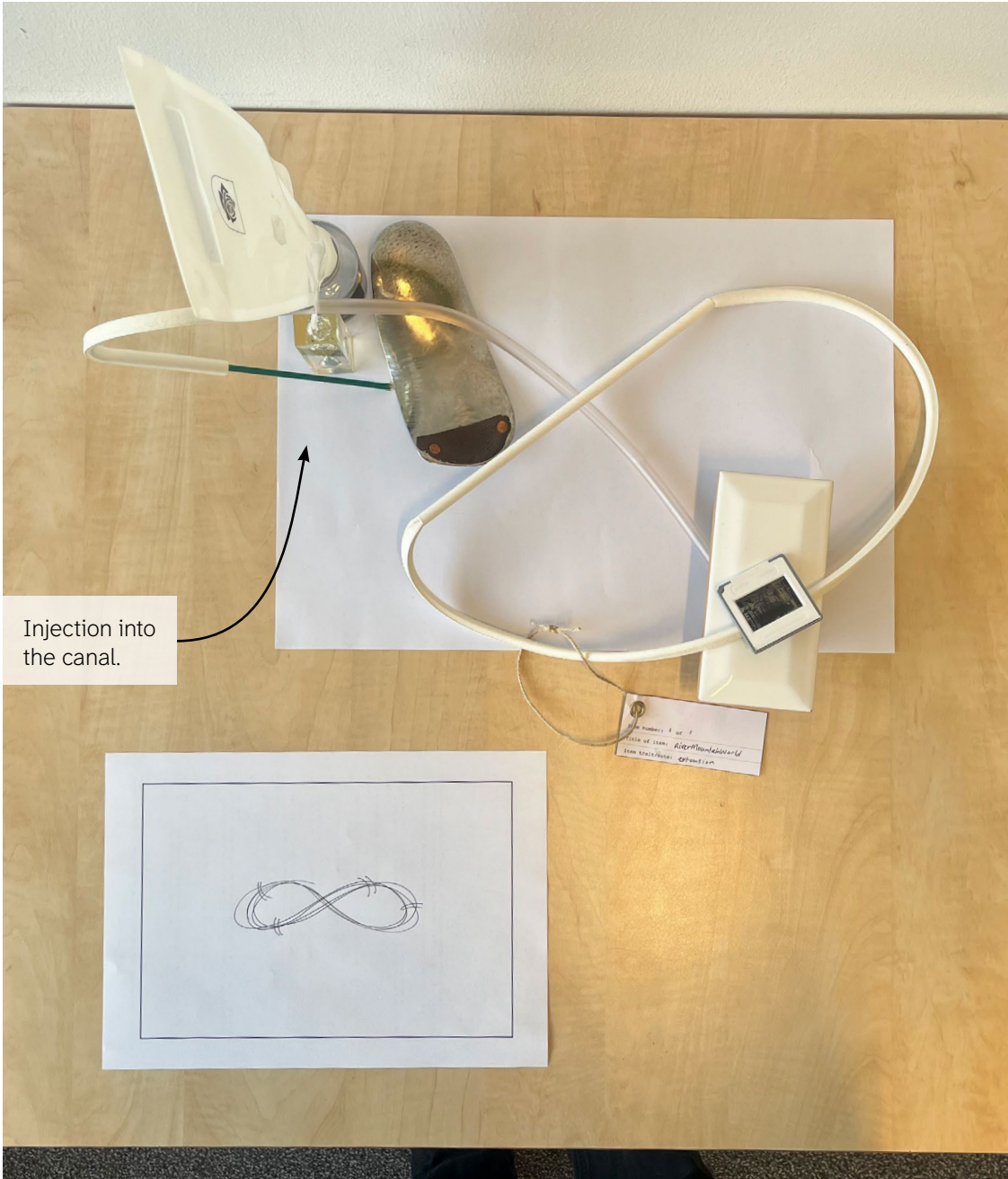
The participant finished building their model quickly. This could be explained by various reasons, such as the participant being satisfied with their model quickly. It is also worth considering if they finished quickly because the model became a representation of the fabulation in its most basic form (mountain and river), rather than their own interpretation. However, the participant’s interpretations became clear when they started explaining the model. It was therefore only the physical representation that carried similarities to the fabulation, but the meaning that physical form carried varied vastly.

“Visuals are good for me, so it’s always nice to have an image and try to figure out how things relate to each other physically. That always helps my thought process, um, and I’m kind of inspired to bring in half of my junk into my office.”

The metaphor that I provide through the manuscript also becomes the frame from which they are creating this provotype. This doesn’t seem to indicate the meaning of the provotype, but moreso the frame or shape that the participant is going for. It is, after all, a correspondence (a response but also taking the next step). The issue that might arise, or the danger, is if the provotype only uses the fabulation and does not work with interpretation and/or free thinking from the participant. It’s therefore important to keep a relaxed, non-performative atmosphere that invites creativity and playful thinking rather than criteria and evaluation (on how well the provotype is, etc.). As noted by the participant during the first interview, *liminal time* is required to work creatively, out of the box, and across disciplines. This can be triggered by the participant not knowing what is expected of them, how much they have to perform or in what ways.

The session was structured so that the fabulation was immediately followed by provotyping. This could be formulated as [fabulation>making>talking]. In this session, it became clear that the participant was comfortable in [talking]. This clearly informed me that placing the [fabulation] followed directly by [making] allowed us to enter a *confusing, non-closed space*—maybe even *liminal* at some points—to exist between the two activities, avoiding placing [talking] in between [fabulation] and [making]. Having moments such as these, not controlled by [talking], might be key to remaining in liminality for longer than a brief moment (for example, while reading the

fabulation) and in going between two activities. In order to further enhance creativity and open-mindedness, I found it important to include vulnerability. I included a sense of vulnerability by leading by example when reading the manuscript. I did so by making weird voices and sounds that they could follow along with.



Model and final sketch side-by-side. My only addition to the model highlighted by annotation.

In terms of the underlying message I was trying to include in the manuscript, it did not seem to be as obvious as I had hoped. I wanted to bring up issues of Western epistemology and science placing itself at the top as the only ‘true knowledge’ (represented by the mountain). Instead, the main trigger was what was missing (being non-anthropocentric). Indirectly, this spoke of the issue of Western epistemology, but from an angle I did not plan. It seems what provoked me in the interview was a sense that *there is something missing*, which prompted my manuscript, and in turn, this sense is also what provoked them. This shows that whatever one intends to show or do with the fabulation, it’s ultimately up to the interpretation of the receiver. This should be a rule of thumb for correspondence as well: You can be certain of what you are sending, but you are never certain of what someone else receives. And this is exactly the point. We are not trying to create a prescriptive conversation, but instead a generative and limit-seeking correspondence that moves onwards.

Method-wise, we have two analyses of this: Negatively, one could assume that two sides of a correspondence become two echo-chambers shouting across a chasm; never to have to assume or build on the other perspective’s position or understandings, ultimately carried by ignorance. Conversely and positively, we can also look at this as a way of talking and working across through the epistemological framework of *not knowing*; not supposing to understand nor to try to convince the other side, but instead ultimately remaining *humble*.

During co-creation, I was especially interested in their thinking-process—both what something affected her and how—more than what they were trying to represent. If this enables their thinking to be ‘extended’, does it make for surprising connections? When I ask them about this, their response was “Not so much, but I’m a tough nut to crack [...] but it is hard to tell.” Although this sounds bleak, something indicated otherwise. When we spoke about key reflections from the artefact, they pointed to very few things; one of which was my small addition to the model (a stick going into one of the pipes that I later discovered was a “river”). Of the key reflections, this was the only one that was physically based in the model and not conceptually abstract. This stick made them question their own model and what it might mean to “inject knowledge into the canal”. This was completely unexpected. I had only added the stick to balance the “mountain” in the first place, not intentionally adding content to their model. They also did not acknowledge that I made that addition. I believe this might point to a more important and fundamental feature of what it means to *materially correspond*: If you only create your own models, you are projecting what you already know into the material. This can question yourself and others, and act as a provocation. But if someone intervenes with your “perfect picture” model, it creates a sudden friction with what you thought you were creating. This friction is only slight, but it is one of the most generative things in co-speculating. It is emergent and unplanned, but being pushed off your path is what opens you up to new possibilities.

CO-SPECULATION 2: PROFESSOR OF DESIGN

The co-speculation session with the professor of design took place two and a half week after the first interview. The co-speculation session took place in an open research and design space at another design faculty and lasted about one hour.

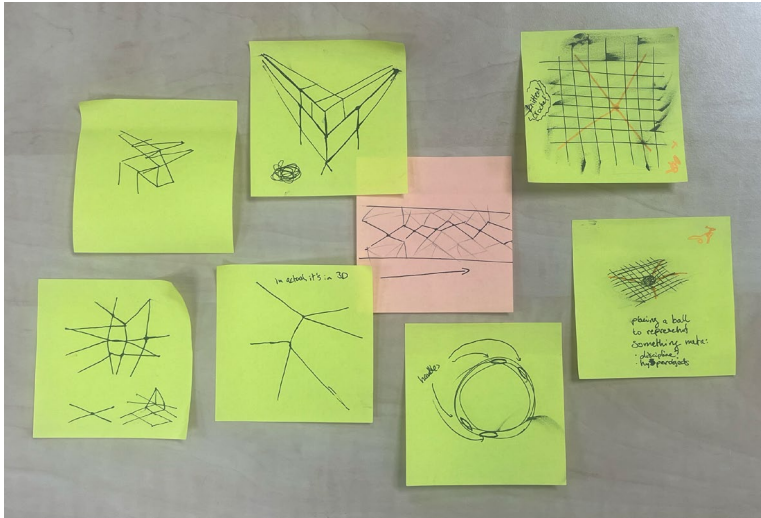
I read two main works by the participant before the co-speculation session began. I will again refrain from citing them to keep anonymity, and instead vaguely refer to how they informed the session. The first work was a key work that also spoke of the nature of co-speculations in similar sessions such as ours. However, their work extended considerations into other domains of thought, such as object-oriented ontology. I used this as one of the starting points to talk about the intentions for the session, immediately aligning us. The other key work brought up key terms in order to discuss sessions such as these, splitting them up into parts happening over a temporal scale. These new terms allow for a language to speak of differentiations I was unaware of in co-speculation sessions (and beyond). However, the participant made it clear that they did not want those terms to be seen as definitive and representational—different moments can be described completely differently by two people, and are therefore only meant as sense-making terms, not representational ones.

PROVOTYPE AND PROMPT: A CROCHETED MESHWORK

There were many threads from the interview that I could have picked up on and continued into a provotype. However, the email correspondence we had had provoked me, and at the same time, we discussed two things that relate to their work: thread-analogies and terms. The following provotype builds on that correspondence.

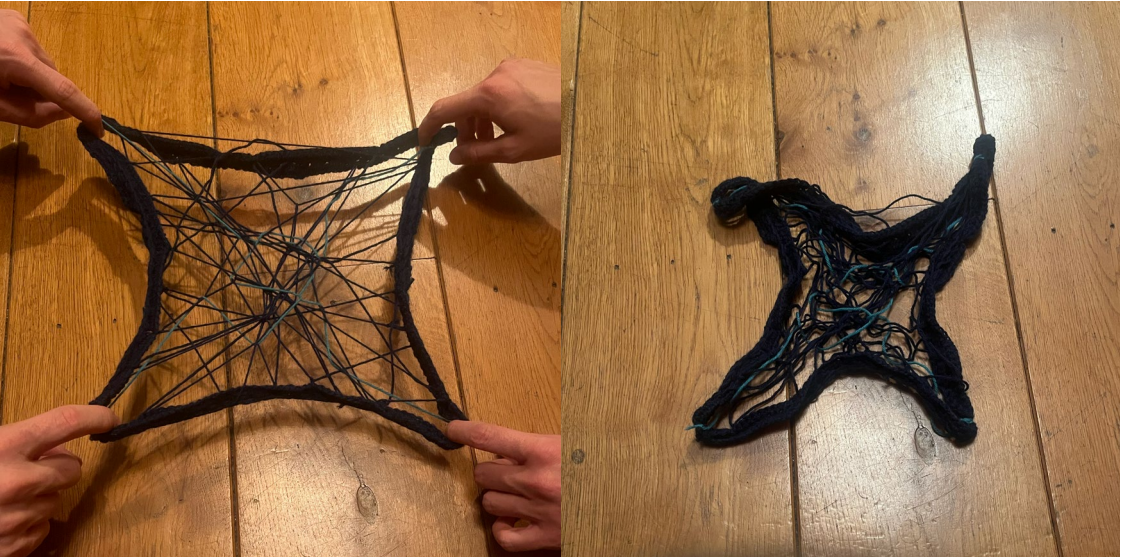
At first, I was looking to make another fabulation or manuscript for this participant, building on my experience from the first provotype. However, I soon realized that I could make something that landed closer to their work and the philosophy we had discussed (which includes Ingold’s). I therefore opted to crochet my provotype. The idea was simple: How do I communicate my frustrations and ideas surrounding those core philosophical concepts, such as “knots” and “weaving”? I started prototyping on post-its to figure out the form and ‘story’ that I wanted the provotype to tell.

I decided that I wanted to crochet a web of relations in a dark colour, becoming the backdrop for two light threads that would weave in and out of the backdrop and each other. I wanted these two threads to represent both two disciplines becoming together,



A collection of some of the post-it notes I used to brainstorm the format and story of the crocheted provotype.

and with everything else around them, but also me and the participant intra-acting and (hopefully) becoming something more through the co-speculation session we were about to have. In a very practical sense, I crocheted using 100% Highland wool (Peruvian) of 50g/175m, which was able to slightly stretch. The final result of this was a lively web of threads that was able to give way and readjust based on how it was pulled in different directions. I crocheted using a 3.5mm needle, making the stitches thin and tight.



The crocheted provotype when stretched out, as it would be in-use (left) and relaxed (right).

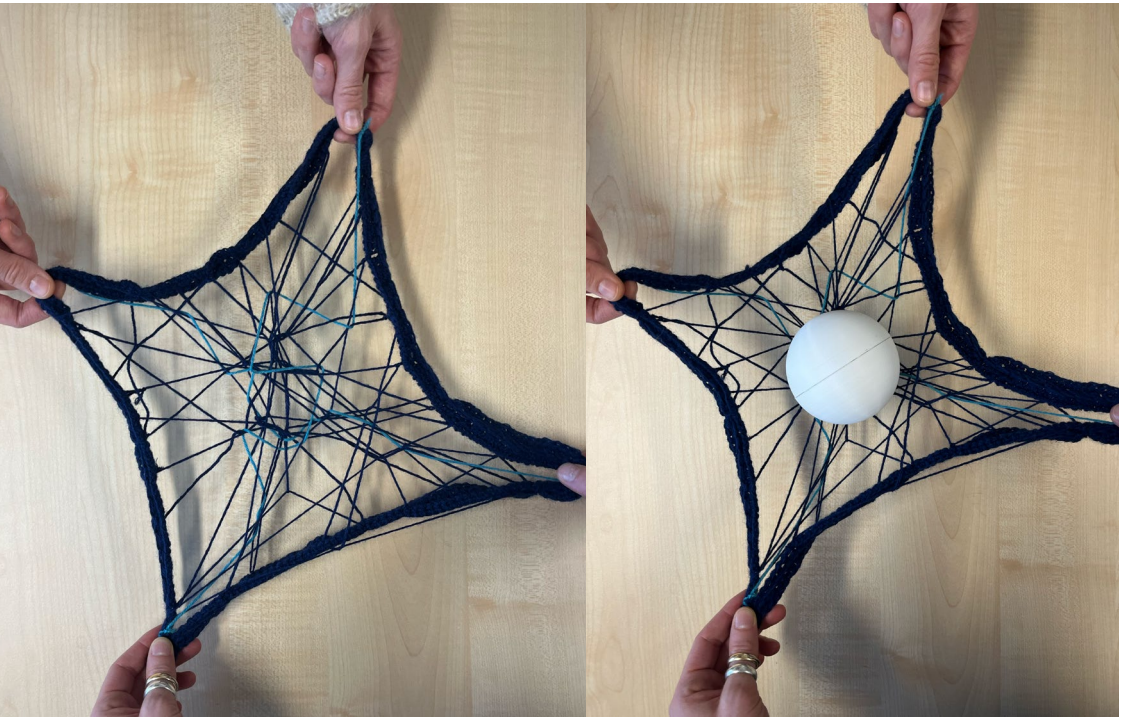
To add onto Ingold’s philosophy, which I had already mentioned in the email correspondence, I wanted to add this element of ‘gravity’. I chose to 3D print a ball with a fitting size so that it would not slip easily through the holes of the web. I also inserted a glass ball into the 3D printed shell to give it an unexpected rolling behaviour.



Two equal shells of a ball. After the print, I inserted a glass ball before gluing the sides together.

When the ball is placed in the meshwork (to use Ingold’s words) of crochet, the middle is weighed down, and the lines are suddenly pulled into a “gravitational centre”. During the presentation of this provotype, I proposed that some things in our lives, such as design

or philosophy or their intersection, can act as if they become gravitational centres; creating a kind of curvature in space and time, pulling lines into it, making the lines intersect, and changing our path from a distance.



The web without (left) and with (right) the ball weighing it down. Notice how the lines are sinking towards the middle on the right image, making the distance between the people holding it shorter.

At the same time as the web represents this idea, it is also felt. When holding on to either side of the web, you also feel the pull of the other person. This was like an intimate dance—you sometimes lead, sometimes follow; stretching on one side, giving way on the other side. By placing the ball, the unexpected weight pulled us both in, bringing us closer to each other. When we were holding the web in our hands, it came naturally to pull in different directions, but because of the tightness of the web and its fragility (it will break if you pull too hard), you are forced to flow with the other’s intentions. This was by far the most embodied provotype of the project at this point, yet also very simple.

The provotype showcases lines in 2D-space, while Ingold’s metaphors exist in 3D-space. Instead, the third dimension I add to the provotype is gravity. By taking the representation of the provotype and stepping back into 3D space (going from the 2D plane), the curvature from the ball represents a fourth dimension—something that is otherwise very difficult to relate to. From this interpretation, I hoped to open the discussion of adding another dimension that we should not suppose to



understand, even in relating to the world through/with Ingold’s relational ontology.

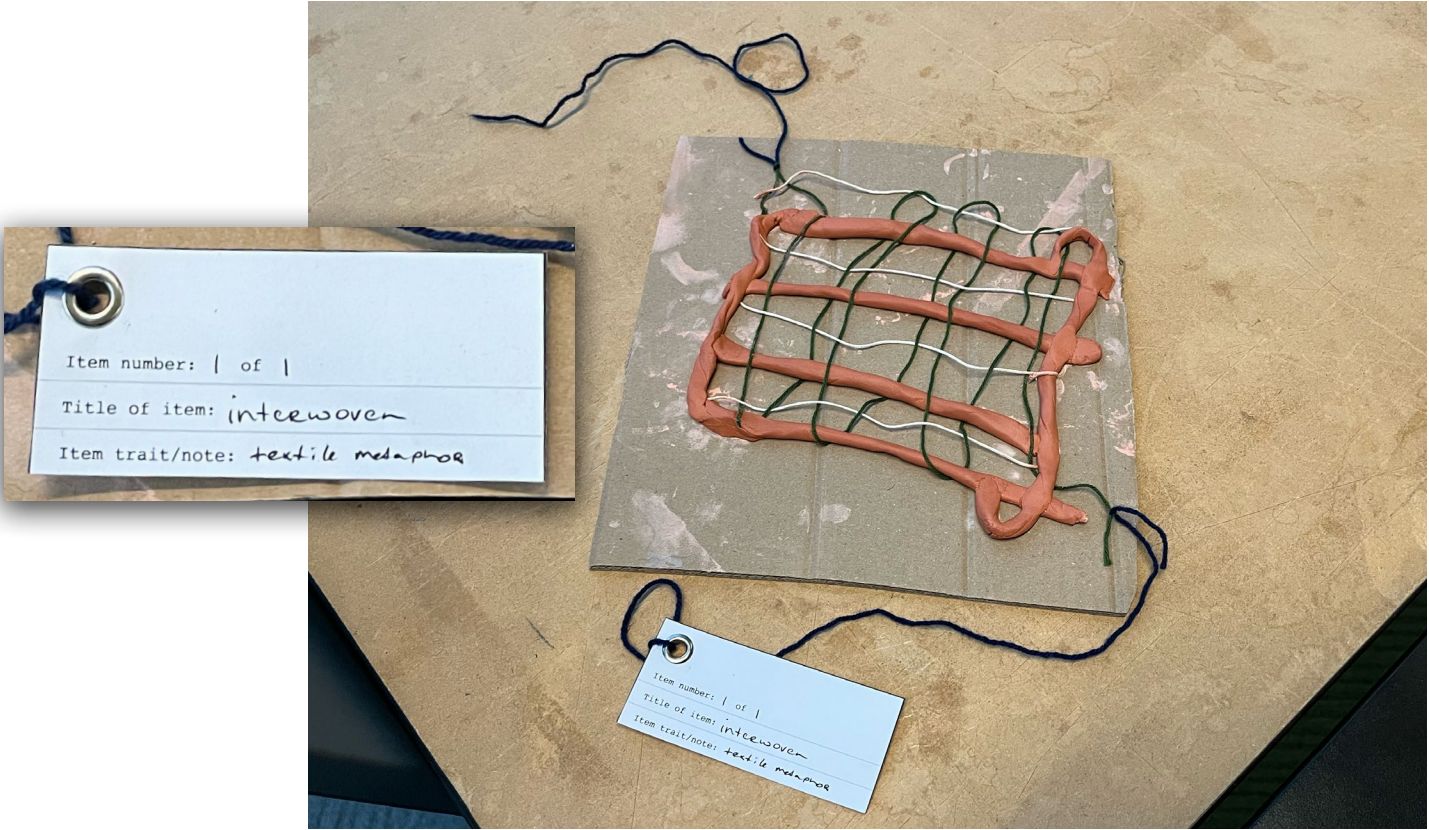
We began talking while each held a corner of the web. I brought up a question about what one of the words mentioned in the email correspondence, “warp”, means to them, both in physical terms and in terms of Ingold’s work. They go on to explain the differences between “warp”, “weft”, and “weave” in working a loom, but were unsure of the relation to Ingold’s work. However, for them personally, it is a way of thinking about how things come together that includes agency and power dynamics: “[some] things are harder to change [and some other things] you have more freedom to move in.” This was juxtaposed to the word I had used, “nexus”, which they did feel includes considerations of power dynamics.

The discussion shifted to the crocheted provotype: The strong border around the provotype made them reflect that a border is indeed needed for this piece to be held together, but what that means for design and philosophy is unsure. When I added the ball, however, they noted how it “weighs it down”. One such thing could be definitions: “Sometimes, finite definitions close up more than they open up, so in that way they weigh down the exploration space.”

CO-SPECULATION: RESPONDING TO THE MESHWORK

After discussing the web and the related theory, we transitioned into the making-part of the session. I had considered using the same setup as the professor of philosophy, but instead opted for air-dry clay for two reasons: transport convenience and testing another medium. Besides clay, I also brought thread in four colours (white, black, green, and blue). Clay was interesting to test, since it affords very open expression, which I assumed would enable the maker to express their thoughts more freely. This assumption is part of what I want to test, as if it is true, clay and similar media might be better for future experiments. The participant was asked to make anything as a response to the web of relations/meshwork, or from our previous conversation, if that helped. After filling our cups with water and unwrapping the clay, the participant began shaping their response. They had some experience working with clay before, so they understood how to use it and were careful not to take too big chunks to form their idea. Similar to the previous co-speculation session, I avoided asking too many questions or being directive in the making, instead letting them involve me when it fit. Unfortunately, I have no images of the making itself, as we both had clay on our hands!

When they started making it, I asked what they had in mind. They only had a vague idea, and let the material guide them, without telling me exactly what they were making. I had set aside about 30 minutes for this activity, so again, I emphasize that the artefact can be in a rough state and definitely does not need to be pretty. When their idea began taking form, they revealed that they were making a warp and weft of a loom. At this point, I tried mildly intervening by adding a thread to their model, retrying what was successful in the first co-speculation session.



The representation they made is very close to the theme of the philosophy we discussed and the provotype itself, however, with their own experience with looms as the twist. They leaned towards this figure based on our conversation prior to making, both on email and as I had asked what “warp” means to them. Furthermore, they mention that they like to use textile metaphors, as it provides a more “messy way of thinking” that grounds and counters narratives of growth.

Like the previous session, we put on a tag and gave it a name to make it ‘real’:

1 of 1
interwoven
textile metaphor

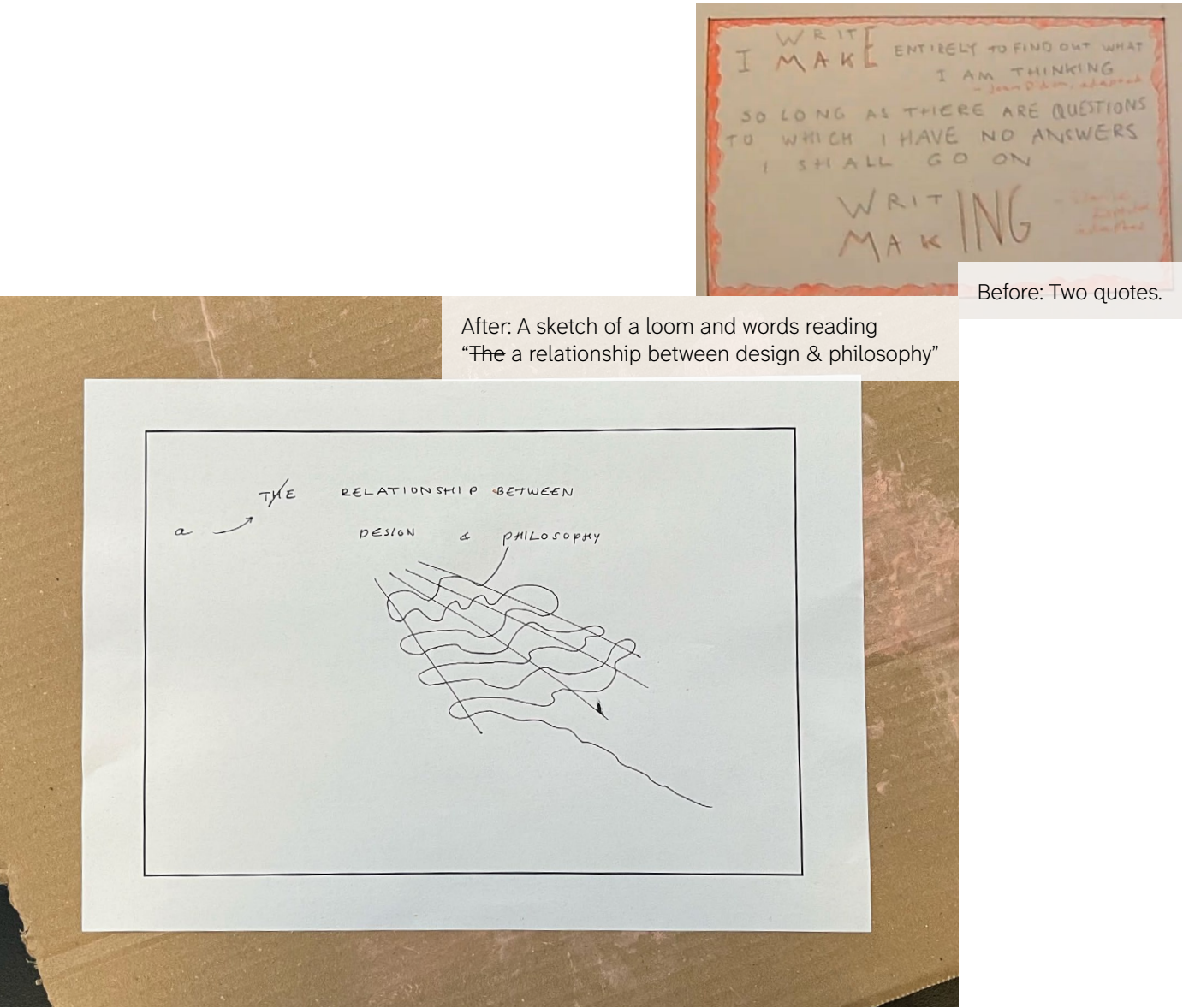
They themed the artefact “textile metaphor”, as that is where the conversation started: Metaphors based in textiles is something that helps them think, personally, but is not representational. Similar to the previous section, I will go into more depth in the discussion following the evaluative framework.

EVALUATIVE FRAMEWORK

Finally, I asked the professor of design to fill out a box similar to the one from the original letter they had received. I, once again, invited all types of expression they could put down on paper.

They chose to start drawing the metaphor they had been using to make the provotype: components of a loom. They then added a sentence to touch on what we were talking about:

THE a RELATIONSHIP BETWEEN DESIGN & PHILOSOPHY
As they added themselves: “As you can tell, I am not very good with definitive statements.”



DISCUSSION AND INSIGHTS

As mentioned above, the professor of design partly based their speculative response after explaining the term “warp”. The moment you start co-speculating, you grab whatever comes to mind, unless you are being specifically contextualized to a theme. I believe the lack of contextualization around the co-speculation exercise is what led to them building from a random note from the conversation right before making, and not the provotype I had made, nor the conversations a few weeks prior. Instead, if I wanted us to build on the previous conversation, a trigger should have been what do you recall from our previous conversation? and then further discuss the themes from last time. As they noted themselves: “It is just the first things that came to mind.” Because of the rushed time we had for the session, they had no time to critically assess or think about a response. Furthermore, they were more enthusiastic talking about terms from looms and the connection to philosophy than my (imposed) provotype.

When reflecting on the co-speculation, we discussed the material choice. This was the first time using clay in this project, and this session indicated that it was the most open form of material expression yet. However, the material choice could have been more interesting: This participant has worked with thread and looms, so what would have happened if I asked them to bring some of their own materials—some old threads? The personal history that might lie dormant in the materials could have sparked interesting results, as it could have been a way of engaging the personal aspects of this making exercise. In other words, instead of imposing a medium and a format onto them, I could have requested them to bring a medium that is meaningful to them, only ‘imposing’ them with the format (to let the session be emergent instead of premediated). As they said themselves when we discussed this idea of bringing personal materials:

“I would have probably thought about [the subject and the materials] more already in relation to the sort of conversation that we’ve been having.”

We spoke of “rhizomatic” being a fitting term to use between design and philosophy, as it is a dynamic process and not something static; it asks questions rather than comes up with answers. In that context, I ask what question we might be asking with the co-speculated artefact, to which they found themselves unsure.

“I could speculate, and add reasoning to it: I think the moment you introduce materials, it becomes more, you know—it’s really like what we just talked about—it’s like a different language than words. So, um, I think it’s more like intuition taking over a little bit. Or just wanting to work with [my] hands instead of my brain.”

My interpretation of this interaction was that the rhizomatic relationship we were picturing is not so clearly put into question: it is in that intuition that new things come up, but not as clear thoughts. We are triggered to explore new places. This is also to say that whatever I might want to analyze and take away from these experiments, I am unlikely to consistently observe one true effect. If we take the idea of liminality seriously, it will also not be a settled place or concept. The knowledge or ‘gained intuition’ will exist at a tacit, underlying level that is constantly in flux. The representation they made is more

directly interpretable. What does it symbolize (not a setimented concept)?

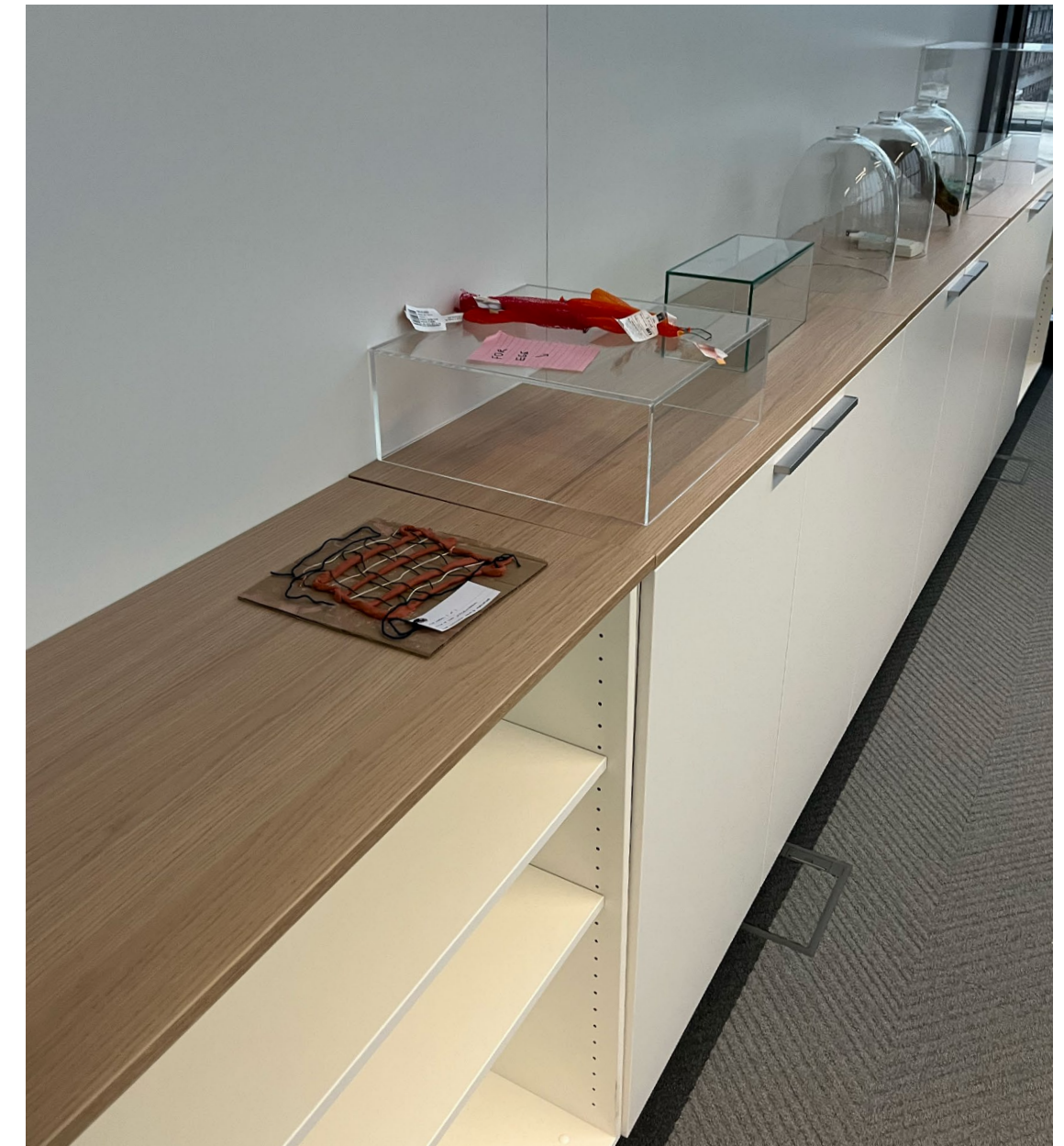
"I can use it to symbolize something for myself or represent something, but to be very definitive about it or to think again, it feels too stable"

However, they still resist this notion of putting a concrete meaning into an artefact, wanting to avoid letting the artefact become representational for their experience and understanding. It symbolizes something to them that they do not feel is fitting to put into words. This is where the key difference between kinds of representations comes in. They used the artefact to think-through and -with, but do not want it to become the final and stable representation of their thinking. Similar to stable definitions, representations can describe a moment in time or thinking that is not able to stretch itself out and ends up limiting instead of being generative. It might even cause a pause in thinking. Some are helpful to communicate something or to think further with, but might lack the nuance that is required for “complex things, like philosophy”. This is very relevant and close to how this project should work with representations: As a way that allows one to think with, but does not stabilize and close itself to be an object for analysis.

They did not seem to have any immediate reactions to the provotype. After making it, it was hard to engage them in pointing to anything in-depth about the provotype. I believe one of the key issues that led to a lack of engagement in the session came from what I based the session on: The provotype was built on something that was mentioned in the periphery of their work, and not a main focus. I built the provotype from it because it was relevant to some of the background theory that I base the idea of “material correspondence” on. To me, it was a natural extension of the project, but possibly too far from their current work, even if they also engage in that same theory. There were many other options to choose from based on the initial conversation. Based on this, I think it is relevant to keep in mind how someone relates to the theme that is being brought up and if it is provoking something they have personal stakes in.

A question that has been hanging in the air during most of the project at this point is whether material correspondence should be done by first giving a reading, some references, or a general concept to start from. We would do this to make sure the conversation is not just about anything or everything, but becomes specific in a way that it can inform the other person about the concept. For example, it could be a type of homework that asks them to read the book *Correspondences* by Tim Ingold (2017). This would also align with nomadic/travelling concepts, where team members are asked to read and critically reflect on a concept before starting teamwork—at least when used as a transdisciplinary method. The co-speculation session, however, revealed that it might not be as advantageous for our purposes as we might have hoped, as it would have streamlined the approach quite a bit. Accidentally, we started engaging indirectly with Ingold's philosophy through related terms, before directly mentioning Ingold prior to co-speculation, even though the first conversation did not centre Ingold at all. The co-speculation session was heavily influenced by our discussion of Ingold prior to meeting in both the conversation and in the making. Although it allowed us to have a nice conversation, it did not make for a provocative artefact nor any deeper insights

about the concept. This could be the case for a variety of reasons: My provotype was not stimulating enough; thoughts of Ingold were premeditated; the conversation prior to making clouded their mind with what to make; they were tired; or something else entirely. Since a wide range of reasons could have led to this, we can only speculate on why this happened to be the case, and take this as an indication that premeditated concepts are not magically going to make material correspondence work without any issues. Instead, as indicated by the professor of design, it seems that maybe engaging their material concerns or histories with a certain material could have been a trigger for more fruitful reflection before co-speculating.



DISCUSSION OF INTERVIEWS AND CO-SPECULATIONS

In this section, I will conclude on various aspects that I have gained insights into over the course of all sessions and interactions with the professors of philosophy and design.

SENSITIZING EXERCISES WORKED WELL

For the purposes of these sessions, it worked well to introduce the exercise and sensitize the participants through a short activity, such as included in the letter. In a larger-scale project, one might have a more significant exercise, all depending on the theme and allotted time. In this case, the letter allowed them to start thinking, which transitioned nicely into their considerations during the interview. However, as preparation goes, I had not needed to read and sensitize myself to their work. It did not contribute to the speculations made during the sessions, as the speculations will likely have to come from a personal urgency—as I will later discuss. The texts were generally more informative in terms of informing the project as a whole, and not the individual exercises and correspondences. It also hinted at their positioning in their respective fields; however, this could have been better achieved by a proper positionality exercise or at least a statement.

ENGAGE PERSONAL SENSE OF URGENCY

I successfully squeezed some more use out of the ‘ask the other questions’-exercise in these interactions as well. It worked great for letting them grant another perspective, instead of explaining outwards from their expertise, and instead use the exercise to introspectively reflect on their own position in the ‘other’ field. They also had to engage in aspects of intersectionality and positionality when responding to that exercise, which engaged their personal urgency. Perhaps applying something coming from a personal sense of urgency is key to engaging with something important within themselves that can be genuinely generative, and not just an understimulating ‘professional curiosity’ that they engage in.

In making provotypes, I have often found inspiration in theory. I also did so when making the manuscript-fabulation. it was helpful for me to go into theory to find something that has concern outside of me, like taking the idea of *Earth Beings* seriously (de la Cadena, 2015). It was in the transition to someone else that the provotypes sometimes fail, as they were generative and interesting to me as I made them. This leads me to believe that simply by being inspired by theory something does not magically get more interesting. It has to come from a real sense of urgency, something alive inside you.

One way of doing so might be to engage with materials that have a part in that personal history. As the professor of design suggested, you can have connections and relations to certain materials—maybe some leftovers from a project—that I could not

have anticipated or brought with me. Each of us has to bring something of ourselves to the table before the exercise can dig deeper into each of our interests, and thereby, if we are both invested, we can affect and build on what we each bring individually. By not including an aspect of personal material history, I inadvertently disconnected the exercise from the participant’s worlds.

Finally, it is important to consider if they put something “of themselves” into the artefact. Did they include something vulnerable? I had not considered vulnerability and intimacy to be fundamental aspects of a material correspondence that starts from personal urgency, but if that is the case, I—as a researcher—should have been more careful in digging out meaning from the artefacts. Instead of asking for meaning, one might want to start by asking for emotions and feelings.

ANOTHER SENSE OF EMBODIED: TUGGING

My provotype for co-speculation with the professor of design, the meshwork of crochet, required each of us to hold onto opposing sides of an artefact. The artefact was flexible and gave way, but was also very sensitive to the other participant. You could feel them tugging or giving way. The simple interaction of holding it was already a very strong experience that felt like it broke down parts of the professional barrier between us, providing a more personal interaction.

The ball that was then added did not provide a lot of meaning in the discussion. However, it felt like the interaction itself improved, as now we not only had to speak while tugging at each end, but we also had to balance—or put out of balance—the ball that was on the web.

The reaction that came of this provotype (co-speculation) did not only react to the web, but also some personal interests regarding looming. In some ways, the co-speculated artefact felt disconnected from everything that came before, but in other ways, it felt like it was an extension of the provotype. Their response (“understanding the world through looming-terms”) to my question (“what if there were threads in a meshwork”).

EVALUATIVE FRAMEWORK: MISLEADING?

The evaluative framework was a nice exercise, but calling it evaluative is misleading. At best, it shows how they have a different outlook on the transdisciplinary space between design and philosophy, but likely, it barely scratches the surface of an expanded intuition about the space. Calling it evaluative is also misleading, as an immediate change in perspective is not what we are looking for. It is not an ontological shift that we are looking to register (which would also be incredibly hard to do). We are perhaps not looking to register anything at this scale at all. Instead, what we are interested in is how entering and working from an *epistemological liminal space* might give way to some other ways

of knowing. The framework for evaluation, as something that can be put on paper, could end up becoming a representation of something that happens outside the dimension that exists; something that does not represent.

COMPLEX WE (?)

The co-speculations had great aspirations in “Complex We”—but did it actually work that way? Did we use ontological excess? If so, in what ways? I think *Complex We* was appropriate in the sense that I am examining behaviour and analysing it, while also being very involved in the context that I am researching. The question is then the intention behind this research project: am I trying to ‘just’ develop a design method, or am I saying something deeper about human thinking?

I think it would be arrogant to assume that I can prove anything novel about human thinking and behaviour. That is neither my expertise nor feasible to do within the scale of a Master’s thesis project (at least within a design-faculty). However, what I can do is to point to the indications that point towards a new way of using design both inside and outside a method. And for saying something outside a purely functionalist view of design methods, it can be worth it to consider the ethnographic implications of the work.

Similar to co-fabulating (my paper) and co-labouring (working without fully understanding): In provotyping together, a sort of diffraction of understandings is co-constituting into a material shape (the provotype), informing us both by surprising each other. The following example is from the professor of philosophy:

- The participant made a full provotype that informs them and through which they discuss things they already know.
- They placed it on a “frame” (A3 paper)
- They picked the different objects from a large variety of random things.
- Made the model from scratch, presenting their own logic.
- I added a small thing, assumed to be inconsequential, which was the only immediate thing they noted as interesting beyond using the representation to talk about theory.
- Note: They did not comment on the fact that I had made that contribution.

I believe this is an example of how unexpected changes can poke at us and knock us off our course. *This* is why collaborative provotyping is generative. In developing a practice of *material correspondences*, I believe it is imperative to focus on the subtle moments like these, where we get an interesting reaction without knowing exactly why it happened. The materials were able to generate questions which, without proving anything for certain, point to this moment of “not knowing” as a generative one.

SEDIMENTATION & SHAKING THE SNOWGLOBE

We can speculate on the effect of co-speculation and correspondence session(s) as giving the participants a thicker (more meaningfully interpreted) understanding of issues and concerns, making it subtle but also part of one’s practice going forward. Thereby, whatever effects the session might have do not have to be serendipitous (contrasting with the professor of philosophy’s theory). It is possibly the opposite of having a sudden serendipitous moment, instead being a long-term sensitizing to something, subtly affecting your work. This will also make it much more difficult to point to how and when the effect took place.

Even if we were able to inflict an ontological shift, it would, with all likelihood have to be repeated over much longer durations. Otherwise, any perceived shift is likely to have fallen back into the status quo by the time we meet again, following Escobar et al. (2024) “ontological shifts”—how our ontology might momentarily be shifted, but slides back into what it was before.

I prefer to look at this change in the way it feels to do the Magic Eye perception trick. Before and after, we look at the same image, but when you have successfully performed the shift in perception, your understanding of what was represented as a flat image suddenly expands. It is like softly shaking a snowglobe: some sediment flies up and lands again shortly after. Many of the same places are covered again, just like they were before, but some new edges of the sediment are exposed, while some other places are now covered.

“But diffraction is not only a lively affair, but one that troubles dichotomies, including some of the most sedimented and stabilized/stabilizing binaries, such as organic/inorganic and animate/inanimate (...) Matter is a sedimented intra-acting, an open field. Sedimenting does not entail closure. (Mountain ranges in their liveliness attest to this fact.)” (Barad, 2014, p. 168)

Sedimentation is a metaphor I use to understand how things shift in place, never stable.

CONTESTED TERMS

The co-speculation session with the professor of design was heavily influenced by our conversation, which was based on our email correspondence. A correspondence that was mostly driven by curiosity about the other’s opinions about a specific term. At the same time, one of the PhD students from the group interview also had a strong reaction to that term. I think in both cases, they had strong reactions to the terms because it partly describes their own positions and partly because they disagree with them. By using a term that has different connotations for different people, and is therefore a contested term, proved generative in discussions and brought them back to question me. I believe by letting the participants encounter the term in an unexpected context, they were forced to reconsider its meaning or challenge it: it was provocative and productive.

TAILOR-MADE PROVOTYPES: PERSONAL OR IMPOSING?

Over the course of the project, I have found that the method will require some level of a tailor-made approach for each encounter. However, what does it mean to tailor-make something for someone? “Tailor-made” might refer to making something that is tailored to provoke in a specified way, which I have found to be unlikely. It will always be unexpected in some way or another, which is what we want.

In a way, by expecting a certain reaction, we start imposing the artefact rather than letting it have a life of its own and become something more by the one reacting to it. The encounter should be emergent and have a productive friction, moving forward *because* of our differences.

We do not want the interaction to say “yes, yes, yes”; we want it to say “and, and, and”. Furthermore, it is not the sender’s responsibility to make sure the recipient is hit in their personal urgency. The sender should only be responsible for including something from themselves, sending their own personal urgency. Focus on what gives us friction to do something differently. What is it we resist? And what is it that resists the change we desire?

GENERATIVE DERAILING: AFFECTING EACH OTHER’S WORK FORWARD

The last main thing I have found from these sessions was subtle, but noteworthy. During the first co-speculation, with the professor of philosophy, I made a slight intervention on their otherwise fully self-made artefact: I added a stick. A simple addition, as that was enough to make the participant pause and make a key reflection about what the representation/artefact was “saying”. In this case, my addition was discrete and visible. In the case of the other participant, the professor of design, it was not as direct. I tied some of my thread onto theirs, extending the lines and breaking the ‘perfect picture’ they were building. This led to an interaction that was informative about how we might look for meaning in symbolizations and representations. We can extend this idea of material ‘correspondence’ not to be one artefact responding to another artefact, but the two authors can also correspond in the making of each of them.

I believe that through a simple push, the trajectory that the maker is on, a ‘derailing’, it is possible for the speculation to be collaborative. One is creating meaning, the other is challenging that construct. The maker is challenged in their view, and might find new reflections from an unexpected change, while the provoker, who is adding something to the artefact finds themselves navigating the maker’s world.

TAKEAWAYS FOR NEXT EXPERIMENT

For the coming event, I find that a few things stand out as especially applicable and important to consider:

First, I believe the method needs to take **personal urgency** as a serious starting point, before and not after theory or the recipient’s concerns. It needs to come from your own sense of self and history, which the recipient can feel is reaching deeper than a ‘superficial’ material reflection of readings.

Second, I believe including serious considerations into how we can make the creative space **vulnerable might be key** to exposing personal urgency and concerns.

Third, using **contested terms can be a trigger** for questioning your own sense of positionality and quickly relating to the provocation that you are being exposed to.

Fourth, we want the method to say “and, and, and”; we want to aim for **‘shaking the snowglobe’** and see how the sediment settles anew.

Lastly, material speculations should not be done in isolation, but should be **collaboratively done through generative friction**; even if the meaning that is generated goes back to ‘only’ informing you of yourself or your own concerns.

CHAPTER 3.4

MONSTERS & GHOSTS



WORKSHOP: *MONSTERS & GHOSTS*

This workshop set out to explore ways of engaging in feminist, embodied, fallible, and situated ways of designing through sketching, crafting, and enactment. What potentials lie in positioning yourself in new ways that are challenged by and challenging to modern constraints through materiality?

Through this workshop, we do not suppose to gain generalizable knowledge about new ways of designing, but rather, as a glance into what types of knowledges might appear when engaging with yourself and others through more than conversation, through corresponding. In this workshop, *corresponding* is used as a key methodological term to explain how participants are engaging with each other and themselves.

The workshop took place at the *Entanglements between Design and Philosophy* event in November 2025. The workshop was called “Material Correspondence for Thinking-Otherwise” and drew heavily on the idea of “Monster & Ghosts” as presented by Anna Tsing et al. (2017). The following is the description provided at the event:

In this session, through provocative artefacts and fabulations, we will start ‘conversations’ to explore epistemic openings from the space in-between the disciplines of philosophy and design. The purpose of this session is to explore that liminal space, and what type of knowledge emerges from it. We will explore this through the idea of Monsters and Ghosts (adapted from Tsing et al., 2017), using charcoal sketching, making clay figures, embodied exercises, and storytelling!

The Ghost refers to traces of the past that still ‘haunt’ us in the present. Haunting, in this workshop’s case, can be both the ‘good’ and the ‘bad’. In this context, it refers to whatever the participants might come up with. The ghosts are no longer directly visible, but remain as ‘active’ in both material and affective worlds.

The Monster is not a ‘bad’ thing. In this case, it is defined as a hybrid being that challenges modern divisions (such as nature/culture, human/non-human, etc.). Tsing describes how monsters describe ways in which the modern splits things we cannot split. My use of the Monster is about accepting that we are not able to split in modern ways and instead acknowledge how *we are Monsters*. In this way, the participants are ultimately asked to consider ways in which they are themselves contradictory in the eyes of the modern.

The Monsters and Ghosts are relevant conceptual personae used to understand how phenomena have transformed (with) modernity, and have shaped or played a role in the Anthropocene. While much of Tsing et al.’s work focuses on the Ghosts, this workshop concentrates mostly on the Monsters. The workshop set out to have participants diffract on modernity, their roles in it, and how they are shaping and/or being shaped by it. From the conceptual openings that might come from such diffraction, the workshop then sets out to uncover what Ghosts have led to these Monsters becoming monsters to begin with.

RAISON D’ÊTRE (WHY)

I wanted to do this workshop to find out what it means to engage the body and the material in more depth. Previous activities have led me to try to understand in what capacities and ways we think with the body, and what type of knowledge might emerge from doing this. Engaging with the body and corporeal knowledge can be done in many ways, and the Monsters and Ghosts is just one of those ways. By using the Monsters and Ghosts theme, the workshop also tries to question and work with modern biases about ourselves.

The meta-exercise here is about opening up the design and philosophy space to inform the project more as to what types of knowledge, frictions, or resonances might emerge from working directly with the two disciplines. The two disciplines are both in the workshop as well as a whole separated into “design” and “philosophy,” and although many attendees agree that they are not separate units, they are still presented in such a modern split.

Finally, the workshop is inspired by the *asking the other questions* exercise that has been used previously. It is reused, since it was fruitful for both philosophers and designers in past activities. In this case, the exercise is applied more subtly to support other activities, so as not to overshadow them. Instead of literally *asking the other questions*, we are instead inspired by how the exercise turns what is expected on its head, and use it to ask participants how they position themselves in someone else’s conceptual landscape.

WORKSHOP CONDITIONS (HOW)

The workshop took place at Lijm & Cultuur in Delft. The building contained many rough concrete surfaces in large, open rooms, resulting in a lot of echo and an environment that allowed for moving around. The workshop took place on the 13th of November, 2025, a day before the DRS deadline, resulting in far fewer attendees at the event as a whole than expected. The workshop had 10 participants, including the supervisory team and me, out of which four had a background in philosophy, overlapping with design, and the remaining six had a background in design, some overlapping with philosophy.

The workshop was set up at six tables, set in a zig-zag pattern. The workshop started with a presentation of theory by me, followed by several exercises. During all exercises, a laptop screen was displaying the active step. Two recording devices were used to capture the full workshop, after informed consent forms were signed. For the workshop itself, heavy paper, pastels, willow charcoal sticks, cardboard, (hot) glue, tape, and knives were available.

The workshop activities were not timed, which allowed us to be more creative and vulnerable, but also resulted in us not performing all of the planned activities. In the first activity, vulnerability was established to allow participants to expose personal issues.

ANALYSIS APPROACH

To analyse the workshop, I went through audio recordings and transcripts of the entire workshop and highlighted noteworthy quotes. As a result, I made a thematic clustering to highlight each participant's way of working through the exercises. The thematic clustering is *not* used comparatively nor to generate any kind of generalizable theory. Its only function is to give an impression of how the exercises were performed, and therefore the potential ways of approaching similar instructions.

Because of a limited number of participants and with a significant in-group bias (every participant either from or previously from TU Delft, all at a Master's level education or higher, most already close acquaintances), it makes little sense to 'document' and 'prove' a new method or theory. Instead, the focus in this chapter relies heavily on reactions and individual as well as group discussions.



ACTIVITY ONE: INTRODUCTIONS

The first activity of the workshop was an introduction. To fit the introduction to the theme of the workshop, everyone was asked to introduce themselves as the Monsters they are. A definition of what that means helped guide this:

The Monster you are asked to imagine is one that scrutinizes the division between design and philosophy. If you were a monster, what kind would you be?

One by one, each participant presented what they imagined as ‘their monster’. These monsters ranged from being in a recognisable and physical form, such as *a werewolf that changes shape and perspectives according to its surroundings* or *the blue monster from Monsters Inc.—to something (or someone!) more abstract, such as everyday objects that gives you anxiety that exists with no stable form* or *a monster that is very flexible and only takes shape from what it reacts to*. In total, ten monsters were introduced, including my own. In this exercise, I tried to establish a vulnerable space for all of us to share something personal for us to feel closer and more related, and to avoid a sterile and disconnected work environment.

At this point, we already gained some insights into the participants’ perspectives on the theme of resisting or sitting outside the modern (aligning with Tsing’s use of *Monsters*). One participant mentioned that being an expression of something outside the modern *is scary to the modern*, providing us with an emotional frame (being scared) to interpret reactions to and from the modern. Multiple participants noted how they see themselves as being Monsters to themselves, ultimately not allowing themselves to step outside of the modern and *become Monsters*.

A rough thematic clustering of the introduction gives us a general overview of how the participants approach the Monster exercise: Five participants constructed Monsters from various mythologies and folklore; while four participants constructed Monsters from emotions that were self-destructive in their origin; and the last participant’s monster was abstract and seemingly positively based on their self-perception. Overlapping with these categories, two participants struggled with the term “monsters” as being something that is purely a negative concept to them, and two other participants opted for completely abstract, non-shape/non-figurative monsters.

Already in this introductory exercise, the split between participants using the Monsters as something that resists the modern in a positive and in a negative light highlights something interesting about how we view things through modern dichotomies: Even the use of the metaphor of “monsters” became a challenge to modern logics, and this small trigger-act of using and entering the role of monsters became an exercise in deconstructing and reframing those logics.

ACTIVITY TWO: LANDSCAPES

The second activity involved sketching the conceptual landscape between design and philosophy. The participants were specifically asked to sketch from the following prompt:

How does the conceptual landscape of design and philosophy look like in your mind?

To help the participants generate a richer landscape and help them along in case they did not know where to start, the following questions were included as inspirational prompts:

What is the temperature like? What kinds of media are there? Is the gravity different? Is it sticky? What is the weather like? What kinds of life-forms are living there? What kinds of shapes are there?

To sketch the landscape, the participants were given heavy A2 paper, willow charcoal sticks, a few coloured pastels to share, knives to scrape dust off pastels, and finally paper to rub the charcoal or pastels with. They were given only a few materials to sketch with to keep the expression of the landscapes similar and easier to ‘compare.’ Before starting the exercise, I introduced a few basic sketching methods to have everyone (designers and non-designers) start on more even footing.

The participants spent about 35 minutes sketching the landscapes. When the sketches were finished, they were asked to add a tag to their landscapes with the following three elements: *Landscape name*; *Who made this*; *Description/keywords*. Thereafter, we spent about 35 minutes exchanging and explaining the landscapes. The explanations happened in plenary, so that everyone could listen along. The landscapes were exchanged before any explanations were given to enable everyone to listen more closely to the landscape they received. This way, any participant could begin to imagine their own monster and landscape in relation to the received landscape while the explanation is happening. The exchange-dynamic was inspired by my findings with the professor of philosophy, where I found that an intervention or unexpected change from someone else was generative.





Similar to the monsters from the first exercise, the landscapes also ranged from figurative to abstract. Some figurative landscapes clearly contain rivers, mountains, hills, or clouds, while other, more abstract landscapes, look like Rorschach inkblots or abstract expressionist paintings. In total, ten landscapes were made, but a participant had to leave, meaning nine presentations took place. Shortly after, another participant left, meaning only eight exchanges were made.

A rough thematic clustering of the nine presented conceptual landscapes reveals how participants approached the exercise and chose to sketch out the relationship between design and philosophy (see Figure 6): Two participants sketched figuratively, while five participants sketched abstract figures, and the last two sketched purely non-figurative abstract landscapes. Five participants either showed or explicitly mentioned that they still see a separation between disciplines, while the remaining four saw design/philosophy as two sides of the same thing. Finally, six imagined the landscape to be dynamic and lively, while the remaining three displayed and spoke about the relationship as (mostly) static.

Furthermore, two participants indicated that they used the landscape sketching functionally, reflecting on specific theory/practice, while two other participants remained in a poetic, non-disclosed space.

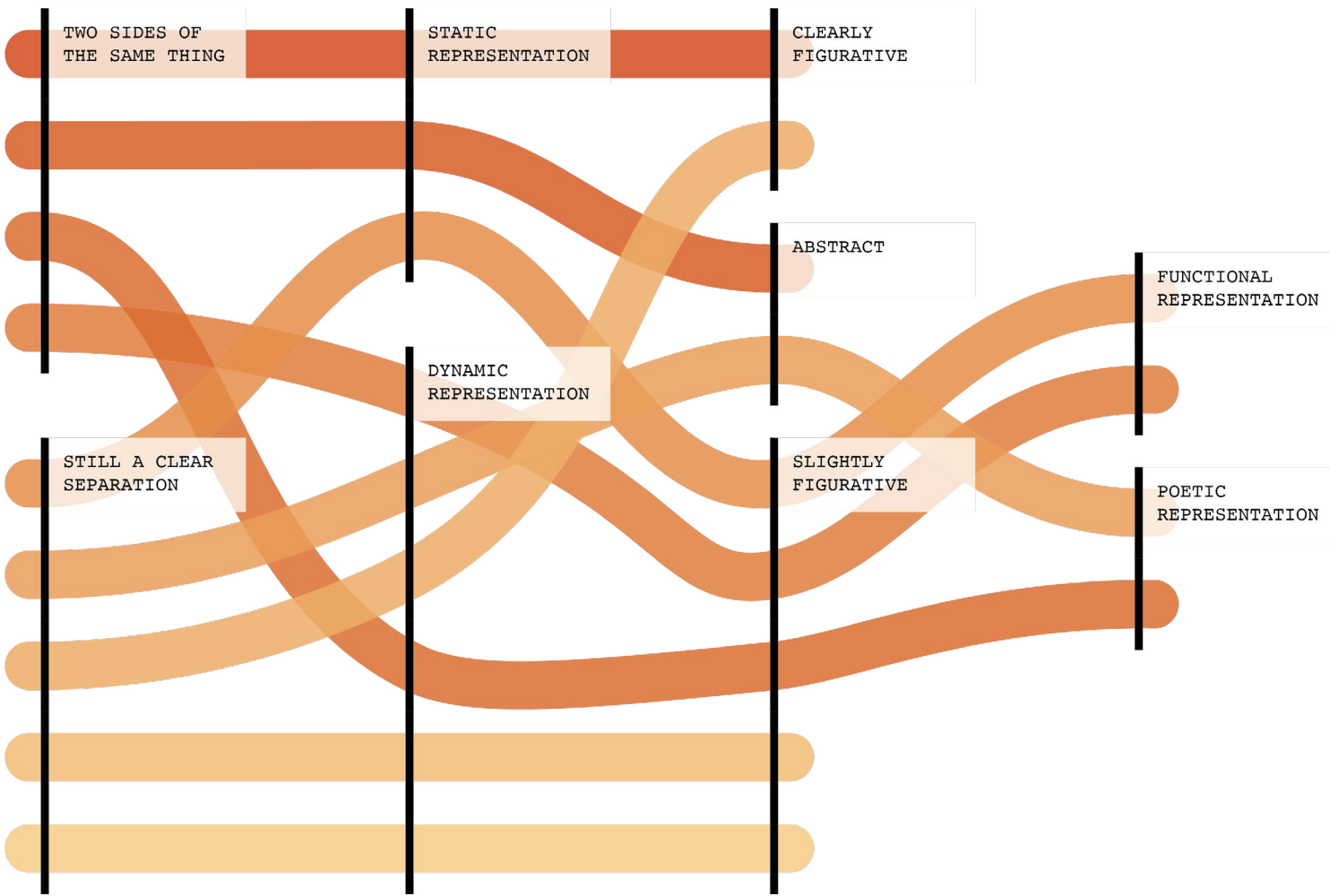
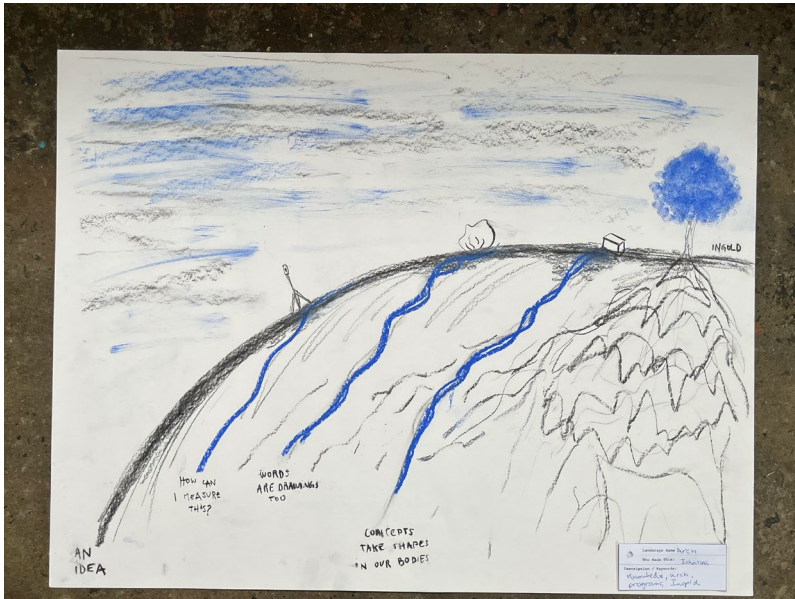


Figure 6: A diagram displaying thematic analysis results of the landscape exercise. Each horizontal ‘line’ represents a participant. The thematic clustering is made from very little data, and is not meant to be representative of generalized theory, but merely to show how different participants worked in a variety of ways, sometimes resulting in unexpected combinations.

There did not seem to be any pattern to the themes, meaning that of the two very figurative landscapes, one saw the relation as dynamic and the other as static. Similarly, of the landscapes showing the relation as dynamic, four out of six still displayed a separation between disciplines. This separation could refer to either the individual’s understanding of disciplines being actually split apart, but could also be a way to critique the status quo of having disciplinary boundaries.

Both the figurative and the abstract landscapes contained a lot of information for their creators, and there was no clear bias towards one being more thoughtful or analytical about what it means to have a (conceptual) landscape over design and philosophy. The figurative landscapes were easier to ask questions about, although asking questions and digging for insights rarely seemed necessary (also due to time constraints).

Most of the presentations did not make any significant notes on the various elements I presented in the prompts (e.g., mediums, temperature, etc.), even though most landscapes were figurative in nature. The presentations also put much less emphasis on the

figurative elements than on the abstract and conceptual elements that the landscapes carried. This is interesting, as it reveals that even though participants created using the figurative elements, the act of creating or making is where thoughts, ideas, and theory are diffracted and created. The creation—using (mostly) figurative elements—is the means to an end (of making theory).

Immediately after the exchange, some participants already questioned: *What do we get out of these material-making exercises? Something interesting seems to have happened, but what?* Starting the much-needed discussion earlier than anticipated. One of the participants even expressed that they were “scared of material exercises,” and wanted to “harvest all the energy that the sketches just brought.” This was a good sign that these exercises, used not only for designers but also for people more used to ‘thinking-practices’, were successfully provoking tensions, thoughts, and ideas.

ACTIVITY THREE: CREATING & PRESENTING MONSTERS

In the the third activity, *Creating the Monster*, the participants were asked to create their own monster *inside* the new landscape they had received from a peer.

No prompts were provided for this exercise; the landscape they had to position themselves/their monsters into functioned as the prompt instead:

Time to get your hands dirty: Create the Monster.

To create their monsters, participants were given only a handful of materials and tools: Cardboard, tape, hot glue, box cutters (knives), and the charcoal and pastels left over from the previous exercise.

After creating the monsters, taking about 15 minutes, we proceeded to share them one-by-one in plenary, which took about 10 minutes. For the presentations, the participants were asked:

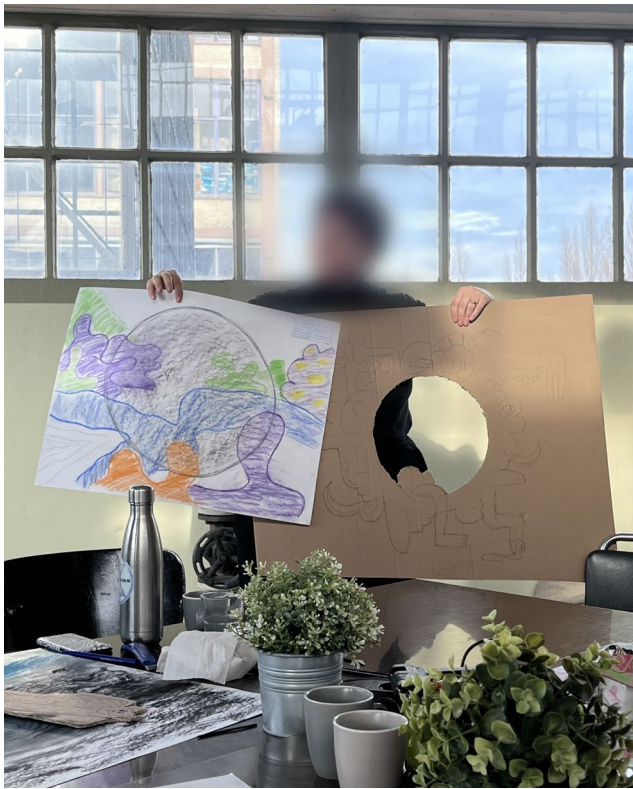
Present yourself as the Monster and the landscape you’re in.

This step was intended to be done immediately after an activity called *Becoming (with) the Monster*, where we would ‘think from the perspective of the monster’. The becoming-with exercise was aimed at decentering the participant further by letting them enact a day in the life of their monster in the given landscape. This should also have been mixed with a first-person perspective, using “I am ...” instead of “My monster is...”, to further decentre the participants. Alas, because of time constraints, we skipped this activity and proceeded straight to presenting. The presentations instead featured background stories made up on the spot.



In general, the monsters took more figurative shape(s) than the ‘outcomes’ of the previous exercises. Of the eight monsters (including my own), two were abstract creations referring not to figurative elements but purely to manifestations of emotional ones. One of the monsters is “taking shape after the landscape,” and became a mish-mash of materials and colours resembling what is in the landscape, while the other abstract model was a manifestation of anxiety. Interestingly, the creator of the latter projected anthropomorphic qualities and gender on it during the presentation, for example, giving *him* a nose, even though it was a very abstract representation.

Of the figurative representations, it came down to a diffraction of what elements were presented and discussed in the landscape piece. One example is a piece that featured the question “How can I measure this?” to which a monster responded by taking shape after this idea by losing its eyes and having its hand replaced by a ruler.



Again, a rough thematic clustering splits the models into two groups: Being critical of the modern, and being affirmative ‘beyond’ the modern. Two of eight models/monsters were critical of modern divides, with one focusing on the limitations and the other on the disorientation that comes from a forced split between disciplines that entangle. The rest of the monsters took different angles on what it means to position yourself in a foreign environment—a landscape based on a disciplinary divide—and how to manage that (new) position in very different ways. One monster uses its naïveté and openness to navigate in a chaotic space, while another monster is in the middle of phase-change to be with the divided landscape. In general, we see all the monsters becoming something new when coming into contact with the new landscapes.

All of the monsters did not emerge by themselves, but from the landscape-context they were given. They were created either ‘with the landscape’ (original monster, but adjusted from an interpretation of the landscape) or ‘in the landscape’ (creating the original monster unaltered). The way in which I categorized these two differently lies in how well the monster model connected to the monster that was verbally introduced in the beginning.



The monsters that were created ‘in the landscape’ was on the surface level the same, but during the introductions, it was clear that the creators had emotional diffractions on what it means for their monster to be in this new space: such as “maybe the monster does not have the right tools” and having an “identity crisis” from “[losing] yourself and your boundaries.”

“So my monster, in this world? Poor thing!”
— Reaction from a participant

Interestingly, it seems that creating ‘in the landscape’ was a gateway to emotional and empathic diffraction and an exercise in finding friction from (re-)positioning yourself in new (conceptual) spaces. This approach emphasized what it means to react to new external situatedness.

Whereas ‘with the landscape’ became an exercise that focused more on understanding yourself in a new environment, how you can fit and react to the seams and conflicts that exist in the new landscape or situation. It became a device for thinking about how you navigate the modern (understanding of disciplinary boundaries). This approach emphasized what it means to examine your own reaction to modern conditions.



WORKSHOP DISCUSSION

The workshop concluded with a plenary discussion that took place physically surrounded by landscapes and monsters. Moreover, we discussed the exercise and theory through the landscapes and monsters, which became a kind of metaphor to relate different theoretical arguments to. One participant used another participant’s landscape to explain the relationship between design and philosophy, and it seemed that using other participants’ sketches became a way of accessing different mental models. In this case, the landscapes become generative not only in their making, but also in their interpretations. Although the landscape might mean something different to its author, it does not matter, as they become devices for projecting your own ideas onto in developing your own understanding. The landscapes became canvases for projecting yourself in order to generate and expand your thinking. This was interesting, as it indicates that the act of positioning in someone else’s landscape becomes an extension of your own mental models. In other words, it was diffractive.

In this section, I mix both the plenary discussion and my own personal diffractions. In general, I begin each subsection by presenting a point made in the plenary discussion, followed by further thoughts and ideas that emerged from ‘analyzing’ the workshop.

DISCIPLINES

A pressing question that came up more than once: *What happens if we change one discipline for another, for example, anthropology for philosophy? Would the exercise be the same or different?*

This was discussed among participants. In the beginning, the participants were unsure if they would have a different response if we exchanged disciplines. One participant pointed out that it does make a difference, “[...] because if you say anthropology-and-design, there is a lot more materiality [in anthropologists’ everyday] than there is in philosophy, so I wouldn’t opt for the air-metaphor [in my landscape]. And if you say engineering-and-design—I wouldn’t even know how to do that.”

The plenary discussion leads us to assume that this exercise and its outputs will change according to what the initial prompt is. One explanation is that we try to represent something constituted of multiple abstract ideas—ideas that are not fully open nor closed, and therefore will inevitably steer our imagination from the associations we have tied to the concepts. In this case, the participants would be influenced by their associations around philosophy, including which sub-discipline (e.g., ethics) they associate the most with. The prompt “philosophy” changes the conceptual framing and, therefore, the inspirations that feed into the landscape and later affect the monsters. This is something we can only assume, as it is practically impossible to create two identical conditions for the same standpoint, and since this workshop was limited to a single instance.

Design is, like philosophy, also not a singular thing. The ambiguity of what design and

philosophy mean to each of us is part of this exercise. As one of the participants said, “We should not define this.” Leaving the concepts open, we allow the space of co-speculation to become liminal in nature so that we generate from a place that floats between borders none of us can identify or control. In other words, leaving concepts open lets us create from one standpoint, but interpret from another, letting the material be the carrier of (open) meaning rather than letting words control and close the concepts down to specifics.

For this exercise, however, it doesn’t matter which discipline is which, but it’s about what kind of generative thinking we are able to create from the liminal space and through embodied means. Instead of focusing on the disciplines, the workshop (and project in general) is about how we understand each other and the disciplinary gap, and in the end, finding epistemic spaces of liminality to *generate knowledge ‘between’ disciplines*. The disciplines (design and philosophy) act as a frame for this work, not the goal.

This issue is reflected in previous activities, for example, interviewing experts in design and philosophy, in which the aim was always to inform the project in general terms (understand the interdisciplinary entanglements between design and philosophy), while also experimenting with provocations (to enter into a liminal space for knowledge generation).

For the same reasons, the workshop never aimed at formulating specific or generalizable knowledge in the first place. The workshop was intended to work as an open field of inquiry that blends criticalities and possibilities to act, reflecting what could be a critical praxis. In line with transferable knowledge, the workshop does not aim at understanding what has been made (the landscapes and models), but rather *what we learned that changes how we design*.

The workshop had something more specific to offer than the abstract formulation of “epistemic spaces of liminality.” During the workshop, but especially during the final discussion, it emerged that the felt experience of the participants was how we relate to each other, which ends up pointing to positionality.

POSITIONALITY

Instead of using the ‘embarrassed etc. clause’ (Butler, 1999), the exercise helped participants generate and expand an understanding of what their positionality means through challenging them to look upon themselves as ‘monsters in the eyes of the modern’. We simply avoid using superficial terms to describe our positionality and instead engage with it as monsters.

Multiple participants discussed how it felt to have the monster—or yourself—positioned inside the new landscape. Someone else’s environment that might at first feel completely foreign, and then having to adjust to that feeling. I do not suppose that this experience was life-changing, but it might very well have been an experience that could be felt:

“We are taught that the body is an ignorant animal; intelligence dwells only in the head. But the body is smart. It does not discern between external stimuli and stimuli from the imagination. **It reacts equally viscerally to events from the imagination as it does to ‘real’ events.**” (Anzaldúa, 1987, bold added)

Another participant experienced their perception of themselves extend by seeing another participant’s monster in their landscape, making them reconsider their own monster and if the other participant’s monster is a better description of themselves.

It is not through the landscapes themselves that reveal something to the creators, but rather, it’s the reaction to said landscapes by someone other than the creator. It is at this point—a point containing a certain liminal quality—that seems to have been the trigger for the participants’ reflections on positionality.

Each participant is a part of the landscape they have made themselves: A designer making a landscape of design and philosophy is a kind of self-portrait, since the designer or philosopher is already part of what constitutes “design” and “philosophy”. When the workshop asked both designers and philosophers to make such a landscape, it was not a separate exercise in observing an external world, but rather a collection of parts of a meshwork sketching themselves and their surroundings from inside the conceptual landscape (see Figure 7). It also implies that positionality is more complex than the *et cetera clause*; as we cannot pretend to be objective and externally observe the research we are engaged with. Knowledge is situated, to reiterate. Thinking back at the rippling metaphor, one’s view informs another, which informs another. A constant feeding into

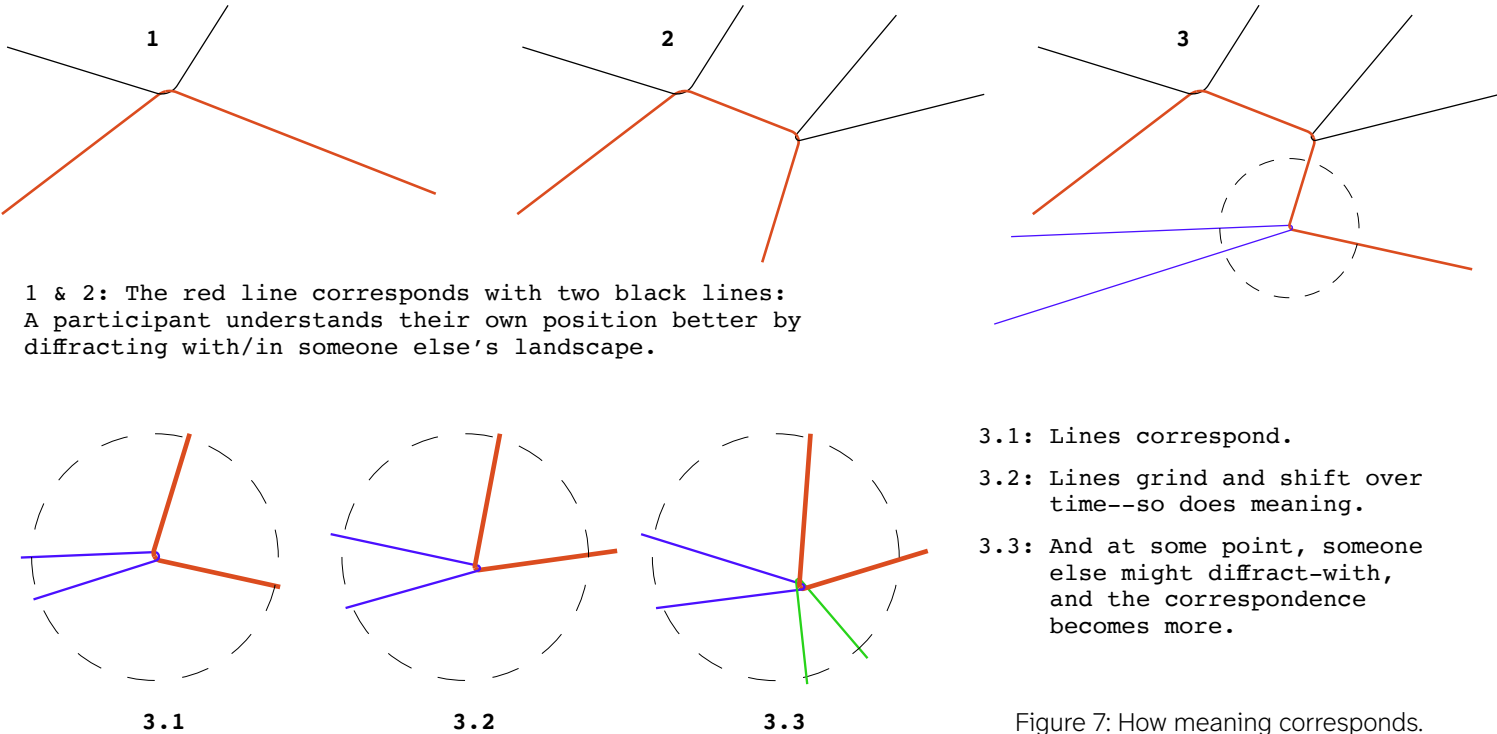


Figure 7: How meaning corresponds.

each other’s understanding—both human-to-human, but also through the non-human actors present. What the materials afford us to make and diffract.

Through this back and forth, without a verbal conversation, we see participants build on each other’s ideas in unexpected ways; generating knowledge through a material correspondence.

It would do no one justice to discuss the model of the monsters without situating them in the landscape in which they were created. This is similar to how researchers should be considered in their positionality and not apart from it, to give the recipients a full(er) picture of where the knowledge and insights come from. In this way, positionality was core to the workshop, although I did not realize it at the time of planning it. The simplified and fractured presentation of exercises (as seen above) is actually flawed in its premise: It is not possible to give a full picture of each of the participants’ individual exercises separated from themselves, each other, and the other exercises.

In the presentations of the monster models, it became clear that the exercise was about ways of relating: The participants created a new monster, either in representation or in emotions, based on how they related to their own monster and the landscape. This was a pleasant surprise, as I expected the monsters to only be adjusted slightly based on the landscape, not fully remade, which was the case for some of the participants. I believe this is partly due to the exercise, and partly due to the conditions set at the beginning of creating a personal and vulnerable space that allowed us to ‘play’ around with emotions and ‘queer’ (to make strange or unconventional) who we are.

‘OPEN’ VERSUS ‘CLOSED’

If the sender of the model (landscape, monster, etc.) provides no explanation or guidance, the landscape stays entirely ambiguous and becomes a random thing with no agency (Figure 8, left). The interpretation will be left entirely to the recipient. Without having some limits or framing for the interpretation, the recipient begins to project their own preconceptions onto the model unchallenged. Because of the confusion of having no frame of reference, the recipient finds it hard to use the model in generative ways.

On the other hand, if the sender explains everything about the model, the recipient will find their own relation to the model and position themselves in the new reality that is, for example, another person’s landscape (Figure 8, right). When a model is overly explained, it is only generative to the presenter, who is lecturing the recipient on what the model is and is not. In this way, the constrained explanation becomes imposing rather than generative to the recipient.



Figure 8: A diagram showing how two extremes in representation, using artefacts, both result in hard-to-use cases for corresponding materially.

The sender must not arrogate their position as creator. Even though they ‘created’ the model, it *does not mean they know what it is about*. This might seem illogical, but it is through the emerging conversations that we, as a group, discovered deeper meaning. The conversations revealed the sender’s as well as the recipient’s biases by revealing intentions and interpretations.

The models could become a provocation for both sender and recipient, and in these provocations, possibly reveal “modern tricks” that might have happened in the making or interpretation of the model. It should be noted that biases are not a bad thing, but actually an important part of what we are looking into in this exercise.

Someplace in the middle between these two extremes can the sender and recipient—both—rather than only one—generate through making. The sender can generate in the making, while the recipient can generate through interpretation and relation. By providing the right amount of framing and explanation, the model gains agency to affect the recipient, while still avoiding being so controlled that the recipient is unable to engage with the model. The agency of the model is important, as that is what enables the correspondence to become generative by letting meaning diffract, instead of becoming a ‘reflection’ of the recipient’s preconceptions. Connecting to Simone de Beauvoir’s ideas about deep work, conversations were key to understanding what she was thinking and doing, or in other words, key to getting out of her own head (Du Preez & Du Toit, 2022).

A popular use of Barad’s philosophy is to “read diffractively”, meaning ways to read and think *with* texts rather than *about* them (Barad, 2007; Du Preez & Du Toit, 2022; Morrison & McPherson, 2024). I propose that the workshop works similarly. We can, for example, understand a participant who receives a landscape as a “reader” of that particular landscape. The participant begins to understand the landscape by positioning themselves into said landscape, which in turn also changes the meaning of their monster. Instead of reading against the landscape (compare what is right or critique the landscape), the participant begins to move *with* and *through* the new landscape by letting concepts interfere and reconfigure one another. Aligning with Barad’s philosophy, the ambiguous nature of the knowledge-generation in this workshop does not reinforce oppositional critique. In this way, the workshop becomes a material reading of each other’s positioning of disciplines and positionality.

REPRESENTATION IN CREATION

In the last exercise, we see most participants—if not all—make a representation of their monster in a landscape. In a way, representation is prevalent in the whole workshop, as participants are asked to make or imagine something as a placeholder for the real,

intangible thing (such as a conceptual landscape). Representation is a fundamental element of this workshop, and it is therefore imperative to ask: *Is this a problem in the eyes of going beyond the modern? Is this yet another modern trick?*

We need to make clear the split between this kind of representation and representationalism. Representationalism, understood as the world is made of representations of what is ‘out there’ and independent of us, becomes a way to close the world into the representations. In this understanding, we return to a logic of *knowing-about* the world through those representations. In going beyond the modern, it becomes necessary to work with representations in *non-representational ways*—that is, avoiding the arrogance of representationalism, and not the representations per se. At the same time, we should not demonize the position of ‘making a representation of...’, which would follow another modern dichotomous relationship (representation<>non-representation). This means that representations shift from being a device of *knowing-about* to one of *thinking-with*.

Representation of oneself as a monster should not become an exercise of reducing oneself into a singular thing. It instead plays the role of a placeholder through which the participant is enabled to think of themselves differently. The monster is a concrete *thing* through which the participant can manipulate their own position, such as in this workshop, where they are placing themselves into a new standpoint. At the same time, other’s monsters have the possibility to change how a participant sees themselves, for example, by seeing your own landscape be inhabited by another participant’s monster.

Although the workshop exercises make use of representations, it does so with an emphasis on ambiguity and keeping some elements undefined, such as not defining certain criteria or parameters in making the monsters, and instead letting it be up to ourselves. This aligns with how Karen Barad discusses our use of apparatuses in order to understand the world, which informs us of what we use to see and relate to the phenomena around us. Depending on the apparatus, our (ethico-)onto-epistemology shifts.

A large part of the workshop is letting an atmosphere of playfulness or silliness emerge. This silliness is not random, but a way to introduce playfulness. It is a way to keep a vulnerable space that should also be open to opposing interpretations, instead of seeking a common truth.

Engaging in this type of activity, which includes sharing emotions and private matters, requires a lot of courage from all participants. Therefore, a careful and caring environment is essential for the workshop to work in the first place.

WORKSHOP CONCLUSION

In this chapter, I go through a workshop as part of the Master’s thesis to understand what kinds of knowledge are able to emerge when thinking happens through what I call ‘material correspondence’ instead of only through verbal abstractions. I have not analyzed the workshop in order to evaluate its outcomes for various reasons.

The main contribution from this workshop was partly accidental: We learned something about positionality. Though the workshop had a strong basis in the intersectionality-exercise ‘ASK THE OTHER QUESTION’ (Davis, 2014), positionality was never the main intended focus. However, we learn that knowledge, such as learning about your own and others’ positionality, is able to emerge and be generated through what we call *material correspondence*.

PHILOSOPHICAL COMMITMENTS: AN APPARATUS

Diffraction was used methodologically in this workshop, rather than as a theoretical metaphor, to underline our philosophical commitment to Barad’s ontology. The philosophical commitments made heavily steer the insights gained. If we had another commitment, the insights would likely be very different. That is not to say that the insights are superficial nor superfluous, but instead to say that this workshop informs us of how to step beyond the modern in one direction (with relational ontologies). With another philosophical commitment, the idea of diffraction or correspondence would possibly be overlooked, or the results from the correspondence would be attributed to something else. The philosophical commitment is thereby also an apparatus (to use Barad’s terms) for us to understand design research—and the world—in another way than traditional Scientific methods (with its baggage of Cartesian, rationalist, and positivist constructs). *The results and insights are meaningful because of and through the philosophical commitment, not separate from it.*

THE BEYOND-MODERN REPRESENTATION: THINKING-WITH

Throughout the workshop, participants were asked to make ‘representations’ of conceptual landscapes and their monsters. In critique of the modern, we can be quick to reject representations. However, I believe the use of representations in this workshop is a step beyond the modern use of representationalist ways of viewing the world without demonizing representations. One type of representation that follows modern logics allows us to *know-about* something, essentially reducing what is being represented into its representation. The other type of both using and understanding representations is what allows us to *thinking-with*, which is instead entrenched in ambiguity and fallibility, and is therefore humbled. By letting representations remain open in intent and meaning, they are able to be co-created with others through diffractive readings.

While the workshop aimed to go beyond modern logics and confines, we remained modern in the use of disciplinary splits. At its core, the workshop operates on the assumption that design and philosophy are at least to some extent separated. By asking participants to sketch a conceptual landscape of these disciplines, they are asked to abstract the disciplinary split in order to work with the split instead of accepting or rejecting the split at face value.

The workshop does not claim to have a non-dichotomous starting point. It demonstrates how representation can be used in non-representational ways to trouble distinctions instead of stabilizing them. Thinking-with emerges as a relational and situated practice where representations gain agency to diffract.

THINKING OTHERWISE ABOUT POSITIONALITY

During this workshop, participants discussed positionality both directly and indirectly. In becoming monsters, inhabiting others' landscapes, and responding to each other, positionality was destabilized. Instead of observing positionality as objective, it was engaged with as a subjective matter that was responsive. In this case, positionality was the epistemological focus, but it is very possible that if the workshop conditions were changed, so would the emerged knowledge.

AMBIGUITY AND POETIC ENGAGEMENT

Instructions were open-ended, meanings were left unfinished, and representations resisted closure. This ambiguity was intentionally included to enable participants to engage in more poetic modes of thinking (such as using metaphors and storytelling). The ambiguity allowed participants to create metaphors for themselves, in correspondence with other participants, without needing them to specifically close themselves into singular interpretations.

Across all activities, participants reported the exercise as refreshing and fun, with some comments that they could do this all day. This is, of course, nice to hear, but on a deeper level, it can also indicate a craving for intellectual stimulation that is not enclosed in traditional evaluative frames or methods. The 'fun' experience of the workshop is likely key to the quality and type of engagement that improves through care, atmosphere, and vulnerability that allowed things to emerge.

VULNERABILITY AND POSITIONALITY

In line with relational thinking, I also believe that letting us be vulnerable beings through sharing emotions allowed us to work more honestly with the material we were engaged with. In this workshop, extra layers of positionality were revealed as part of our sharing

emotions and queered metaphors that we relate to. This indicates that positionality is *exactly* like Judith Butler and critical/feminist theory speak of (Butler, 1999; Davis, 2014; Lutz, 2015): Not just an 'et cetera clause', but about who we are as human beings, with emotions, bodies, minds, relations, and worlds. The combination of factors—many of which we are unaware of—that make us who we are is what gives us our standpoint (Anderson, 2024), our positionality. Acknowledging this, we can get one step closer to understanding the situatedness of the knowledge we generate (Haraway, 1988).

CORPOREAL KNOWLEDGE

As stated previously, participants encountered themselves through others' landscapes, monsters were made relationally, and meaning seemed to emerge through correspondence, not separated or through introspection. We learn that knowledge about positionality was generated through felt experience that was enacted and diffracted. It was not generated nor declared through labels, categories, or identities, nor was it reduced to intersectional labels. **Positionality was generated through material and relational displacement.**

HOW WAS THE RESEARCH QUESTION ADDRESSED?

Let's refresh the research question for the thesis:

How can **design, in encounter with philosophy**, help **think otherwise** in order to support **the creation of non-modern knowledge**?

The research question remained in focus even though the workshop's focus shifted to discuss positionality. In the workshop, unexpected knowledge emerged through engagement with liminal qualities. Through this engagement, knowledge that challenges modern constructs was discussed.

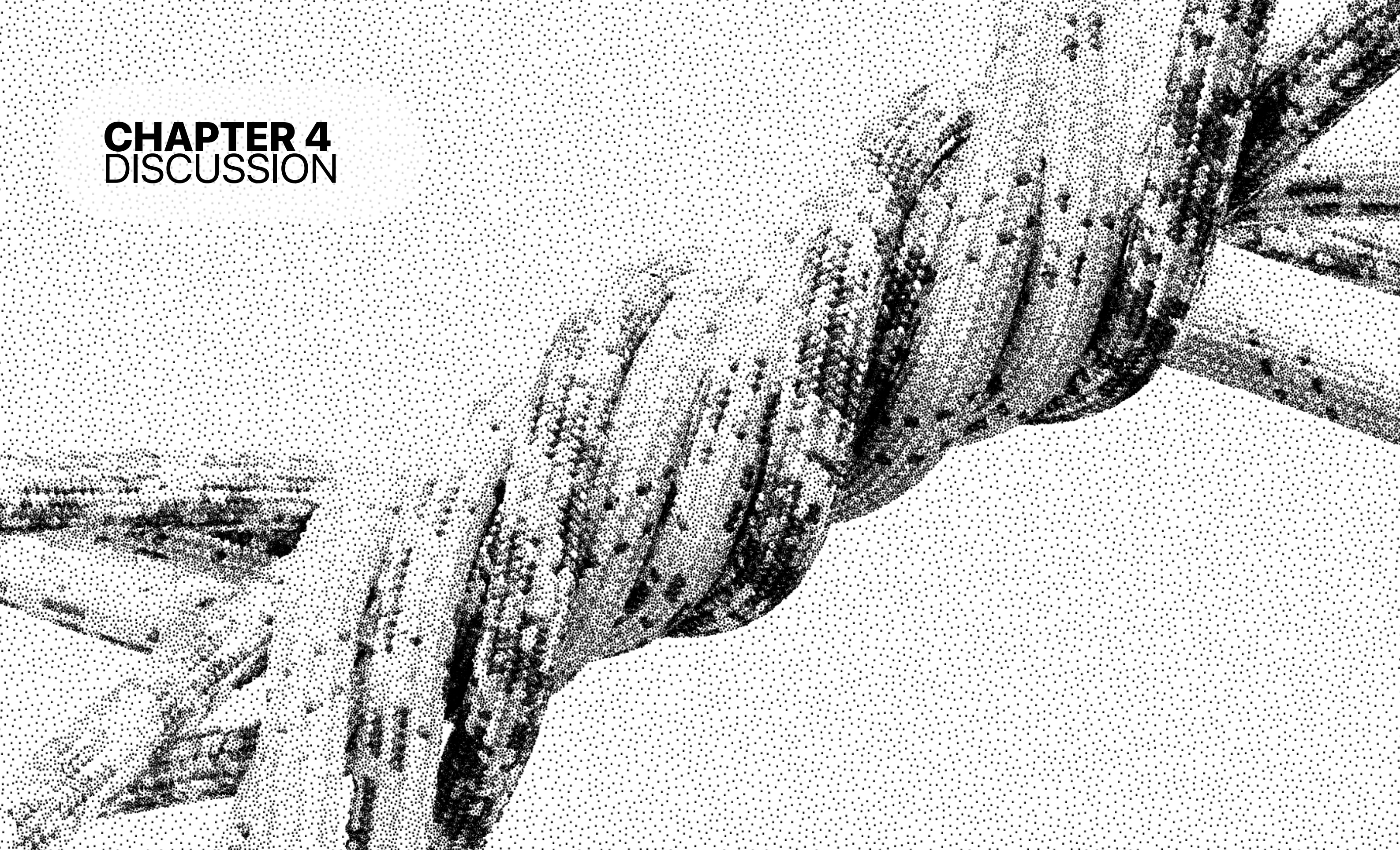
How are positionality and generating different knowledge through materiality connected? I have supported this claim by presenting how the material correspondence allowed participants to be displaced from their conceptual positions by changing landscapes; slowing down meaning-making; preventing conceptual closure (open vs. closed); and allowing ambiguity to do work and help generate knowledge.

However, we should not revert the logic to suppose that epistemic spaces of liminality are the same as generating knowledge about positionality. We also do not want to claim that material workshops "reveal positionality".

Instead, what we can hypothesize from this work is that **one of the potentialities of working within an epistemic space of liminality is to generate unexpected knowledge about abstract or personal subjects**—such as positionality. This type of engagement was able to generate knowledge that might otherwise have been inaccessible through discursive methods alone.

CHAPTER 4

DISCUSSION



DISCUSSION

This Master’s thesis set out to ask how design, in the encounter with philosophy, is able to think otherwise to support the creation of beyond-modern knowledge. This was done through four iterative design experiments. Each experiment was building on what emerged from the previous. The first experiment, *Walking a Kite*, asked what it means to corresponde through material engagement, and showed that metaphors can emerge in this engagement, a single imposed artefact lacks the personal depth needed for generative engagement. The second experiment, *In a Box*, tested how provocative artefacts might open a space of inquiry between disciplines, and found that while the provocations triggered conversation, the body was missing from the inquiry. The term “nexus” proved to be surprisingly generative, as it touched on participants’ self-understanding of their disciplinary position. In the third experiment, *Co-speculations*, personal agency, vulnerability, and the ‘ask the other question’ exercise came to the fire. This experiment demonstrated that these conditions opened the epistemological space in ways that planned provocations did not, but also that imposing artefacts onto participants, however carefully designed, limits what emerges from such encounters. The final experiment, the *Monsters & Ghosts* workshop, collected multiple participants. In this workshop, participants positioned themselves in each other’s conceptual landscapes materially that generated unexpected knowledge about positoinality, which would have been inaccessible through conversation alone.

Across these experiments, a general vector appeared. The engagements moved from imposing objects to relational encounters, from representations to correspondence, from the mind to the body and mind, from individual reflection to engagements across multiple bodies, from knowing-about to thinking-with.

LIMITATIONS

This thesis is a research-through-design inquiry at a limited scale. The design experiments all involve a small number of participants, most of whom share context, such as most participants being affiliated with the TU Delft, holding a Master’s level education or higher, and already being acquainted. The strongest indications emerged from the workshop, which was a single session that did not complete all planned activities. The literature review of both liminality and transdisciplinarity were non-exhaustive and limited by the temporal scale of the project as well as my knowledge of the specific contexts.

These limitations mean that the theoretical contributions listed hereafter are propositions grounded in the iterative design work and supported by what emerged in the experiments, but also require further engagement across different contexts, participants, and scales.

The findings are best understood as promising indications from a first exploration, not as validated claims.

KEY CONTRIBUTIONS

The two literature reviews in Chapter 2 identified two gaps that this thesis attempts to occupy. The first relates to the use of liminality in design research; the second relates to the orientation of transdisciplinary methods. In addressing these gaps, the thesis also develops a third contribution, which is a set of traces for recognizing when a liminal epistemological space is entered. Together, these three contributions form the theoretical and practical foundation through which the main research question is addressed.

CONTRIBUTION 1: LIMINALITY AS GENERATIVE

In the review of liminality in design literature (Chapter 2, Liminality: A Brief Review), it is identified that liminality has been used primarily as an analytical tool. Whether *liminality* has been used to describe a temporary phase of transition, a disciplinary position between fields, a lived condition of in-betweenness, or an ontological condition of inbetween presence, the literature uses liminality consistently to describe and analyze spaces or states that are “in-between.” The epistemological frame used to observe liminality remains the same, being a Western analytical lens pointed *at* a threshold. This thesis sees this as a gap, since liminality has not been used as a generative condition in design research.

This thesis therefore proposes and demonstrates a different use of liminality by treating it as a state one can enter. A space in which modern distinctions are suspended, and where knowledge that does not fit existing categories is allowed to emerge. The reorientation from *liminal to understand* (epistemological analysis) to *liminal as generative* (epistemological opening) was developed theoretically from Agamben’s caesura and de la Cadena’s epistemic stance of not knowing. It was tested through the design experiments.

A key finding from the research is that liminality in itself is not a critical-affirmative practice, but is instead the condition: a state of suspension in which modern categorization does not hold it usual organizing power. The kind of knowledge that emerges is determined partly by the context and exercise that is performed within the epistemological liminal space. During the workshop, the knowledge that emerged (about positionality) was a product of the specific exercises (becoming monsters, inhabiting others’ landscapes) done within the epistemological liminal space. With different exercises and conditions, we can assume a different knowledge will emerge. This distinction is essential: *liminality provides the epistemological opening; it does not prescribe what passes through it.*

Liminal epistemological spaces are subjective, temporal, and dependent on conditions. Liminality cannot be permanently established, but it can be invited, cultivated through careful attention to the conditions that support its emergence.

CONTRIBUTION 2: MATERIAL CORRESPONDENCE A DESIGNERLY APPROACH FOR EPISTEMOLOGICAL OPENINGS

The review of transdisciplinary methods (Chapter 2, Transdisciplinarity: A Brief Review) found that existing approaches remain oriented towards problem-solving, alignment of project goals, and producing shared solutions. Even if teams flatten hierarchies, embrace ambiguity, and highlights plural perspectives, projects still orient towards common definitions and ‘productive’ outcomes (Augenstein et al., 2024; Scholz et al., 2024). Transdisciplinary work is supported by roles that move across disciplines, such as boundary spanners, facilitators, and Gluon researchers, whose function is to translate and align across epistemological boundaries (Brand et al., 2025; Newman, 2024). No tools or methods in the reviewed literature explicitly attempt to produce knowledge in non- or beyond-modern ways. This thesis identifies this as a second gap: transdisciplinarity, as currently practised, is not suited for knowledge production that exceeds modern modes of organizing knowledge.

This thesis responds by developing *material correspondence* as an approach to this gap. Material correspondence is a practice of thinking with and through artefacts and materials. Materials are treated as active participants in the knowledge production rather than as containers for pre-formed meaning. Material correspondence is relational, since knowledge does not come from a single maker reflecting on their own creation, but in the encounter between participants as they respond to each other’s material engagements. Material correspondence is also iterative, since meaning is understood as unfixed and shifting through the back-and-forth of corresponding, as each response diffracts and displaces. Lastly, it is embodied, as both the body and the mind are engaged as sites of knowing.

Fundamental to *material correspondence* are philosophical commitments. Both Tim Ingold’s notion of *correspondence* as attentive and relational becoming, Karen Barad’s *agential realism* that takes seriously the agency of matter, and research-through-design as knowledge production through making. These philosophical commitments become the *apparatus* (in Barad’s terms) through which insights emerge. The apparatus determines what becomes visible, while different commitments will produce different insights. Through the design experiments, these commitments have steered the inquiry towards a specific set of insights about what leads to epistemological liminal spaces, as well as iteratively redefining what material correspondence is.

Material correspondence is a distinct practice from other similar practices already existing in design research, although it has similarities with several of them. Material co-speculation (Wakkary et al.) similarly acknowledges material agency within a more-than-human frame, but focuses on people thinking through pre-meditated artefacts over time, rather than towards generative knowledge production between participants through material encounter. Speculative design (Dunne & Raby) creates artefacts for an audience, making a unidirectional relationship from designer to viewer. Material correspondence is fundamentally bi-directional, since both parties make, respond, and are

displaced. Critical making (Ratto) uses making as a site for critical reflection, typically about technology. Material correspondence is not primarily oriented toward critique but toward generative (affirmative) knowledge production through relational encounters. Participatory design and co-design involve making together, but typically toward a shared goal or deliverable. Material correspondence has no orientation towards a ‘product,’ and instead respects the making as the knowledge production.

Opposing current transdisciplinary methods, material correspondence does not align disciplinary perspectives, but instead suspends them. In this way, the disciplines become the frame for the work done by/through material correspondence. It seeks epistemological openings through moments that destabilize disciplinary, ontological, and epistemological categories through the encounter with another’s making and thinking. In this way, material correspondence responds to the identified gap in transdisciplinary research, since it offers a designerly approach that works with the tensions between disciplines as generative material.

This approach and contribution also speaks to a broader shift happening in transdisciplinary research which calls for the decolonization of knowledge practices and for greater humility between disciplines (Vladova et al., 2025). What this thesis adds is a concrete demonstration that transdisciplinary encounters can be designed for a suspension that can produce knowledge that is inaccessible through discursive or goal-driven methods.

CONTRIBUTION 3: TRACES FOR RECOGNIZING WHEN YOU HAVE ENTERED LIMINAL EPISTEMOLOGICAL SPACES

If this thesis proposes that liminality can be used generatively, and that material correspondence is a means for cultivating it, then it becomes essential to the contributions to understand *how one can know when a liminal epistemological state has been entered*.

Without criteria for this, the concept risks becoming inflated, as any group activity with materials can claim to be liminal. The following traces were identified as indicators that one has entered a liminal epistemological space. These traces are not exhaustive, but are instead orientations to guide whoever seeks to enter an epistemological liminal space. When present in combination, these traces *suggest* that modern logics of organizing knowledge has been at least partially suspended.

EMOTIONAL & FELT RESPONSES

In both the co-speculations and the workshop, participants experienced emotional or felt responses, such as disorientation, discomforts, or emotion reactions to what is otherwise abstract conceptual boundaries. One participant in the workshop described their experience of disciplinary split between design and philosophy in their landscape through the frame of their anxiety. When disciplinary categories begin to produce emotional responses rather than analytical ones, it suggests that categories are being inhabited.

DESTABILIZING CATEGORIES

The workshop demonstrated that when participants were asked to create monsters representing themselves, and then place those monster in others’ conceptual landscapes, their self-understanding shifted. This was a material and relational displacements that produced new understanding, since some participants remade their monsters entirely as a response to the new landscapes. When a participant’s sense of their own position shifts through material engagement, this indicates liminal qualities.

EMERGENCE OF UNEXPECTED KNOWLEDGE

The workshop was not designed to produce knowledge about positionality. That it did so suggests that the liminal space had opened for knowledge that was not anticipated by the design of the exercise to emerge. When knowledge surprises the researcher and the participants, it indicates that something outside the planned epistemological frame has been accessed.

AFFIRMATIVE, NOT JUST CRITICAL

In the experiments, critical engagement (identifying what is wrong with the modern and its categorization) was relatively straightforward for participants. Affirmative engagement (imagining or enacting alternatives) was more difficult and came up more rarely. The workshop exercises, particularly the monster-making, seemed to afford affirmative thinking, since participants built alternatives rather than only critiquing existing structures. When the engagement shifts from being critical to affirmative, it may indicate that one is engaging within a liminal epistemological space.

METAPHOR & POETIC ENGAGEMENT

In the workshop, participants used monsters and landscapes as devices for meaning-making rather than analytical frameworks. When participants create their own metaphors, or otherwise ambiguous or poetic engagements, and start believing in them, we find that rational/analytical modes of thinking has been at least partially suspended.

LIMINAL EPISTEMOLOGICAL SPACES: *CONDITIONS*

The contributions above present the theoretical premise (generative liminality), the designerly approach (material correspondence), and the means of recognition (traces). What is missing, then, is the question of: **What conditions enable material correspondence to produce liminal epistemological states?**

In this section, the findings from all experiments are synthesized into a set of conditions. These conditions can be used as guidelines to enable others to work with and towards epistemological liminal spaces. They are orientations, and should not be seen as a prescriptive checklist, since prescribing the conditions would contradict the epistemological commitments of this work.

PERSONAL URGENCY

The generative depth—or what we might call a sort of ‘weight’ or ‘heft’—of any engagement depended on whether or not the activity touched the participant’s personal urgency. This was true throughout all experiments. When an engagement remained academic or abstract, the resulting conversation was interesting but flat. Participants could speak *about* concepts without being *moved* by them. Instead, when an engagement connected to something the participant(s) genuinely cared about (their sense of self, disciplinary anxieties, unresolved questions), the engagement started to exceed rational argumentation.

During the workshop, this was achieved by asking the participants to discuss how they resist or sit outside modern categorization (become monsters). This aspect immediately connected the exercise to something personal and urgent. In the co-speculations and box experiments, the contested term “nexus” achieved something similar. The term provoked the participants because they saw themselves in the position being described, and disagreed with the it. However, this is a respectful encounter aimed at curiosity for all people involved, not a critique of the participants. Personal urgency is a way to start engagements that can produce depth, and without it, material correspondence remains at surface-level.

VULNERABILITY AND CARE

The experiments showed that personal urgency only becomes generative when the environment supports vulnerability. Sharing something urgent and personal, e.g., how you are a monster, how your disciplinary position is unstable, how you feel about being placed in someone else’s conceptual world, requires courage.

The workshop demonstrated that vulnerability must be cultivated from the start to open up the space for each other. The monster introductions at the beginning of the workshop did this. By asking everyone to share something personal early, a tone was set in which emotional honesty was (more) expected and supported. Without this vulnerability, participants might switch to an analytical distance. Therefore, care is the condition that makes vulnerability sustained and generative.

SENSITIZING BEFORE ENCOUNTERING

Through the workshop, it was found that participants had to engage with the material on their own terms before encountering the work of others. In the workshop, the participants first created their own landscapes, which gave them meaning and personal depth. In a way, they had invested themselves in their own understanding before being asked to respond to someone else’s. When they then had to position themselves in another’s landscape, the encounter was not as abstract as it would be otherwise, since they had developed a senes of personal stake. By contrast, in earlier experiments where participants received artefacts without prior sensitization, the engagement often felt disconnected. Sensitizing exercises create the conditions under which the encounter with another’s work can be generative rather than confusing.

INVITATION, NOT IMPOSITION

Throughout the experiments, one of the most prevalent ‘issues’ that appeared was that imposing artefacts onto participants limits the engagement from the participant, even if the artefact is carefully designed.

In the *With a Kite* experiment, the artefact was fully designed by the researcher. In the *In a Box* experiments, the provocations came from the researcher’s own theoretical concerns, not from the participants’. In both cases, the engagement was limited: participants reacted to what was given rather than generating from what was urgent to them.

Throughout the thesis, I gradually withdrew my control as author. By the workshop, participants were making their own monsters, their own landscapes, and placing themselves into each other’s worlds. The role of the designer becomes one that creates the frame (sequence, materials, prompts) without determining the content. Material correspondence, when it works, is an invitation to think together through making.

EMBODIED ENGAGEMENT

Material engagement offers something different from conversations alone by letting things emerge through form, texture, placement, and gestures that are difficult to articulate in words. When participants of the workshop had an emotional or felt reaction to placing their monster inside a foreign landscape, it was not something they were reasoning their way to. Embodied engagement is, however, not a replacement for conversations, but an expansion. Not every act of making leads to new insights, and in that way, the body sometimes ‘disappoints’. This condition of embodied engagement works best when in combination with other conditions.

OPEN-CLOSED BALANCE

Finally, the last condition that was found throughout the experiments was that the presentation of artefacts, and the artefacts themselves, should strive to strike a balance between two extremes. One extreme, being too open, there is no given explanation or framing, leaving participants to project their own preconceptions onto it unchallenged. In this way, the artefact becomes something similar to an artwork to be interpreted, and the engagement becomes random instead of generative. Oppositely, if the artefact is too described and has everything accounted for in its presentation, participants are stopped. They either begin analyzing or might feel distanced from the artefact.

The most productive engagements happened in the space between, where there is enough framing for participants to orient themselves, but enough openness for their own meaning to emerge. In the workshop, the landscapes were conceptual enough to allow many interpretations but structured enough (*mapping design and philosophy*) to provide a shared starting point.

On the diagram shown on the right, Figure 9, the connection between the different layers that this thesis has found is shown. The logic goes from the philosophical commitments as apparatus for insights to emerge, into material correspondence that has conditions to enter liminal epistemological spaces, and the traces that appear from being there. The diagram finally points towards non-modern knowledge being many things, one of which alternative insights about your positionality beyond modern categorization.

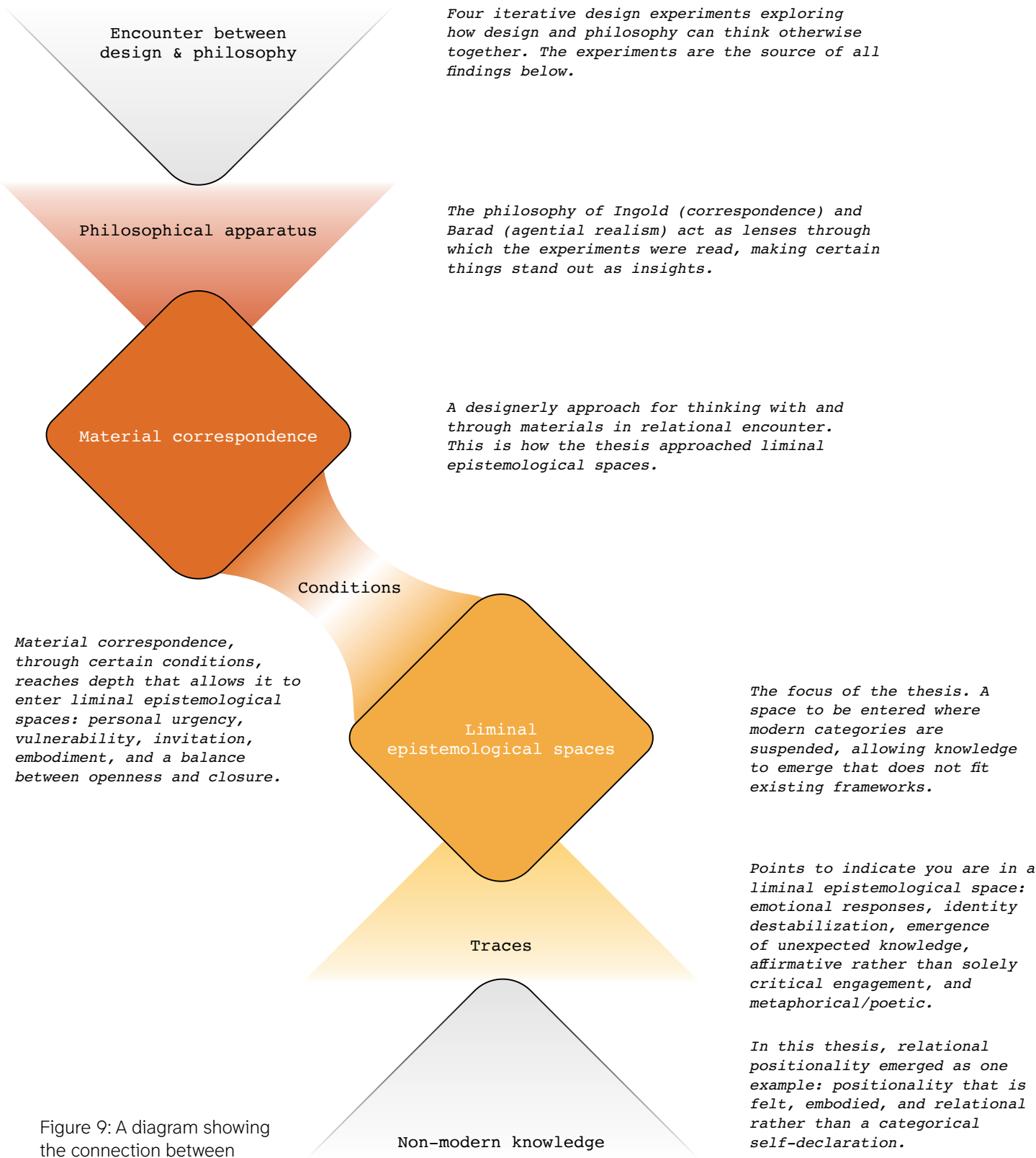


Figure 9: A diagram showing the connection between experiments and findings.

RESPONDING TO THE MAIN RESEARCH QUESTION

Throughout this thesis, the work and research has been steering towards responding to the main research question:

How can design, in encounter with philosophy, help think otherwise in order to support the creation of non-modern knowledge?

Design contributes by bringing the capacity to work with ambiguity, provocations, and thinking-through the act of making. Where border thinking has been theorized (originating in lived experiences), this research with its experiments suggest that it can also be practices through making—through the bodily act of creating and placing objects in relation to others. Philosophy contributes the critical apparatus, allowing insights to emerge from new places, and provides a capacity for self-questioning and putting assumptions into doubt. In the experiments, design and philosophy neither merge into one nor did one ‘serve’ the other. The encounter instead created a generative tension that could be inhabited.

Through *material correspondence*, the experiments indicate that participants were able to at least partially suspend modern categories. In the workshop, unanticipated knowledge emerged about positionality, which exceeded categorical self-declaration and was instead generated through a felt, embodied, and relational experience. This points towards a form of knowledge production that cannot be easily accounted for through the modern epistemological apparatus of rational categorization, disciplinary boundaries, and representational logic. It instead suggests that design, as a material and relational practice, can be one of the means through which such suspension is approached.

It is not claimed, however, that design is the only practice that is able to cultivate a *liminal epistemological space*. Other practices, e.g., poetry or dance, may also be able to do so. This thesis also does not claim to have conclusively demonstrated a reliable path to non-modern knowledge. This thesis provides a first exploratory slice, indicating that when design is oriented towards epistemological openness and brought into the encounter with another thinking-practice, it can enable the conditions under which non-modern knowledge might emerge.

In response to the initially set success criteria, formulated in the beginning of the project: *Can I create a method that is able to generate transferable knowledge that not only allows correspondence between people with thinking-practices, but also allows for critical reflection on their positionality and epistemology?* — the answer is a cautious yes. What was produced is not a method in the conventional sense, but an approach that was iteratively developed through the thesis, being philosophically grounded and practically explored. This approach generated transferable, non-generalizable, knowledge, and enabled critical reflection on positionality and epistemology. This approach is named *material correspondence* in the context of this thesis. The approach is, by design, not fixed; but rather a tactic that is adaptable to different disciplines, participants, and urgencies. Fixing it into a rigid method would contradict the commitments that made it work. However, the validity of these claims are limited to the contexts explored in this thesis.

GENERAL DISCUSSION OF THESIS & FINDINGS

In this subsection, I will go over the thesis in a more personal tone. I will look at the specific knowledge that emerged, what it suggests about the relationship between positionality, material engagement, and non-modern knowledge.

In Chapter 2: Background Theory, I asked myself what design adds to the conversation about *thinking otherwise*. This question was left open-ended on purpose to be addressed through the experiments. The experiments suggest that design adds a capacity to hold a space of potential between people and materials. In this space, knowledge can emerge that neither conversations nor reflection by yourself can generate. In this section, I go into what this means and try to assess how the design experiments worked and how they fell short.

ON WHAT DESIGN ADDS & HOW THE EXPERIMENTS FELL SHORT

What does design add to this conversation of liminality, and what kind of liminality does designing allow to come up? As a personal evaluation, I will try to formulate what this feels like—even if I am unable to compare it to how other practices, such as dancing or poetry, let liminality emerge.

THE TASTE & FEEL OF LIMINALITY

The designerly *taste* of liminality, as I see it, exists in the dynamic between people. It is the feeling of *potential*. As something that can slip away into awkwardness, or can be caught and turned into a generative and emergent quality. This came from an expectation I had that I would introduce something not fully prescribed, something ambiguous, that the participants would have to catch—and this, in turn, put pressure and expectations on the participant. If they did not ‘catch’ the energy I was giving out, the dynamic would stall. There was something uncomfortable about having prescribed too much and then waiting for a reaction that did not come. These awkward moments, resulting in ‘flat’ exchanges with polite but disconnected responses, were not ‘failures’. But they were indications that something was missing. This sense of ‘something is missing’ was a primary factor in leading me through the project.

When the dynamic worked (in parts of the co-speculations and more fully in the workshop), the feeling was different. It was then a sense of cliff-hanging (me trusting something will emerge) that gets caught by the participant(s). The dynamic begins with me inviting someone else, but it can only become something more if that someone else is prepared and wanting to ‘play’. That moment of potential, where it could go either way, is, I think, what the designer holds as a facilitator of these spaces. It is inherently relational, and would not emerge in the same way alone. Making by yourself is somewhat stagnant in this regard, as what produces the liminal quality is the correspondence with others: the not-knowing-what-they-will-do-with-it. And holding that potential required vulnerability from me as a designer as well, and not only from the participants.

The material dimension gives this a particular character. Working with charcoal, clay, and cardboard is spatial, tactile, and ambiguous in ways that conversation is not. You can place something next to something else and let the relation speak. You can make a monster without fully knowing what it represents and then watch it gain meaning when someone else responds to it. This is different from the liminality that might come through writing a poem (which is linguistic, and might be by yourself) or through philosophical dialogue (which is discursive and tends toward precision). Designerly liminality is messy, material, and social. I can only speak to this version, as I have not tested others, but the experiments suggest that this particular taste of liminality is what design brings to the broader conversation about thinking otherwise.

‘REFLECTION’ ON THE ATTEMPT

As for whether this was a good attempt: I think it was. The variety of experiments (different types, scales, participants, contexts, roles for me as researcher) meant that each iteration could build on what came before. The iterative process was the strongest aspect of this work. Every time an experiment fell short, it revealed something about the conditions that matter, which collectively informed the approach and the conditions presented in this chapter. The ‘failures’ were not really failures—they were the findings.

At the same time, what I am trying to do in this thesis is very theoretical, while I am still not an expert in the theory nor an expert in any single design method I used. This means I was often working at the edge of my understanding. I believe this produced both generative confusion and possibly overclaiming at times. At certain stages, I have made assumptions and conclusions in order to move on, which might have been more than the experiments’ findings support. The limited timeline also meant that I was at times moving to the next experiment before fully processing the previous one. It would have been valuable to spend more time with fewer participants to build the kind of sustained correspondence that the co-speculation sessions gestured toward.

The in-group context of the experiments is a real constraint. Most participants are from overlapping academic circles, and I cannot say with certainty that the approach would work in radically different contexts, for example, with different disciplines, different cultural backgrounds, or outside academia entirely. However, the situated knowledge framework that this thesis commits to means that generalizability was never the goal—but it does mean that what I found is bound to the specific situations in which it emerged. Further work in different contexts is needed not to ‘prove’ the approach, but to understand how it changes when the situation changes.

ON POSITIONALITY AS BEYOND-MODERN KNOWLEDGE

Positionality was a specific knowledge that emerged through the liminal epistemological space in the workshops. Gaining insights precisely about positionality was not what I expected to get out of the workshops, but looking back, the exercises do indeed work in that direction. However, the workshop was more broadly looking to explore the relationship to/with the space between design and philosophy, which in fact plays into the participants’ positions. But the finding goes deeper than accidentally learning about positionality.

What emerged was also a different understanding of what positionality is and how it can be engaged with. Conventionally, positionality might be declared in a more sterile way, being categories of who you—and in the more extreme cases, almost entirely limited to “embarrassed etc. clause,” as previously discussed. These categories usually describe gender, race, class, nationality, and the like, and acts as an epistemic disclaimer. The problem is not that these categories are irrelevant, but that listing them does not constitute understanding. Two people who share identical categorical markers will still have different standpoints, different urgencies, different relationships to the knowledge they produce. *Positionality, if it is to mean anything, must be engaged with as more than a list.*

The experiments in this thesis showed that positionality can be generated (instead of declared). In the workshop, participants enacted it instead of stating it by “becoming monsters” that resist modern categorization. They placed themselves in others’ conceptual landscapes and experienced what it felt like to be repositioned. They saw others inhabit their landscapes and had to reconsider what their own position meant in the presence of another. And in this way, I believe that they now partly began understanding their positionality corporeally (felt, embodied, relational). *This could not have been accessed in a written statement.*

Vázquez argues that positionality needs to move from the “I think” to the “we”. From the positionality of the individual self to the multiple positionalities of a relational “we” that is grounded, historical, gendered, and racialized. The workshop enacted this in a material way, since positionality emerged in the encounter between participants, their monsters, and each other’s landscapes. The “we” here is not a consensus or a shared identity, but instead like a relational field in which each person’s position was destabilized and reconfigured by the presence of others.

There is an irony worth mentioning: positionality statements in academic work are almost always about the “I.” They are individual declarations made in the service of acknowledging situatedness. But situatedness is inherently relational. You are situated in relation to others, to histories, to structures. To understand your positionality through categorical self-description is to remain within the modern logic of classification. To understand your positionality through relational, material, embodied encounter is to step—however briefly—outside of that logic. In this sense, the knowledge about positionality that the workshop produced was itself beyond-modern knowledge, since it exceeded the categories that positionality is normally understood through.

It is important to note that positionality, understood in this way, is not primarily about how you communicate yourself to others. It is about how you understand your own position and use that understanding to work with the implications of your situatedness within modern epistemology. The monsters in the workshop served as devices for this understanding—a kind of placeholder that participants could think of themselves differently through. The monsters were not representations of fixed qualities, and could therefore not be reduced to a list of positionality categories. The monsters only had real meaning in the moment of its making and in the encounter with others.

How ironic, then, that academic positionality statements ask us to declare who “I” am, when the very concept of positionality, as understood through feminist and decolonial theory, demands that we ask who “we” are. As Vázquez (2020, p. 11) writes:

“The we configures itself as multiple and changing, but always already grounded. It embodies historical, geographical, gendered and racialized relations [...] The we only comes to voice in the mode of listening, in the awareness of its infinitive indebtedness to others.”

The workshop’s material correspondence of making, exchanging, positioning, responding was a kind of this listening—a practice of positionality.

FURTHER WORK

As previously noted as limitations of this thesis, it is not validated if material correspondence can reliably produce non-modern knowledge. This work cannot conclusively claim this. Instead, what we can say is that the developed approach produced *indications* of knowledge about positionality that was inaccessible through discursive methods and that exceeded modern categorical logic. This is a small but concrete step towards understanding how non-modern knowledge can be produced through design.

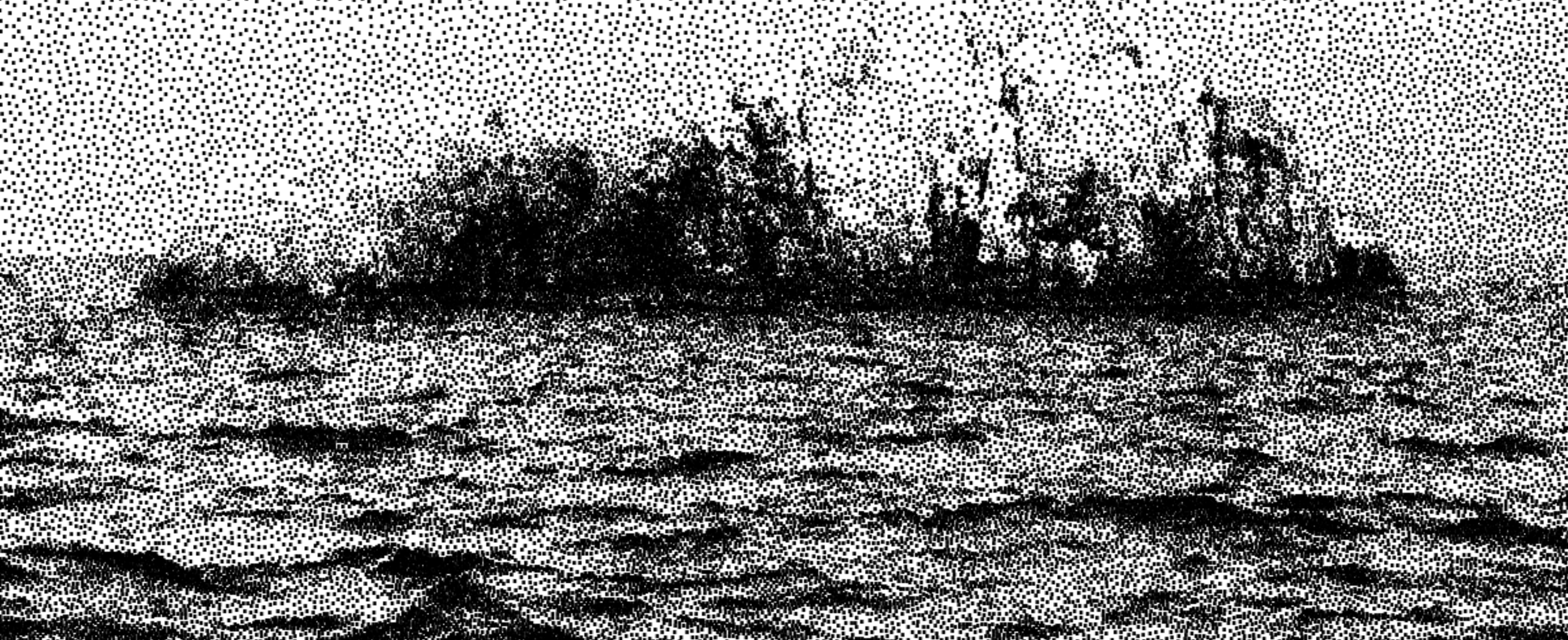
I find that there are two directions for further work that could build on the findings of this thesis. First, this work has been tested within one context (design encountering philosophy), producing one form of non-modern knowledge (relational positionality). It would be interesting to see what other disciplinary encounters, other conditions, or other exercises within the epistemological liminal space would generate. In this regards, further work should explore what emerges when the approach is applied in different contexts, such as other disciplinary combinations, other urgencies, and other materials and material engagements. *This would examine what other forms of non-modern knowledge becomes accessible.*

Second, the knowledge about positionality that came up starts its own line of questions. If positionality can be generated and felt through material correspondence, then what else can we learn about positionality through such practices? How can we expand the idea of positionality? How might a long-term engagement deepen these insights? And how can the understanding of a relational positionality (“we” rather than “I”) further inform researchers (in many different fields) engage differently with the situatedness of their knowledge?

Finally, as a concrete ‘next step’ from this thesis, I have made some practical reflections on and considerations for a future iteration of the workshop. These can be found in Appendix A. In this, I address questions of timing, material choice, group size, and facilitation that are relevant for anyone seeking to build on this work.

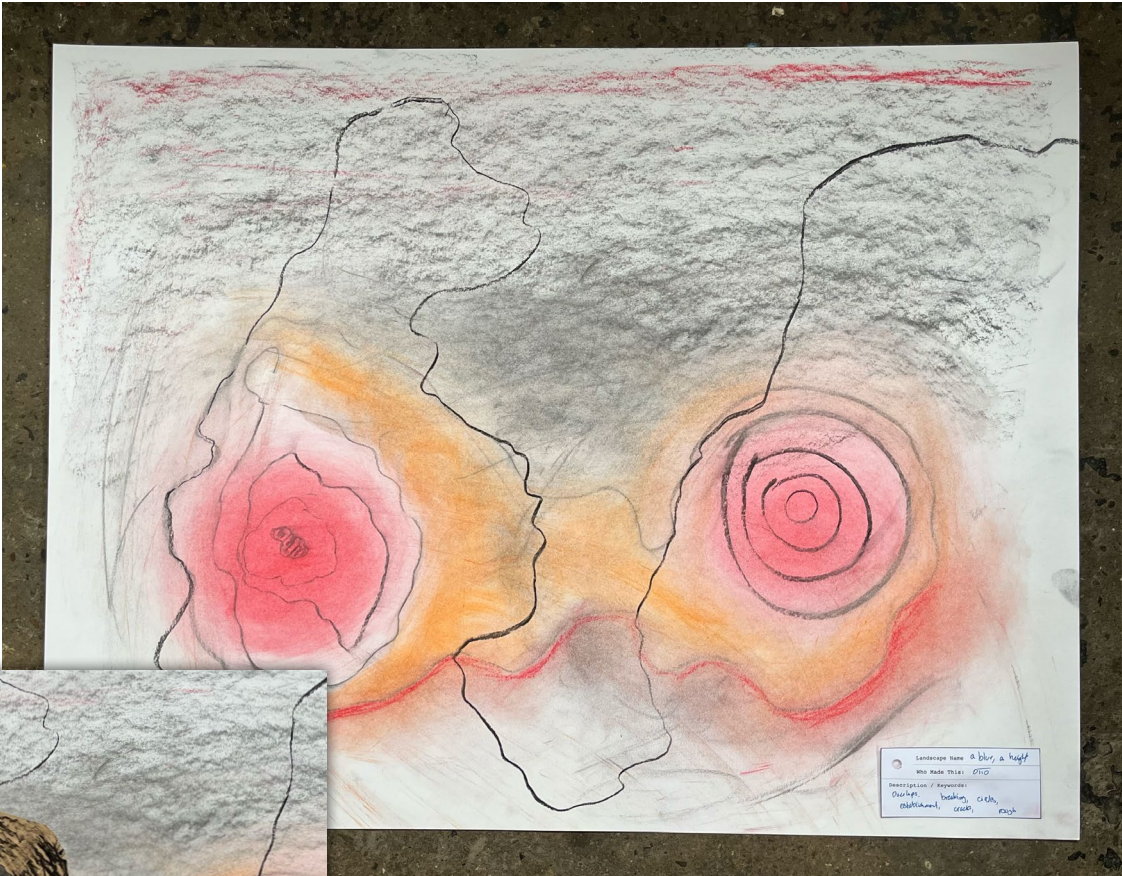
CHAPTER 5

POSITIONALITY



In my previous positionality statement (on page 49), I declared categories befitting myself, locating me within practical, academic, and cultural heritages. In this section, I will challenge the first positionality statement by instead showing my positionality in alternative forms in line with my findings in this thesis. The following is my relationally and contextually generated positionality:

I find myself returning to Loke (Loki) from Nordic mythology. A god and a jätte (jötunn). Loke shifts between loyalties, genders, species, and introduces an element of unpredictability. Loke is queering the world of Nordic mythology and holds contradictions without resolving them. Loke often takes on the role of the instigator of action, becoming the force that drives exploration of the unknown. Loke is neither a hero nor a villain. Loke is both inside and outside the order of the gods, both necessary and threatening to it.



My landscape from the Monster & Ghosts workshop with another participant's monster positioned within it.



My monster (left), placed in another's landscape (right).

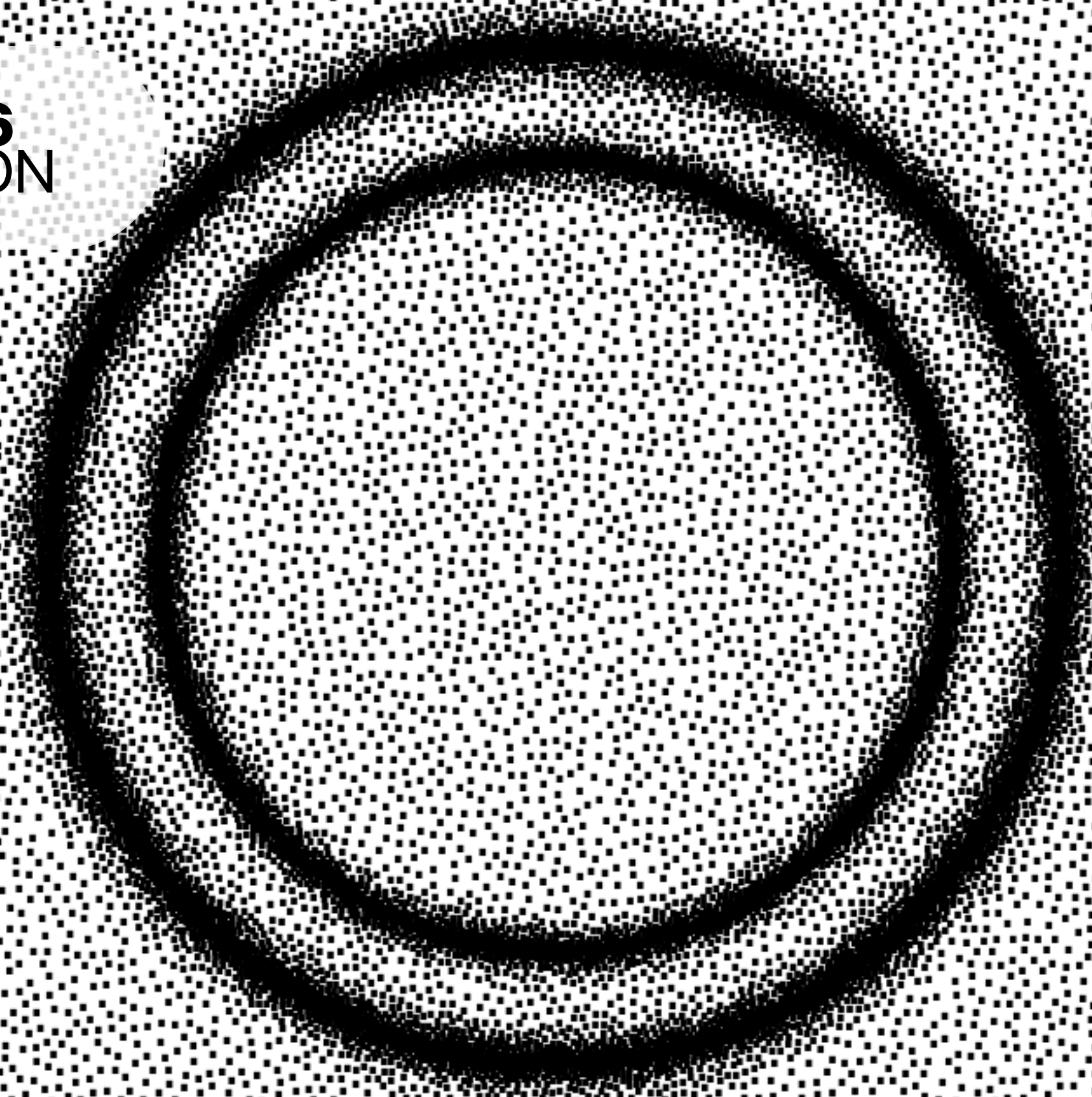
Loke walks; neither male nor female, neither one nor the other, and not both, and not neither. While we might recognise Loke to be a Man, he gets pregnant. While we might see Loke be part of the North, he travels home to the South. While Loke used to be a God, he was also a Jätte. A symbol of Chaos who is in balance. But when the epitome of all Good in the “world” was murdered by an arrow of the Mistletoe, was it really Loke who was at fault? Was it not the Mistletoe that had never considered Balder? Or was Balder only loved as a consequence of the stories told by the Gods, not the Jætter? What did the Spruce tell the Mushroom about Balder?

Was love really a concept reserved for the Gods to have and to project onto the rest? The Mistletoe did not love nor hate Balder nor any other. It was intimate with everything else, but not in love with any of them. To walk where Loke walked, not human, not God, neither and not neither, both and not both, we see that he held a space for something we forgot when entering the paved road. Because on the paved road, the Mistletoe could not bloom and waste for a new fungus to eat and feed the next generation. So, how does Loke enter the city if no wasteland is left?

On the other side of the wasteland, another city stands. This one is made of figures of other forms. The thread we followed through the forest to the other city, laid down by Loke before us, was not what constituted the city on either side. No, the thread is what we followed to enter the forest, the wasteland, and to perceive what was on the other side of it. So while Loke suffers on the verge of Ragnarok, we must remember that Ragnarok is not what it is in the movies. It's the collapse of the people of Midgaards, just as well as the cities on either side. It is not a catastrophe, because it is the end and beginning of the next cycle.

CHAPTER 6

CONCLUSION



CONCLUSION

How can design, in encounter with philosophy, help think otherwise in order to support the creation of non-modern knowledge?

To answer this question, I carried out four design experiments that iteratively developed an approach I call *material correspondence*. It is a practice of thinking-with and -through artefacts and materials in relational encounters. The design experiments progressed from a single imposed artefact, through a collection of provocations, into one-on-one co-speculation sessions, and finally to a workshop called *Monsters & Ghosts*, in which participants created and exchanged conceptual landscapes and monsters.

The research makes three key contributions: First, it proposes that liminality can be used generatively in design research to allow modern categories to be suspended in knowledge production, opening a *liminal epistemological space* where non-modern knowledge can emerge. Second, the research develops material correspondence as a designerly approach for creating epistemological openings in transdisciplinary encounters. Material correspondence does not align disciplines, but instead suspends them and works with tensions between disciplines as generative material. Third, this research identifies a set of traces for recognizing when a liminal epistemological space is entered or being approached. Through the experiments, the research also finds a set of conditions that support material correspondence in producing liminal epistemological states.

The non-modern knowledge that emerged through the experiments, particularly the workshop, was knowledge about positionality. Participants did not declare their positionality through labels, but instead generated it through a felt, embodied, and relational encounter. They became monsters, inhabited each other's landscapes, and experienced what it means to be repositioned. This points toward a form of positionality that is relational and enacted rather than individual and declared. A form of positionality that exceeds modern logics of categorization.

The findings of this research are based on a limited exploratory inquiry. The experiments involved a small number of participants who shared context in different ways. Furthermore, the workshop happened in a single session. The contributions have not been validated and should therefore be interpreted as situated propositions that emerged from the design work.

This research offers a step towards claiming design as a practice that, when oriented in certain ways and enters into an encounter with philosophy, can contribute to creating the conditions under which non-modern knowledge can emerge. It is not the only way, and it is not without its flaws—but it is a humble, situated, and fallible attempt to take the crisis of knowledge seriously and to affirmatively respond through making.

PERSONAL TAKEAWAYS

I will in this section briefly go through my impressions that I take away as a person and researchers from having done this thesis.

First of all, I think the most concrete skill that I will have gained from this thesis is ‘cutting things to the bone.’ This thesis has been complex in many ways and on different levels, and I have at times been floating in imprecise thoughts, which is fine and even necessary at times. But without sometimes making decisions and making things concrete, I would have drowned. I feel like I have improved at sticking with nuances while at the same time being able to make it clear for myself what I am actually doing.

I have also been thinking about how I work. Throughout the thesis—until the very end—I have been organizing my thoughts on Miro (a digital whiteboard, where you can add post-it notes, etc.) extensively. Even though I sometimes write enormous amounts to make sense of the smallest of things, I also think visually and especially spatially (with plenty of post-it notes in real life as well). However, and this is what I want to highlight: I am a completionist at heart as well. I tried to get everything documented, cross-referenced, and accounted for. And I am not convinced this made the project better than spending that time opening and closing more ideas more intuitively. This goes further, as I also spent a lot of time going back to recordings and transcripts to make sure I caught everything. Oftentimes, I would find new ideas, but at the cost of a lot of time and energy. Going forward, I will probably keep doing Miro and recordings, but I will have to be a bit more careful about trying to catch everything.

I also have some concrete notes on running the workshop. It stands out to me as one of the most vivid learning moments. I was surprised by how crucial timing and flexibility are, especially when running a workshop that wants to avoid time-pressure. Because the workshop session was intentionally loose, managing it live was quite challenging—especially when I had/wanted to give precise instructions and steer the process when the plan started to shift. My relative inexperience running workshops made me blind to how my sometimes vague language, when I tried not to steer too much, would lead participants down different paths. But it should be okay for workshops to shift depending on the dynamic. So this taught me the value of making a clear ‘minimum viable product’ version of a session that gets through the essentials, but also making plans for if the workshop has time to expand.

If I had to give a piece of advice to another student starting a thesis like this one, I would tell them to be honest with themselves about what they find interesting and what they find difficult. I managed to shape the project into something I am proud of, but I did not know this is what I was going for in the beginning. In the beginning, the path was quite different and quite unclear to me. I think it is a strength to let the project and process be emergent—let yourself be surprised by it. If you can expect what will happen, it is far less interesting to do it.

When I look back, I wish I had, at times, been better at taking the work less seriously. I tend not to start something unless I have a ‘good enough’ plan—but the plan rarely comes out before you start. So in this regard, I want to try to be more generative in the future. To make more things to think with and through. To read papers and books in response to things I make. I find myself sometimes worried about crossing all the boxes that I almost forget to explore. In a way, the iterative process of this project was an antidote to this by forcing me to make things and respond to what happened before I had rounded off the previous stage.

Finally, the people I worked with (participants, supervisors, ‘colleagues,’ friends) made this project what it is. The knowledge that emerged did not come from me alone. It came from encounters, conversations, material exchanges, and the willingness of others to be vulnerable and generous with their thinking. This thesis is, in its own small way, evidence that knowledge is situated and relational—not because the theory says so, but because I experienced it.

GLOSSARY: KEY TERMS AND WHAT THEY MEAN

This is a glossary of terms that have been developed or expanded throughout this thesis. These specific terms are listed to give the reader an easy reference for uncommon terms that have a certain meaning in this thesis. Other relevant terms used throughout this thesis, but not developed (such as apparatus, diffraction, border thinking, etc.), are defined where they first appear in the text.

LIMINAL EPISTEMOLOGICAL SPACE: A generative space or state in which modern epistemological categories, such as disciplinary boundaries, rational categorization, and representational logic, are suspended. This stands in contrast to the analytical use of liminality in existing design literature, which describes in-between positions from an unchanged epistemological frame. Liminal epistemological spaces are something one enters for the purposes of knowledge production. It is a space that is temporary, situated, and dependent on *conditions*. It can be achieved through the approach of *material correspondence*, but it cannot be guaranteed.

LIMINAL EPISTEMOLOGICAL SPACE — **TRACES:** Indicators that a liminal epistemological state is being or has been entered. Identified traces are: emotional and felt responses; destabilization of categories and identity through material repositioning; emergence of unexpected knowledge; affirmative and critical engagement; and metaphorical or poetic thinking. These traces can be used to give direction and help distinguish liminal epistemological engagements from conventional co-creation.

MATERIAL CORRESPONDENCE: An approach to designing that treats materials as active participants in knowledge production. It is relational (knowledge emerges from encounters), iterative (meaning shifts through back-and-forth response), and embodied (the body is engaged as a site of knowing). It draws on Ingold's notion of correspondence and Barad's agential realism but synthesizes these into a designerly approach developed through this thesis. Material correspondence is distinct from material co-speculation (which is oriented toward object-oriented ontology through premade artefacts), speculative design (which is one-directional, from designer to audience), and critical making (which is oriented toward critical reflection). Material correspondence is the means through which this thesis approaches liminal epistemological spaces.

MATERIAL CORRESPONDENCE — **CONDITIONS:** A set of circumstances that support material correspondence in producing liminal epistemological spaces. Conditions describe what this thesis has revealed as important for material correspondence to become an engagement with the depth needed to enter liminal epistemological spaces. Conditions were iteratively found through the thesis, and include: personal urgency as a starting point; vulnerability and care as preconditions; sensitization before encounter; invitation rather than imposition; embodied engagement beyond discourse, and a balance between open and closed presentations and framing. Conditions can be used to give direction to your work and approach.

NON-MODERN KNOWLEDGE: The type of knowledge this thesis aims to produce. It exceeds or resists modern logics that organize knowledge. Non-modern knowledge is not anti-modern knowledge, but is instead presented as beyond-modern. The knowledge emerges from practices that suspend modern categories and allow other forms of understanding to emerge. This thesis finds that one form of non-modern knowledge is about relational positionality, which is felt, embodied, and generated through material encounter. The type of knowledge that can emerge is not closed (not defined as 'relational positionality'). Other forms of non-Modern knowledge will emerge under different conditions and exercises.

PERSONAL URGENCY: The quality of engagements that comes up when an activity touches something personally important to a participant, for example, their sense of self, disciplinary uncertainties, or other unresolved questions. This thesis identifies personal urgency as a key condition for material correspondence to produce depth. When engagement remains academic or abstract, conversations may be interesting but lack the 'weight' needed to approach a liminal epistemological space. When an engagement becomes personally urgent, it starts exceeding purely analytical thought, which opens the possibility for emergence. In the workshop, personal urgency was accessed by asking participants to become monsters and talk about how they resist or sit outside modern categorization.

POSITIONALITY: Even though positionality is an established concept in feminist and critical theory, the term is expanded through this thesis in two ways. First, positionality is no longer understood as something that can be declared through a categorical self-description alone. In the workshop, participants did not state their positionality, but instead enacted it by becoming monsters, inhabiting others' landscapes, and experiencing what it means to be repositioned. Second, positionality is shifted to be understood as fundamentally relational—shifting from an "I think" to a "we." This understanding grounds the idea of positionalities beyond labels and is challenging modern epistemological logic. Positionality might sometimes be perceived as something others read to understand what position you are coming from—but positionality is much more important for yourself to understand. If you do not understand what thoughts and ideas you are implicitly bringing forward through your work, you cannot expect to be able to work in non-modern ways. Positionality is about how you understand your own position.

SHAKING THE SNOWGLOBE: A metaphor for the process of creating conditions where something urgent and personal is allowed to emerge in material or emotional form. By shaking the snowglobe, you destabilize settled assumptions and allow them to reconfigure. It describes the felt quality of being in a liminal epistemological state—a moment of suspension where the sediment of your habitual thinking is disrupted, but has not yet settled again. This metaphor points to both the intention of the approach and the felt quality of liminality.

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APPENDICES

APPENDIX A: CONSIDERATIONS FOR ANOTHER WORKSHOP

This appendix presents practical reflections on the Monsters & Ghosts workshop and considerations for a future iteration. It is intended for anyone seeking to build on this work.

TIMING AND STRUCTURE

The workshop activities were not timed, which allowed for creative freedom and vulnerability. Unfortunately, this also meant that not all intended activities were performed.

A future iteration should first create a plan for a “minimum viable workshop” (the essential exercises that must be completed), and then add additional activities as extensions on this if the time allows for it.

Having a clear sense of what is essential can prevent you from losing the thread when things move slower than expected. At the same time, the loose structure was also something that allowed the depth of the engagement to take place, meaning strict time-taking should be avoided. There is a balance to be found in knowing what cannot be skipped, while keeping the workshop naturally emergent.

PLANNED	TIMELINE	WHAT ACTUALLY HAPPENED
introduction15 minutes		introduction20 minutes
sketching landscape10 m		sketching landscape35 minutes
exchange landscape (1-on-1)10 m		
create the monster15 m		exchange landscape35 minutes (passing on, plenary)
become the monster20 m		
present monster + landscape + “narrative”20 m		create monster15 minutes
discussion reflection diffraction30 m		share monster10 minutes
		discussion10 minutes

Figure A1.1: A comparison between the planned schedule for the workshop and the actual events. Some things took far longer than expected, such as the landscape creation and exchange. ‘Become the monster’ (enacting the monster’s everyday life) is entirely missing, but was included in the sharing in the workshop.

MATERIAL CHOICE

Several participants mentioned at different points that it was either difficult to work with cardboard for creating physical models, or that it would have been nice with another material or medium.

We cannot expect a medium to fit everyone’s personal style of making. Furthermore, I found that using clay might not be the best material, even though it gives far more freedom, as there is not as much generative friction. It is unsure, but I would probably not use clay as the main material in a future iteration.

Even if participants felt it was difficult to work with the cardboard, it was still possible for participants to read personality and intention into the models. Even if they were rough or incomplete.

A future iteration could include a larger variety, however, I also believe that keeping things simple is best to go directly into making instead of spending time deciding on what to use and make from.

One important detail I found in the co-speculations was that personal materials could be very generative. A future iteration could either ask people to bring a personal item for inspiration, for non-destructively adding into the models—or if it is a craft-material, participants could make something beginning from their personal material. This also connects to the ideas of positionality and personal urgency, as material already will have access to a deeper register of feeling and engagement.

MATERIAL ARE CONTEXT-DEPENDENT

To extend the material considerations, I want to briefly focus on what the space afforded and did not afford. The space was warm, loud with a lot of echo, and had a tough stone floor. One might ask what would be different if we performed this workshop in e.g., a forest? Clay might have worked wonders in a forest, where participants would be able to mix leaves and twigs into the model with ease. In the venue’s space, the cardboard work was supported by the stone floors, letting everyone freely cut through cardboard without worry. The material choice was supported by the environment. Alternatively, in a neat meeting room with carpet floors, this same dynamic would be hard to replicate, as the participants would be more careful. The space, as much as the medium itself, likely both have a major influence on the exercise.

UNCLEAR DETAILS THAT LED TO QUESTIONS

Some confusion occurred during the introduction of this activity, which are worth noting if a second iteration of this workshop is to be held. The following concerns (in bold) were raised and responded to on the spot (in italics, summerized):

- What type of landscape? The conceptual landscape of what you imagine it would look like between design and philosophy.
- Are the monsters involved? The landscapes are separate from the monsters from the introduction, but if it helps your imagination, you can use the monsters to inspire your landscapes.
- Are words allowed? Shapes, words, creatures—everything is allowed. It doesn't have to be pictures or abstract shapes.
- How much time is allocated this exercise? About 30 minutes or whenever the group feels their landscapes are finished—but do not stress.
- How many colours are allowed? Are both charcoal and pastels allowed? All provided materials are allowed for this activity.
- When exchanging landscapes, which one do you describe? Your creation or the one you received? The one you created is the one you describe.

These questions are good to keep in mind to streamline the presentation and workflow of the workshop going forward.

ABSTRACT OR CONCRETE LANDSCAPES?

In this exercise, we 'generated theory' using sketching landscapes, but this is not the only way, as this is the same potential that methods such as critical fabulations hold.

It's worth discussing the difference that a more concrete landscape-exercise would have made, and whether this is what we want for a second iteration. A more concrete exercise could be framed as: using trees, mountains, rivers, fungi, and animals, how does the conceptual landscape between design and philosophy look like? This would likely amount to very different results and discussion, for example getting participants more 'out of their heads' and into a less abstract space. This would, in turn, also make interpretations have less emphasis, which was the main driver for generating theory in this exercise.

We need to ask ourselves what this exercise aim to do. At its core, the exercise aims to generate theory. The main reason to have a stricter framing would be to decenter ourselves. However, the landscape itself was never meant to be an exercise in decentering alone, but only through a series of exercises (combined with creation of monsters and enacting them) do we propose this workshop would enable decentering at a meaningful level. Therefore, an abstract and open framing is likely the preferred choice.

MONSTER-MAKING AND BACKSTORY

The monster creation exercise was relatively quick because participants had already been sensitized through the landscape exercise. This worked, but the monsters might have gained more depth if participants had been given time to develop a backstory or narrative for their monster before exchanging landscapes. This was originally part of the plan (enactment of the monsters).

The question of whether the backstory should come before or after making the physical monster is worth exploring, as creating first and narrating second may produce different results than the reverse.

The important part of the enactment and backstory is to decentre. This can be further enhanced by using an "I" language or "we" language when presenting the monster: speaking through the voice of the monster. Live-Action Role Playing the role of the monster by saying "I like to do ..." or "Yesterday, we did ..."

THE EXCHANGE AND POSITIONING EXERCISE

The most generative moment in the workshop was when you receive someone else's landscape and having to position yourself (your monster) within it. Two different approaches to this came up, and it is worth considering if we want to motivate one or the other, or look for other ways:

Some participants created their monster *in the landscape* by responding to it directly. Others created *with the landscape* by using it as context for their own thinking-making. Both were productive but in different ways.

THE DISCUSSION AS GENERATIVE SPACE

The discussion at the end of the workshop was intended to be the generative space that would use the monsters and landscape to discuss and think with. However, unfortunately because of time constraints and poor planning, the discussion was rather brief.

For the discussion, the physical presence of the artefacts is important. In a future iteration, I would ensure that the discussion happens with the artefacts.

GROUP COMPOSITION

The workshop had a lot of in-group bias, since many knew each other or were affiliated with TU Delft. A future iteration should try getting more diversity in disciplinary background, for example. It would also be valuable to test the approach with participants outside academia entirely, to understand how the conditions and dynamics change.

APPENDIX B: PROJECT BRIEF



IDE Master Graduation Project

Project team, procedural checks and Personal Project Brief

In this document the agreements made between student and supervisory team about the student’s IDE Master Graduation Project are set out. This document may also include involvement of an external client, however does not cover any legal matters student and client (might) agree upon. Next to that, this document facilitates the required procedural checks:

- Student defines the team, what the student is going to do/deliver and how that will come about
- Chair of the supervisory team signs, to formally approve the project’s setup / Project brief
- SSC E&SA (Shared Service Centre, Education & Student Affairs) report on the student’s registration and study progress
- IDE’s Board of Examiners confirms the proposed supervisory team on their eligibility, and whether the student is allowed to start the Graduation Project

STUDENT DATA & MASTER PROGRAMME

Complete all fields and indicate which master(s) you are in

Family name

Rønnest

Initials

OR

Given name

Otto

Student number

6075371

IDE master(s)

IPD

☐

Dfi

☒

SPD

☐

2nd non-IDE master

Individual programme
(date of approval)

Medisign

☐

HPM

☐

SUPERVISORY TEAM

Fill in he required information of supervisory team members. If applicable, company mentor is added as 2nd mentor

Chair

Virginia Tassinari

dept./section

HCD, Design Aesthetics

mentor

Iohanna Nicenboim

dept./section

SDE, Materialising Futures

2nd mentor

client:

city:

Delft

country:

Netherlands

optional comments

!

Ensure a heterogeneous team. In case you wish to include team members from the same section, explain why.

!

Chair should request the IDE Board of Examiners for approval when a non-IDE mentor is proposed. Include CV and motivation letter.

!

2nd mentor only applies when a client is involved.

APPROVAL OF CHAIR on PROJECT PROPOSAL / PROJECT BRIEF -> to be filled in by the Chair of the supervisory team

Sign for approval (Chair)

Name

Date

Signature

CHECK ON STUDY PROGRESS

To be filled in by SSC E&SA (Shared Service Centre, Education & Student Affairs), after approval of the project brief by the chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total

EC

Of which, taking conditional requirements into account, can be part of the exam programme

EC

☐	YES	all 1 st year master courses passed
	NO	missing 1 st year courses

Comments:

Sign for approval (SSC E&SA)

G. Janse

Digitally signed by G. Janse
Date: 2025.07.22 10:27:31 +02'00'

Name

G. Janse

Date

22-7-2025

Signature

APPROVAL OF BOARD OF EXAMINERS IDE on SUPERVISORY TEAM -> to be checked and filled in by IDE’s Board of Examiners

Does the composition of the Supervisory Team comply with regulations?

YES	☐	Supervisory Team approved
NO		Supervisory Team not approved

Comments:

Based on study progress, students is ...

☐	ALLOWED to start the graduation project
	NOT allowed to start the graduation project

Comments:

Sign for approval (BoEx)

Monique von Morgen

Digitally signed by Monique von Morgen
Date: 2025.07.22 10:56:40 +02'00'

Name

Monique von Morgen

Date

22/7/2025

Signature

Name student

Otto Rønnest

Student number

6075371

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT

Complete all fields, keep information clear, specific and concise

Project title

Materialising Knowledge: Corresponding with Philosophy and Quantum Physics in Material Ways

Please state the title of your graduation project (above). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

Introduction

Describe the context of your project here; What is the domain in which your project takes place? Who are the main stakeholders and what interests are at stake? Describe the opportunities (and limitations) in this domain to better serve the stakeholder interests. (max 250 words)

My project will be relevant for design education and research, with specific focus on philosophy and more-than-human design (MTHD). The project will attempt to occupy a gap in design research by 'giving back' with "new kinds of knowing" to disciplines that are borrowed from (e.g., philosophy). This includes material and designerly ways of knowing, e.g. artefacts that embody contradictions, paradoxes, and impossibilities - expanding the imagination, challenging the intellect, exposing hidden assumptions, and offering new insights - "sitting at the edge of what makes sense".

The main stakeholders are designers, philosophers, and quantum physicists, and all of their disciplines. Design and designers' interest is giving back, becoming less extractive, and finding new ways of producing knowledge by looking into non-logocentric ways of conceptualising and corresponding between fields.

I aim to do so by looking into materialising conversations between design and philosophy/quantum physicists. Conversations are materialised from the understanding that we need non-logocentric ways of communicating, avoiding 'concepts' as only formulated by language. I will do so through creating research artefact(s) - "conversation pieces".

The opportunity thereby becomes: better ways of knowing, producing knowledge, corresponding across fields, giving back, diving deeper into understanding dense fields (of quantum physics/philosophy), and helping other designers get a similar understanding and sensitizing. Ultimately, this will help expand design as a field of producing knowledge.

This project is limited to 'slicing' the research by focusing on specific theory and conversations, meaning the project itself is a 'prototype' of corresponding materially across fields.

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introduction (continued): space for images

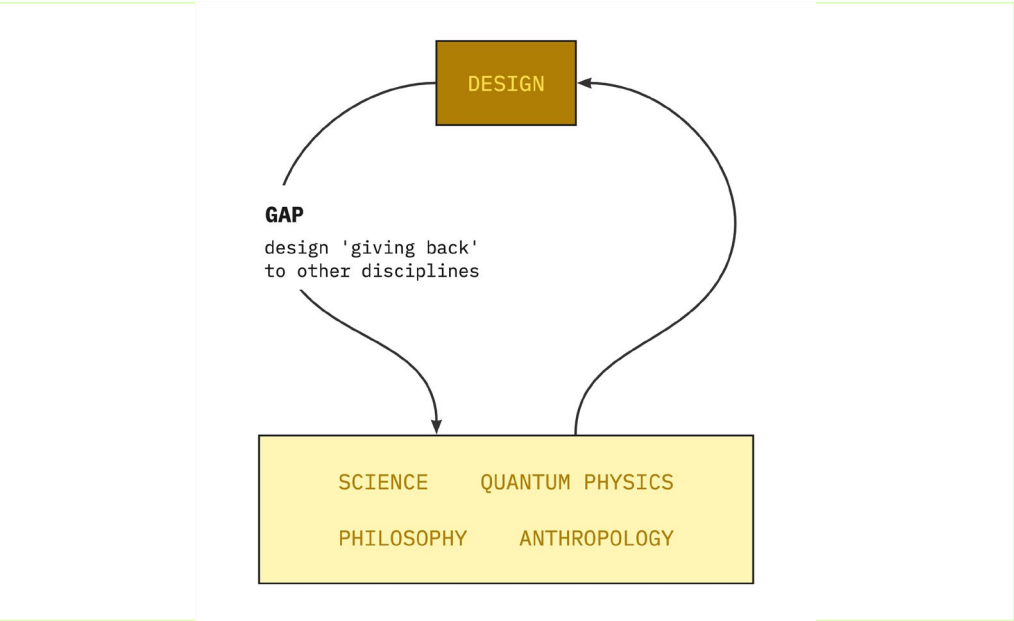


image / figure 1 Design 'giving back'



image / figure 2

Problem Definition

What problem do you want to solve in the context described in the introduction, and within the available time frame of 100 working days? (= Master Graduation Project of 30 EC). What opportunities do you see to create added value for the described stakeholders? Substantiate your choice.
(max 200 words)

The ‘problem’ is a gap in design (research). This project’s call to action is twofold:

First, there is a gap in addressing and avoiding the issue of design research (e.g., MTHD) being extractive of other disciplines and not ‘giving back’: We need to engage in different ways. Second, it’s a prototyping of stepping out of a unilateral use of concepts in language. It asks: What if we use material knowledge to activate a different kind of thinking?

The project looks into how philosophy is needed in MTHD discourse. The project will engage with this issue by asking how we might engage directly and in material, non-logocentric ways.

I will use philosopher and physicist Karen Barad as an example, since they are increasingly relevant within the field of MTHD. The project will look into addressing the gap by using Barad’s mechanism of putting X through a body of Y, e.g., quantum physics through design and vice versa. I will also aim to produce an experiential outcome as an alternative to logocentric reporting of research (i.e. something you can listen to; adopt in your home; or other ‘different’ way to experience it).

Assignment

This is the most important part of the project brief because it will give a clear direction of what you are heading for. Formulate an assignment to yourself regarding what you expect to deliver as result at the end of your project. (1 sentence)
As you graduate as an industrial design engineer, your assignment will start with a verb (Design/Investigate/Validate/Create), and you may use the green text format:

Co-design provotypes and conversation pieces to enter dialogue with philosophy and science in a designerly, material way - using philosopher and physicist Karen Barad’s theory - to bring the knolwedge back to inform design to occupy a gap bewteen theory and practice in More-than-Human design, for designers and design as a

Then explain your project approach to carrying out your graduation project and what research and design methods you plan to use to generate your design solution (max 150 words)

The project will start with a literature review that looks into: provotyping (general and specific to this case), Baradian design methods and theory, other MTHD cases, the materializing of knowledge, and similar. An overarching theme is MTHD in every aspect of my research.

I will thereafter engage in (brief) qualitative research work, including interviews, with faculty members from TPM and QuTech. In turn, I will start rapid provotyping, creating a lot of different artefacts (similar to ITD) in response to and alongside my initial research. Next, I will be taking learnings from my conversations to show designers to test what types of meaning my provotypes will materially be able to carry. This will likely be an iterative process, convening with both faculty members, other students, and people outside the university.

In general, I will work with research-through-design, sensitizing activities, critical fabulations, co-creative sessions, and more.

Project planning and key moments

To make visible how you plan to spend your time, you must make a planning for the full project. You are advised to use a Gantt chart format to show the different phases of your project, deliverables you have in mind, meetings and in-between deadlines. Keep in mind that all activities should fit within the given run time of 100 working days. Your planning should include a **kick-off meeting, mid-term evaluation meeting, green light meeting and graduation ceremony**. Please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any (for instance because of holidays or parallel course activities).

Make sure to attach the full plan to this project brief.
The four key moment dates must be filled in below

Kick off meeting

25 Aug 2025

Mid-term evaluation

23 Oct 2025

Green light meeting

15 Jan 2026

Graduation ceremony

19 Feb 2026

In exceptional cases (part of) the Graduation Project may need to be scheduled part-time. Indicate here if such applies to your project

Part of project scheduled part-time	☐
For how many project weeks	24
Number of project days per week	4

Comments:

First four project weeks will consist of five project days, thereafter four project days per week.

Motivation and personal ambitions

Explain why you wish to start this project, what competencies you want to prove or develop (e.g. competencies acquired in your MSc programme, electives, extra-curricular activities or other).

Optionally, describe whether you have some personal learning ambitions which you explicitly want to address in this project, on top of the learning objectives of the Graduation Project itself. You might think of e.g. acquiring in depth knowledge on a specific subject, broadening your competencies or experimenting with a specific tool or methodology. Personal learning ambitions are limited to a maximum number of five.
(200 words max)

I wish to start this project as it inspires me and will push me beyond my current abilities, challenge me to improve methods I am familiar with (provotyping, IoT, critical fabulations, to mention a few), allowing me to grow as a design-researcher and explore new ways of creating.

Personal Learning Ambitions:

(1) I am very excited about the theory this project will concern itself with, and I look forward to get the chance to get (more) familiar with authors such as Barad.

(2) I had difficulties correctly framing the project, so I wish to improve my ability to see and state an assignment clearly for what it is and its opportunities.

(3) I find myself limiting my own designerly abilities at times, being overly self-critical, so I want to be better at enabling my subconscious creativity and letting go of control.

(4) I am very excited to work with supervisors. I want to take in as much feedback as possible, while still respecting my own preferences and directions for the project.

(5) As part of my personal and professional growth, I believe it extremely important to my future to become a humble (and ‘idiotic’) designer!

