UNIVERSITY OF
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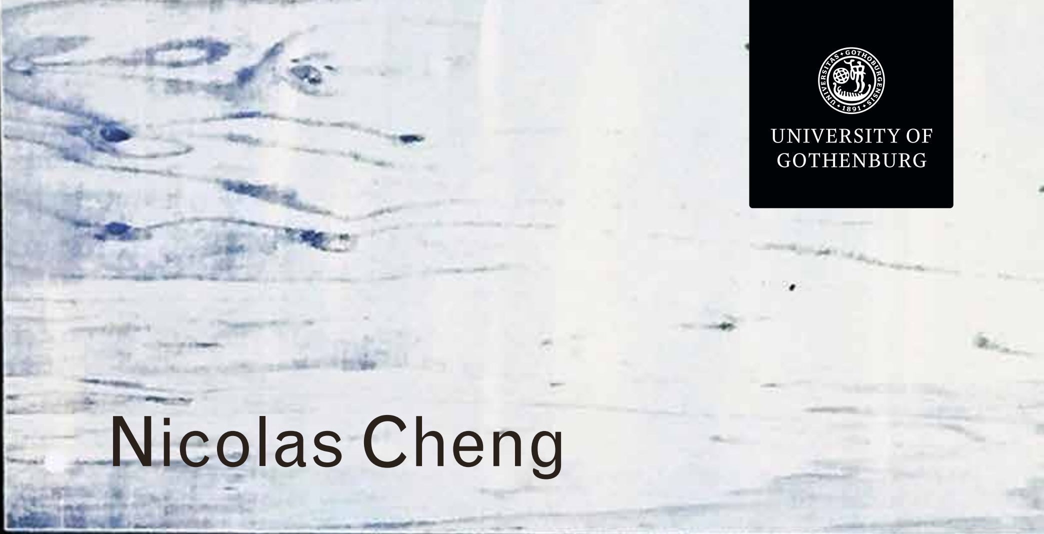
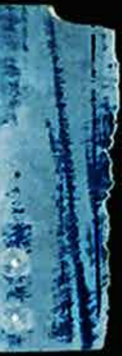
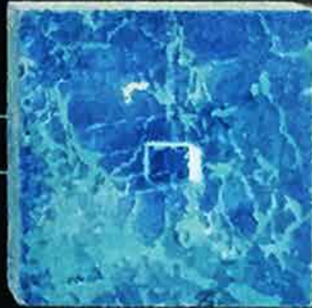
# World Wide Workshop : The Craft of Noticing

Nicolas Cheng



World

Nicolas Cheng

Wide

Workshop

:

The Craft of Noticing

Thesis for the degree of Doctor of Philosophy in
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# Abstract

TITLE: *World Wide Workshop: The Craft of Noticing*

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In my research, I consider craft as a discipline that is extremely elastic in terms of propositions and positions. Today craft exists in a highly dynamic space — what I will refer to as the World Wide Workshop — and is essential for noticing, caring, mending and negotiating the complex relationships that individuals and communities have with their sociopolitical, economic and natural environment. By moving away from the self-reliance implied by traditional studio-based craft practice, I use situated making and situated learning together with and in response to others, as methods that enable me to pay attention and respond to my surroundings, and to observe connections and entanglements offered by craft — what I will refer to as a craft of noticing. This thesis considers craft's role and potential in a world that is interconnected, globalised, and disrupted by human-caused phenomena.

The research focuses, firstly, on understanding how craft can be both a connector and a method for noticing, and for problematising complex global production and economic issues in today's postindustrial society. I approach craft as both a physical but also a virtual entity and explore where and how craft-based disciplines are learned, passed on, practised, and shared. Secondly, I look for ways craft can play a strategic role in revealing hidden histories and behaviours. In the process, I have observed how the awareness of entanglement in a complex world system, where it is no longer possible to think in terms of opposites or dichotomies, challenges an anthropocentric worldview and decentralises the human in our relationships to nature and to material resources.

Through my own methodological propositions and personal reflections on making within the realms of contemporary craft and jewellery, the thesis aims to build from the craft of *noticing* (Tsing 2015) to propose actions of *response-ability* (Haraway 2016) in the service of a praxis of care and resurgence in a time of environmental crisis. My practice questions our roles and response-abilities as makers in an entangled, damaged world and attempts to move away from a linear extract-produce-discard model to a more circular approach (Tsing 2005, 2015; Haraway 2016), thus testing the possibilities offered by a harvest-care-remediate model.

Below is a list of both individual and collaborative projects from my artistic practice that are discussed in the thesis.

*Terroir* (2015) — Individual work, exhibited at: The Lloyd Hotel & Cultural Embassy in Amsterdam (NL), duo exhibition, Terroir, 2015.

*From Landscape to Timescape* (2016) — Individual work, exhibited at: Easy!upstream Contemporary Art Space, Munich (DE), group exhibition — (IM)PRINT, 2016.

*From Landscape to Timescape: The Floor* (2017) — Individual work, exhibited at: Konsthantverkarna, Stockholm (SE), duo exhibition — Friction, Resonance, 2017.

*The Doorstopper* (2017–18) — Individual work, exhibited at: Konsthantverkarna, Stockholm (SE), duo exhibition — Friction, Resonance, 2017; RIAN Design Museum, Falkenberg (SE), solo exhibition, 2019.

*Filament of Surplus* (2017–18) — Individual work, exhibited at: RIAN Design Museum, Falkenberg (SE), solo exhibition, 2019.

*Gold Rush* (2016–18) — Collaboration work part of *Conversation Piece*, exhibited at: Stedelijk Museum 's-Hertogenbosch (NL), group exhibition — CULT, 2016; Maurer Zilioli Contemporary Arts in Munich (DE), duo exhibition — Gold Rush, 2017; Konsthantverkarna, Stockholm (SE), duo exhibition — Friction, Resonance, 2017; ALCOVA, Milan Design Week (IT), group exhibition — Device People, 2018; Kunstnerforbundet, Oslo (NO), group exhibition — Everyone Says Hello, curated by Lars Sture, 2019; Pinakothek der Moderne, Die Neue Sammlung — Design Museum (DE), group exhibition — Schmuckismus, curated by Karen Pontoppidan, 2019.

*Craft Remediation* (2018–19) — Individual work, exhibited at: Barklund & Co., Stockholm (SE), solo exhibition — Craft Remediation, 2019; RIAN Design Museum, Falkenberg (SE), solo exhibition, 2019.

## Table of Contents


Introduction

11 Research Context
12 Aims, Methods, and Research Questions
16 Thesis Structure: Chapters, Key Concepts, Themes, Projects

Chapter One Unfamiliar Familiar

29 Looking Back to *Chinoiseries*: Background and Research Interests
33 Craft Realities in Contemporary China
35 Entering the Workshop of the World — Between Flattery, Imitation and Exoticism: Chinoiserie as Reproduction of the Self from the Reflections of the Other
37 Stimulus Diffusion — Unfamiliar Familiar
39 Additive Method of Remaking
40 Subtractive Method of Unmaking
43 *From Landscape to Timescape — The Floor*
49 The Necessity of Unlearning One's Learning
54 Situated Learning, Situated Making
58 Diffractive Methodology
62 Summary and Introduction to Chapter Two

Chapter Two Craft as Facilitator: Creative Economy

69 *Terroir*
76 Google Earth and the Local, Self-Organised Network
79 Craft as Connector
82 Do It with Others
83 Crafting Neighbourhoods — *Made in Şişhane*
85 Re-Crafting Neighbourhoods: the case studies of Theaster Gates's practice in the South Side of Chicago and Design Lab Skärholmen
91 The Reemergence of Craft in the Digital Age
94 Craft Dissolving — Craft Becoming
96 The Van der Kelen-Logelain Institute, Brussels
100 *Slöjd* Education in the Nineteenth Century
102 Fredrik Ingemansson's *Friday Techniques*
105 Barry X Ball's *Masterpieces*
106 Morehshin Allahyari's *Material Speculations: ISIS*
108 Summary and Introduction to Chapter Three

Chapter Three Maintaining and Caring — Making the Invisible Visible
115 The Horizontal
118 Scraping the Surface
119 Whose Labour, Whose Craft?
124 Theaster Gates's Horizontal Surface
126 Cleaning Chores: From the Manifesto for Maintenance Art 1969! to the Staff at Casco — Office for Art, Design and Theory
128 Praxis of Care: Ursula K. Le Guin's Metaphor of the Carrier Bag
130 Don't Steal the *Kil*: The Doorstopper
137 What is Discarded When Something is Made?
140 Summary and Introduction to Chapter Four

Chapter Four Response-able for a Sustainable Future
147 Bound to the Ground — From Anthropocene to Chthulucene
151 Crafting as a Way of Connecting and Playing String Figures
154 Domestic and Urban Mining — *Gold Rush*
165 *Filament of Surplus*
168 Waste Matter
174 *Craft Remediation*
179 Local Matter — Vinterviken
182 Remediation and Making Process
184 Caring for Waste Matter — Extended to the Community
187 Conclusion of Chapter Four

Conclusion
195 Concluding Discussion
197 On the Impossibility of Knowing: Reflection on the Limitations of the Research Approach in Craft
200 Craft Contribution to Present and Future Communities of Practice
202 Suggestion for Further Research

205 Svensk sammanfattning

222 Acknowledgements
223 References
226 Image Credits

# Introduction

## Research Context

My artistic practice focuses on craft and material research; it is informed by the subject of jewellery but is not limited to it. I aspire to an openness and cross-pollination between disciplines and an elastic attitude as a maker informed by my interdisciplinary background which spans interior architecture, product design, craft and jewellery. I am interested in boundary crossing, in merging different knowledge, skills, and tools. This attitude has affected the way I understand craft, moving away from the self-reliance implied by traditional studio-based craft practice, and towards an understanding of craft as a discipline that in itself is extremely elastic in terms of propositions and positions: a craft that is always in *flux*[1] and in a *supplemental*[2] position. The same qualities (elasticity, adaptability, fluidity) apply to what the space of craft — where and how craft is learned, produced, made, known, discussed, passed on — may look like today.

As part of my research, I set out to understand how the postindustrial context[3] affects my practice as a craft and jewellery artist. I am also interested in the ways in which craft-based disciplines are practised and disseminated today. How is the ideology, meaning, and potential of craft discussed in a postindustrial context? When referring to a postindustrial context, I take into account in particular questions raised by the impact of digital technologies on the ways we make, communicate, share, and produce knowledge. I also consider the postindustrial landscape (e.g., production sites, brownfields) where I situate parts of my research, such as in the

projects *Doorstopper* (2017–2018), *Filament of Surplus* (2017–2018), *Gold Rush* (2016–18) and *Craft Remediation* (2018–19).

The other key context for this research is that of the *Anthropocene*,[4] a notion I will expand on significantly in Chapter Four—titled *Response-able for a Sustainable Future*—by adopting scholar Donna Haraway's use of the *Chthulucene* as an alternative, more inclusive term than the Anthropocene which considers how human activities, since the advent of the Industrial Revolution, have fundamentally impacted our Earth's ecosystems and species. From soil and water pollution to deforestation and overconsumption, these human-caused phenomena together characterise the epoch of the Anthropocene. They are the result of a progressive confluence of production and consumption, driven by technology, economics, and human desire. Within this context it has become impossible to take for granted natural resources, materials, mechanisms of production, and the environment as a whole. This affects craft practitioners and makers, and has necessitated a rethinking of practices—an unlearning of privileges[5] and inherited behaviours that are part of an anthropocentric worldview. The propositions discussed in this thesis emerge from an acute awareness of the impact of postindustrial society and of modern digital and communication technologies on craft-based disciplines, and a sense of urgency and response-ability regarding the challenges posed by the Anthropocene.

## Aims, Methods, and Research Questions

In my research as a craft practitioner I work with a range of materials, techniques, and traditions, adopting the making processes, methods, and ways of thinking that are the foundation of craft-based disciplines such as jewellery and metalsmithing but also trompe l'oeil decorative painting and embroidery. At the same time, I have explored anthropological methods as a way to reveal what is often hidden or taken for granted in material production. The qualitative methods adopted in this process involve case study analyses, record keeping, semi-structured interviews with key practitioners and representatives of institutions, and participatory observation. But it is mainly through making and by learning actual skills in an unfamiliar workshop context that I am able to become an active participant in dialogue with others.

The projects discussed in this thesis rely on fieldwork practice with reference to the work of anthropologist Anna L. Tsing.[6] Essential to my situated learning and situated making has been my hands-on experience in different contexts (from workshop spaces and sites of production to postindustrial landscapes), often via self-organised residencies or field trips away from the familiarity of my own studio. In these situations, I am not merely an observer working with others; I come to embody the craft knowledge of a specific context. I render myself more vulnerable if I immerse myself in a situation or context that I am not familiar with, and I am most acutely aware of my surroundings when I respond to them through making, and allow that making to be, in turn, influenced by factors beyond my control. In dialogue with other actors, my guard is down and I can open myself to an understanding of the agency of others. Staying within the comfort of my own studio behaviours and routines would not permit this. Thus, I have begun to understand that things — starting from the tools and materials of production that I encounter in my artistic practice — are not just resources at my disposal to be used, or raw materials that I can easily claim. Things are entangled in both matter and meaning, subject and object, and things derive their meaning, materialisation, and physical characteristics, co-enacted by both human and nonhuman agencies, continuously across time and place.

An example of this type of investigation is my project *The Doorstopper* (2017–18), which I discuss in Chapter Three: *Maintaining and Caring — Making the Invisible Visible*. In this project, I consider a mundane object, a doorstop, as an actor with agency, known for its ability to misbehave or become misplaced. I started to pay attention to this object during self-organised residencies and field trips to production sites, workshops, brownfields, and institutions such as the Gallery of Victoria in Melbourne, Australia. Focusing on the doorstop, I began to understand its daily relationship with other objects, spaces, and actors, shedding light on the mechanics of labour productivity in institutional contexts.

In my research, I consider the possibilities offered by a rhizomatic[7] approach to craft in order to understand my practice and take responsibility for it in a larger world system where the material production and consumption of everyday objects takes place. My practice is nonlinear: through collaboration, situated learning and making, and

becoming better able to respond to encounters or specific situations, I travel along unexpected segments of a rhizome and learn and know together with others. A rhizomatic approach focuses on engagement *within* the world as a mode of embracing and diffracting,[8] rather than being *about* the world, and it encompasses different situations in which materials, objects, people, histories, and their places are interconnected.

This way of knowing requires multiple responses from different perspectives. From my point of view, there is a necessity for craft practitioners to reassess their materials, processes, and actions—particularly in today's information and internet age, where resources seem unlimited and everything is just one click away. Because resources are indeed limited, we must be sensitive to inherited histories, uncovering and making room for voices, human and otherwise, that are too often overlooked by an anthropocentric worldview. Noticing and fieldwork practice allow me to observe invisible connections, to understand the vulnerability of others and by extension my own vulnerabilities. This in turn presents me with the possibility of becoming more able to respond to others, to understand and possibly challenge power structures and go beyond an unsustainable worldview. In short, noticing and fieldwork practice are essential if I want to activate recuperation and resurgence in the time-space of the Anthropocene. They are also essential to what I discuss in terms of a praxis of care in the final project of this research, *Craft Remediation* (2018–19).

The act of *noticing*, intended here in terms of the techniques of observing an entangled world, as discussed by Tsing,[9] is an important step towards revealing hidden effort, the invisible labour of maintaining and caring that sustains everyday life—the unsung histories, beings, and things that lie behind systems of making and production. I understand Tsing's invitation to noticing, especially through my method of fieldwork practice, as necessary in order to listen to a world in a state of ruination. Noticing is not merely a cognitive act; it requires an ability to relate and respond to multiple others. To practise the art of noticing is to pay attention to the unexpected vulnerability of entities, objects, and disciplines in a disrupted world, which are interconnected through complex visible and invisible relationships. Tsing points out that: for anthropologists, the challenge is noticing that there are other organisms that are key parts of our lives, and they don't always behave like resources.[10]

But what needs to be done, once we start to notice? Motivated by the urgency for actions of response-ability, craft can inspire a praxis of care and resurgence at a time of environmental disruption. I propose a *World Wide Workshop* where this can happen: a place for *response-ability*—the ability to respond. My notion of a World Wide Workshop is a place of ever-changing boundaries and connections, both a physical space and an elastic reality that can be expanded or shrunk through the creation and activation of networks of production, education, knowledge sharing, making, and exchanging. In building this concept, I draw on the idea of the World Wide Web (abbreviated WWW or simply *the Web*), which consists of information that travels across the virtual space of the internet, and which we access through computer devices, web pages, and portable technology. I intend the World Wide Workshop to function as an interconnected space that can be adapted and reconfigured ad hoc, sometimes even reactivated. Through this space, the craftsperson moves as an *internaut:* a person who is flexible and able to respond to relentlessly changing contexts and challenges, particularly in the epoch of the Anthropocene.

In light of these observations, which are rooted in my research as a craft practitioner, the PhD addresses three main questions:

- What is exposed when we reconsider craft as a phenomenon that expands beyond the studio practice and is situated in an entangled sociopolitical and economic environment?

- How are the links between craft knowledge, creativity, and the hand renegotiated in the digital era, in today's postindustrial society?

- How can craft/jewellery practice—its making and thinking processes—not only be employed to problematise complex production and consumption issues, but also become an essential artistic practice in a process of recuperation and resurgence for a damaged environment?

The above questions guide my research and are explored through my physical projects, which are informed by the theoretical writings of Haraway and Tsing, and through the case studies of contemporary artists and makers.

## Thesis Structure: Chapters, Key Concepts, Themes, and Projects

In Chapter One, *Unfamiliar Familiar,* I discuss an essential thread running through my thesis: how the long-standing geopolitics of authorship, cultural identity, and mimicry are created and shaped in a system of exchange, and how the concept of otherness[11] is often encountered as an opposite in a dichotomous worldview, or with a subordinate connotation in a power relation. Whether it is the "other" exoticised by a dominant culture, or craft marginalised as the "other" at the time of the Industrial Revolution, or nature treated as "other" from an anthropocentric perspective, "otherness" is a loaded term that needs to be unpacked in order for me to position my research and practice in the context of a postindustrial society and in the space-time of the Anthropocene.

I thus look at how the concept of "otherness" has been shaped in the following contexts:

- Craft forms and traditions that reinforce the idea of the "other" in a dominant culture: I examine the term *chinoiserie* through the lens of craft in China, from the eighteenth century to the manufacture of consumer products today. The aim is to reveal how the tradition of reproducing the "self" from the reflection of the "other" is at play. How and why does something unfamiliar ultimately become familiar, and how have handicrafts been used to construct hierarchical systems of value, taste, style, and need?

- The emergence of craft as the "other" in the context of the Industrial Revolution: I look at how craft, as an ideologically charged concept, began in the mid-nineteenth century to stand in opposition to manufacturing, new technological developments, and the speed of industrial production.[12] The aim is to highlight what the environment of craft looks like in today's postindustrial society. This is necessary in order to understand how craft has become reconciled, even merged, with present production and manufacturing scenarios and digital technologies in a globalised world. This aspect will be discussed in more detail in Chapter Two.

By reflecting on two of my projects, *Chinoiseries* (2013) and *From Landscape to Timescape – The Floor* (2017), both discussed in detail in Chapter Two, I will point out how the notion of otherness poses the need for "unlearning one's learning".[13] In my craft practice, I look at how, for example, materials and artefacts originally from one region or culture are assimilated into another culture, so much so that they become familiar, even assuming that culture's identity (e.g., mahogany wood imported from North and South America was used for British eighteenth century furniture as a contrast to highlight the silver objects, to the point that mahogany became an icon of that nation's aesthetic identity).[14] What happens when we start to pay closer attention, question and start noticing things, materials, and behaviours that are ingrained in the everyday?

Craft becomes embedded in our daily interactions: we mediate the meaning of craft through direct contact so that it becomes part of our own histories and identities, from an Aran sweater[15] to Delft pottery.[16] These objects in turn mediate how we perceive and interpret the world, and what choices and decisions we make. Through these direct contacts and exchanges, something unfamiliar becomes ultimately familiar. When we start to question and unlearn the familiar, it becomes possible to notice how, for example, craft and its production has been used to shape certain ideas of nation and to construct hierarchical systems of value (e.g., "Made in China" has a very different flavour than "Made in Europe"). Such awareness is essential if craft practitioners are to understand their position of responsibility in a complex world system. *Noticing,*[17] intended in my thesis as a technique of observing an entangled world, is necessary in order to challenge social norms, structures, and habits that we have come to internalise and sustain. In my view, the act of noticing — through situated learning and making, and a praxis of responding to others in new, entangled contexts — allows for unspoken rules to be challenged. Hidden behaviours, histories, and practices are revealed and the invisible is observed so that new possibilities can be considered and developed.

My previous project *Chinoiseries* (2013) allowed me to explore both examples of "otherness" highlighted above. I briefly discuss what constitutes the environment of craft-based disciplines in contemporary China, a country historically associated with fine crafts, and today a fast growing economic, cultural, and technological

superpower, where such forms of craft heritage may soon dissolve. Furthermore, I look at how the term "chinoiserie" became understood and popularised in Europe throughout the eighteenth century, as a style imitating (as in appreciating) the artistic forms and traditions of China and East Asia, exoticising and idealising them in a way that is far removed from the original cultures. Chinoiserie becomes particularly interesting in the context of my project when we consider the types of imitations that drive the manufacture of consumer products in China today. By thinking of chinoiserie as a transnational hybrid, and examining the exchange of influences from country to country, I argue that these imitations and cheaply produced goods (consumer electronics, souvenirs, toys, counterfeits of various kinds) are a new kind of chinoiserie with inverted cultural and economic values.

Furthermore, I point out how foundational questions and ideas of my research can be traced back to *Chinoiseries* (2013). It is in this project that I started to reflect on the nature of the workshop as a space that can be adapted, expanded, and reconfigured ad hoc, sometimes even reactivated. In this respect, I see the workshop — starting from my own studio and workspace in Hägersten, Stockholm — as a space that is not clearly defined but integrated into larger networks of production, cooperation, and possible collaboration, all of which are facilitated by digital technologies and communication.

Having previously discussed how craft was typecast as the "other" at the time of the Industrial Revolution (a connotation that still persists today), in Chapter Two, *Craft as Facilitator: Creative Economy,* I examine the role and status of craft in today's socioeconomic landscape. I am less interested in what of craft's heritage and idealised history has been lost in the transition to a postindustrial society. Instead, the aim is to highlight the possibilities offered to craft practitioners and makers by modern digital technologies and the internet. The connections between craft and technology (e.g., digital fabrication and the makers' movement) show us craft as a connector and facilitator of relationships across different disciplinary boundaries, economic models, and production realities.

First, I discuss how craft-based disciplines have been passed on and practised historically, and consider whether and how the sense of communal practice and shared resources upheld by certain workshop systems can be applied today. With an awareness of and sense of urgency regarding contemporary socioeconomic and

environmental challenges, I suggest that some of these practices and teachings can support the sustainability of craft in the space-time of the Anthropocene. In particular, I discuss the transformation of dialogical learning in craft. The traditional workshop as a social space[18] in which people dealt with one another face-to-face differs from the dialectical relationship fostered by digital technology today, where interactions in both working and educational environments are often mediated via screens.

I discuss my research field trip to the Institut Supérieur de Peinture Décorative Van der Kelen-Logelain in Brussels. This private institute, founded by Alfred Van der Kelen in 1892, specialises in the art of trompe l'oeil, a painterly effect focused on the naturalistic replication of marble and wood grains. The aim of this field trip was to understand the dynamics of a private institution defined by traditional guild methods, and to analyse how embodied knowledge and craft expertise is passed on today in such institutions compared to how it has operated traditionally since the nineteenth century.

I then compare two main pedagogical case studies in Sweden: the *slöjd*[19] educational system found in Scandinavia, which was developed by Otto Salomon in the 1870s; and the *Friday Techniques*[20] project of Fredrik Ingemansson, a noted Swedish silversmith and former teacher at the CRAFT!/Ädellab — Jewellery and Corpus faculty at Konstfack. Both case studies, although more than a century apart, help to cast light on important aspects of craft education — how tacit knowledge is passed on in dialogical and dialectical situations, including new possibilities offered by digital technology. Craft has become dynamic, shifting from more traditional educational methods (e.g., developing individual skills or nonverbal tacit knowledge) to today's digital technologies and processes that open up dialectical methods for sharing cross-pollinated knowledge relevant to other areas of human society and behaviour.

In my craft practice, I question and confront accepted notions of skill and time: in this sense, the relationship between traditional forms of craft and digital technology is central to many contemporary craft projects. Digital fabrication methods, fast communication, and readily circulated tools and materials have collapsed distance barriers in global culture and fixed notions of skill and time. When the value systems that rely on these notions are challenged, new possibilities may emerge.

I see the workshop as both a physical space and an elastic reality that can be expanded, reconfigured, and activated through the creation of networks of production, education, research, and exchange. The craftsperson embodies "the line of flight" that Deleuze and Guattari saw as a means of escaping hierarchical powers, control, and structure.[21] This proposition allows craft practitioners to break dichotomies through rhizomatic thinking, thereby disseminating their ideas—producing differences, multiplicities, and making new connections. These forms of connectivity, flexibility, and transversal skills are indispensable to today's craft; they allow for multiple profiles and types of expertise (from maker to designer to entrepreneur to anthropologist) to be connected and collectively constitute the craftsperson's identity. In short, I propose to move away from the self-reliance implied by traditional studio-based individual craft practice, and to instead shift towards cooperation and cross-disciplinarity.

In order to pinpoint some of the key ideas illustrated in Chapter Two, I refer to the project *Terroir* (2015). Here I set out to explore the mechanisms of craft that lie behind global production, either distant or local, with the objective of expanding self-organised local networks. Through making, I blur the line between geographical nearness and farness, but also cultural distance, with the intention of evolving networks of ideas about place and cultural ownership. As part of the project *Terroir,* I travelled from my studio in Stockholm to the Netherland's TextielLab in Tilburg and the Lloyd Hotel & Cultural Embassy in Amsterdam. Throughout the project a key concept was the idea of craft being a connector—from the local network constituted by workshops in my neighbourhood of Hägersten, in Stockholm, to the global network of institutions and production facilities that I sought to collaborate with. This experience has led me to observe how the cultural heritage of a place in a postindustrial context can not only be preserved but also reinvigorated through the activation of a network of collaborative, craft-based entrepreneurial realities embedded in the urban as well as global fabric.

In Chapter Three, *Maintaining and Caring—Making the Invisible Visible,* I look at possibilities to reveal the invisible labour that lies behind systems of making, from everyday domestic activities like cleaning and maintaining to sourcing waste materials and industrial leftovers from postindustrial sites. I aim to connect threads that bring to the surface unsung practices, hidden histories,

and unnoticed labour through several examples and case studies that I discuss in this section. These examples show that the floor, the ground, or even a flat horizontal surface (as in the case of Theaster Gates and his father when they tarred roofs in Chicago, free of charge) can be a meaningful site of interaction, and they support me in developing and reflecting upon what, inspired by Tsing, I call "a craft of noticing" as a substantial method in my own practice.

After discussing these relevant case studies, I refer to my own practice. In the work *The Doorstopper* (2017–18) I consider this often-overlooked object in relation to the power relations and negotiations that occur daily among humans and nonhumans in an institutional setting or in different production sites. The doorstop is a powerful object precisely for its ability to misbehave — for its readiness to disappear or become misplaced, thus disrupting what is expected, causing humans to suddenly pay attention. When a disruption occurs, then it is possible to notice, to observe the invisible and to renegotiate human-nonhuman power relations. In this project, I start by referring to the realm that Nicolas Bourriaud describes as the *exformal*[22]: a liminal ground that I explore by literally staying close to the ground; the doorstop, as an actant and collaborator, which allows me to investigate mechanisms of inclusion and exclusion. Fashioning doorstops from an array of waste materials and industrial leftovers, or fabricating some in silver and similarly valuable materials, or hiding a GPS tracker inside the doorstop which connects to my cell phone and will sound an alarm if the doorstop is moved, I disseminate these objects back to their everyday contexts and allow them to be used, misused, interacted with and misplaced. When possible I retrieve them, noting the marks left on their surface by other actors, mapping out their movement through a given space, and, if they have been misplaced, trying to determine how and by whom.

By observing these doorstops in everyday situations, in both institutional and noninstitutional settings, I have begun to outline how unnoticed objects are powerful precisely because they are taken for granted. They help unearth histories and power structures that are typically overlooked. Furthermore, these particular objects — of which the doorstop is one example — help me to understand the concepts of agency and craft as a verb: craft that reveals what we would rather sweep under the carpet, or what would otherwise go

unnoticed. The doorstop as an object speaks to numerous concepts and questions that are essential to my research and work, the floor and the ground as both physical and metaphorical places for investigating hidden behaviours, societal norms and practising care. This potential is discussed in the final chapter of my thesis.

Until this point in my research, I have been building towards an understanding of how craft can be both a connector and a method for noticing the invisible, and for problematising complex global production and economic issues. In the process, I have observed how unlearning one's own privilege is essential, as is the awareness of entanglement in a complex world system whereby it is no longer possible to think in terms of opposites or dichotomies (e.g., human-nonhuman, craft-industry, object-subject, nature-culture). For the last part of my thesis, I build from the craft of noticing to propose actions of response-ability[23] in the service of a praxis of care and resurgence in a time of crisis. In my view, craft is a practice that is based on responsiveness, on the ability to respond (response-ability) to histories, to traditions, to urgent questions, to materials, to technology, to others — both human or nonhuman — that are interconnected, bound together, and entangled in the process and experience of making. By paying closer attention to making and to the stories that are both interconnected and revealed through it, craft practices can inspire a praxis of care, recuperation, and resurgence on a damaged planet. The question is how, and through what steps, this proposition can be activated.

In Chapter Four, *Response-able for a Sustainable Future,* I first consider Haraway's suggestion of "the Chthulucene" as a more complex, urgent, and inclusive term than the Anthropocene for describing the current space-time that we live in; I also consider her compelling discussion of the principle of *sympoiesis* (making together with) and of the need for "staying with the trouble of a damaged planet" and "making kin".[24] These discussions have deeply affected my thinking through making and how I understand craft — particularly as a verb rather than a noun. Although a controversial figure in some circles of scientific discourse, I find Haraway to be a thinker and storyteller who can vividly pose the critical social and political questions of our present: how to live well and die well together across species; the terrible space-time of the Anthropocene; learning to inherit a damaged world with particularly upsetting

histories that nonetheless belong to us. Her questions resonate deeply in art and feminist communities, and her thinking informs my craft-oriented discourse and practice. Haraway's manner of thinking and propositions provide a filter for looking back at the projects *Gold Rush* (2016-18) and *Filament of Surplus* (2017).

The work *Gold Rush* raises questions concerning electronic waste and conflict materials related to the ubiquity and built-in obsolescence of consumer electronics. As part of my collaborative practice *Conversation Piece,* the project represents a critical case study that not only posits ways of intending craft (and collaboration) as a *thinking technology* and *sympoietic* process, but also allows me to dig into the mud—literally and figuratively—looking for entangled scenarios for contemporary craft and jewellery that challenge the status quo (for instance, jewellery as a visible, glimmering façade versus industrial waste as the flipside of an extractive economy), spark a conversation, and raise urgent questions about the complex relationships between objects, materials (how they are sourced and by whom), resources, and people.

The work *Filament of Surplus* (2017) shares subject matter with *Gold Rush* (2016-18) and previous projects, both individual and collaborative. In this project I have been working together with specialised companies such as filament and pigment producers to create special filaments that can be used for 3-D printing. These filaments are composites of both industrial and domestic waste materials sourced from landfills, and they can be used in digital fabrication, for restoration, for repair (e.g., for printing a missing component), or just left in their unused state as future currency. Left unused, on display in a vitrine for example, the filaments are suspended, waiting to be activated: they suggest scenarios yet to be explored, and represent both a reminder and a possibility for restoration.

From discarded electronics to jewellery as an heirloom, meant to be passed on and to create social awareness, and from waste material to filaments for potential repair with the help of digital technology, I move to the final project discussed in my thesis, *Craft Remediation* (2018-19). The project is a time-based installation in a local cultural space in Stockholm and presents a hands-on permaculture approach for phytoremediation.[25] It aims to discuss how remediation and a praxis of care can be understood in a local community and social context, and what role craft may play in this

proposition through a more cyclical approach to materiality. The idea of caring and harvesting are explored not only in a human encounter, but are materialised and extended to nonhumans, particularly plants collected from the neighbourhood of Aspudden in Stockholm, and technology used to measure photosynthetic activity in plants.

The investigation started at Vinterviken[26] in Aspudden, a postindustrial site where Alfred Nobel revolutionised armaments and explosive manufacturing with the invention of dynamite. The side effects of industrial activities in Vinterviken since the 1860s have led to soil contamination in the area, with high levels of lead and arsenic. The project looks into this particular history and landscape, and proposes ways to harvest-care-remediate alternative materials from industrial leftovers and refuse in collaboration with plants. For this concluding project of my PhD I am not a nomad. I situate my making and research in the neighbourhoods surrounding my studio, and I involve the community (a local cultural gallery, shops, a potter, the neighbours who every year meet to sell and buy second-hand goods at the Aspudden 2 km flea market) through small acts of sharing and circulating, and mundane interventions.

Working on a small, neighbourhood scale, I have come to understand the possibilities of a craft-based praxis of care in terms of everyday perseverance and resilience. An example of this is the distribution to neighbourhood residents of plants in pots filled with previously contaminated Vinterviken soil. I acquired the plants at the 2 km flea market six months earlier, and tended to and cared for them over the course of five months. Each is capable of purifying the contaminated soil they grow in. By bringing the pots into the private homes of the neighbourhood, a collective praxis of care is suggested: the local community, together with the plants, participate in the process of purifying portions of redistributed polluted soil, thus providing my local community with the possibility of becoming *response-able*[27] across species.

I also reached another important realisation on a more personal level, particularly as I engaged in several months of imperfect, non-verbal dialogue with the plants involved in *Craft Remediation* (2018–19): I came to understand making as intrinsically connected to caring, and as a process of becoming *response-able,* which extends beyond material-based and technological processes. Here, making and crafting have been an ongoing process of harvesting,

tending to plants, carrying and transferring soil, gently transforming second-hand items that I collected at the 2 km flea market, connecting different realities in a local neighbourhood, and opening up a space for sharing stories. While there are objects that I made in the process, these were the result of material transformations that I never fully controlled. I understand this process as a *sympoietic* interaction between myself, plants, technological devices, objects charged with stories, the local community, places, other realities, and collaborators.

# Notes

1. Paul Greenhalgh (ed.), *The Persistence of Craft: The Applied Arts Today,* London: A & C Black Publishers Ltd., 2002, p. 1.
2. Glenn Adamson, *Thinking Through Craft,* London: Bloomsbury Academic, 2013, pp. 9–37. For more context, please see: Knut Astrup Bull & André Gali (eds.), *Documents on Contemporary Crafts – Material Perceptions,* Arnoldsche Art Publishers, no. 5, 2018, pp. 93–113.
3. For more context, please see Daniel Bell, *The Coming of Post-Industrial Society: A Venture in Social Forecasting,* reissue edition. New York: Basic Books, 1976, pp. 126–127; David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change,* Oxford: Blackwell Publishers, 1989, pp. 132–133; Richard Sennett, *The Craftsman,* New Haven: Yale University Press, 2008, pp. 22 and Saskia Sassen, *Cities in a World Economy (Sociology for a New Century),* Thousand Oaks, CA: SAGE Publications, fourth edition, 2012, pp. 127–137.
4. The word Anthropocene is derived from the Greek *anthrōpos* (a human being) and *kainos* (new). It was coined in 2000 by the Nobel Prize–winning atmospheric chemist Paul Crutzen. The term Anthropocene has been suggested as the next epoch (denoting the current geological age), and is viewed as the period in which human activity is the dominant influence on the climate and the environment. For more context, see Haraway, 2016. In her book *Staying with the Trouble: Making Kin in the Chthulucene,* Haraway discusses in depth her issues with, and criticism of, the term Anthropocene, and how Chthulucene might be better suited to an epoch of resurgence.
5. The proposition of "unlearning one's learning and unlearning one's privileges" was initially posed by feminist critic Gayatri Chakravorty Spivak. See, in particular: Sara Danius, Stefan Jonsson, and Gayatri Chakravorty Spivak, *Boundary 2,* vol. 20, no. 2 (Summer, 1993), Duke University Press, pp. 24–50.
6. Anna L. Tsing is a professor of anthropology who has developed several complex arguments around a narrative account of fieldwork practice. This narrative character is an important aspect of her books *The Mushroom at the End of the World* (2015) and *Friction* (2005), which are exemplary of how ethnographic accounts might develop arguments about the impact of globalisation. Her analysis can be helpful in understanding my fieldwork practice, especially when it comes to physical travel and working together with artisans on a local, regional, national, and even transnational scale. Tsing's narrative about marginalisation and interest in the marginal can also be transferred to the craft perspective in our global culture.
7. See Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia,* Minneapolis: University of Minnesota, 1987, p. 17.
8. See Rick Dolphijn and Iris van der Tuin, *New Materialism: Interviews & Cartographies,* Ann Arbor: University of Michigan, 2009. http://quod.lib.umich.edu/o/ohp/11515701.0001.001/1:4.3/--new-materialism-interviews-cartographies?rgn=div2;view=fulltext [Accessed: 2019-07-08].
9. Anna L. Tsing defines "the arts of noticing" as the techniques of observing an entangled world. See Tsing, *Friction: An Ethnography of Global Connection,* Princeton: Princeton University Press, 2005, p. 37. See also Tsing, *The Mushroom at the End of the World,* Princeton: Princeton University Press, 2015.
10. See Tsing "interviewed by Maija Lassila", *Suomen Antropologi* 42, no. 1 (spring 2017), p. 28.
11. Cultural theorist Edward Said, in *Orientalism* (1978), describes how representation of the "other" has been used to shape and profile Western identity in the past. His book gives us a tool to understand different dimensions of political powers that are at play in history. The original use of the term "other" in its original intention was applied to other humans rather than "othering" material. By othering, I refer to any action by which an individual or group through a history of trade, representation, and exchange becomes mentally classified into two hierarchical groups: them and us. Further reading: Edward Said, *Orientalism,* New York: Pantheon Books, 1978, pp. 1–7. See also Sara Ahmed, "This other and other others", *Economy and Society,* 31 (4), 2002, pp. 558–572 and Sara Ahmed, *Strange Encounters: Embodied Others in Post-Coloniality,* Routledge: London, 2000.
12. Glenn Adamson, *The Invention of Craft,* London: Bloomsbury Academic, 2013, p. 18.
13. See Spivak, Gayatri Chakravorty, *Boundary 2,* vol. 20, no. 2 (Summer, 1993), Duke University Press, pp. 24–50.
14. See: Jennifer L. Anderson, *Mahogany: The Costs of Luxury in Early America,* Cambridge, MA: Harvard University Press, 2012, pp. 18–32.
15. See Paola Antonelli, *Items: Is Fashion Modern?,* Museum of Modern Art, New York, 2017, p. 42.
16. See Christiaan Jörg, "Oriental Export Porcelain and Delftware in the Groninger Museum", in *Ceramics Crossed Overseas: Jingdezhen, Imari and Delft from the collection of the Groninger Museum,* exhibition catalogue in collaboration with the Groninger Museum, Kyushu Ceramic Museum, and Japan Airlines, 1999–2000, p. 10.
17. Noticing, a method that I develop with reference to scholar Anna L. Tsing's notion of the "art of noticing" (Tsing, 2015, p. 37).
18. See Richard Sennett, *The Craftsman,* New Haven: Yale University Press, 2008, pp. 51–61.
19. The word *sloyd* is a direct translation into English of the Swedish word *slöjd,* which means crafts, handicraft, or handiwork. It refers primarily to woodwork but also paper-folding and sewing, embroidery, knitting, and crocheting.
20. See *Friday Techniques* https://www.youtube.com/channel/UCvJnzCd-9r6NXyMH2MHxTMw [Accessed: 2019-07-08].
21. "Line of flight" designates an infinitesimal possibility of escape; it is the elusive moment when change happens, as it was bound to, when a threshold between two paradigms is crossed. The concept is also used to define a "rhizome" for deterritorialisation according to which lines change in nature and connect with other multiplicities. Gilles Deleuze and Félix Guattari in *A Thousand Plateaus: Capitalism and Schizophrenia.* Minneapolis: University of Minnesota, 1987, p. 17.
22. Nicolas Bourriaud, *The Exform,* New York: Verso, 2016, pp. 13–16.
23. See Haraway, *Staying with the Trouble,* in particular p. 31.

24. Donna Haraway, *Staying with the Trouble, Making Kin in the Chthulucene,* Durham and London: Duke University Press, 2016, p. 99.
25. "Phytoremediation" derives from the Ancient Greek *phyto,* meaning plant, and the Latin *remedium,* meaning to restore balance. Phytoremediation is a biological technique used to restore polluted water and soil environments to their natural state. It involves the use of living plants and their related microorganisms to remove contaminants from the environment or to degrade contaminants to a less toxic form.
26. Vinterviken was ranked in 2011 by the City of Stockholm as the ninth most polluted area in the city. https://www.dn.se/sthlm/vinterviken-kan-sparras-av-efter-larmet-om-farligt-bly/ [Accessed: 2019-07-08].
27. I use the term response-able, instead of responsible, with reference to Haraway. The word recalls both the capability of being held accountable, of taking responsibility, and also the capability of being able to take action, to respond. Further reading: Haraway, *Staying with the Trouble,* 2016, p. 34.

# Chapter One
# Unfamiliar Familiar

## Looking Back to *Chinoiseries*: Background and Research Interests

In this chapter, I consider how craft has been affected by massive economic growth and shifting societal values and norms in a globalised world. This is done largely by reflecting on two projects: *Chinoiseries*, which I carried out between 2012–13 before my PhD studies; and *From Landscape to Timescape*, developed between 2016–17 as part of my PhD. Ideas and methodological propositions discussed in this chapter will be further developed in Chapter Two: *Craft as Facilitator: Creative Economy*. In this chapter, my intention is to problematise a general category of what may be considered familiar, and to provide an understanding of how materials, objects, and craft traditions become familiar through a complex history of trade, exchange, imitation, and appropriation.

In 2012–13, when I relocated to Beijing, I was intrigued by cloisonné's cultural and economic history—it likely developed in the Middle East and spread to South Asia via Silk Road trade routes, eventually flourishing in China through the work and artistry of local masters.[28] What would this particular craft, an extremely complex form of enamelware, be able to tell me about China today? What histories would be revealed by following this lead?

During the eighteenth century, chinoiserie as a style was popularised in Europe, but not only there. We also find local expressions of it in India, Japan, and the Americas. The term refers to a specific European style of applied arts, which draws its inspiration from

and imitates the arts of Asia and Chinese-style motifs, landscapes, and plants. The European fascination with exotic materials like silk, porcelain, and lacquer, combined with a lack of accurate information on the great civilisations of Asia, gave rise to European artworks that reflect artistic curiosity and experimentation. They do not, however, reflect the real world of Asia, but rather European fantasies of those civilisations.[29] Thus, the attraction lay in the exoticism that the imagination of "the Orient" provided to European tastes — and the chinoiserie style was able to satisfy such tastes. As imitation, it even engaged a form of flattery, albeit inaccurate.

The project *Chinoiseries* (2013) represented an important turning point in my practice, as it allowed me to investigate the two cultures that I live in and move between: those of China and Europe (particularly the UK and Northern European countries). Growing up in Hong Kong, I experienced as a teenager the historical transition in 1997 from being a British colony to becoming a special administrative region of China. Yet, despite my Hong Kong heritage and upbringing, and living in-between these two dominant cultures, I had never visited Beijing or mainland China before undertaking *Chinoiseries* (2013). Travelling to my self-initiated residency and workshop at one of the last surviving cloisonné enamel factories in Beijing, I found myself in a country that felt foreign in many ways. I had to adapt to everything: the language, the culture, the rhythm of city life, and the work itself. Through this experience, of living and working in a kind of limbo, I began to reflect on questions of familiarity: how something — a behaviour, a tradition, an object or pattern — is assimilated into a culture through a history of exchange, flattery, idealisation, imitation, and even appropriation. How and when do things become accepted and ingrained as the norm — and thus taken for granted?

This context and working situation — travelling to specific, often unfamiliar places to do hands-on work at on-site, self-initiated residencies — eventually became a method of operation for most of the projects that I developed from this point onward. I began to self-identify as a nomadic practitioner. I am aware of the luxury of this position, having had access to funding that made it possible for me to physically travel to workshops, production sites, and laboratories both locally and globally in order to carry out my research and to situate my practice.

Regardless of my own familiarity with specific craft practices, their tools, techniques, and sets of skills, I approach craft as a way to understand our past, present, and future political and social realities. My wish is to share different kinds of expertise and ways of knowing in dialogue with others. A certain collaborative and peripatetic intention has always been present in my practice, and in more recent projects undertaken during my PhD I have begun to emphasise and consciously explore these tendencies. My individual and collaborative practices have been variously dependent on outside organisations, collaborators, institutions, and their respective environments, and I have often travelled many miles to work on site in specific facilities or workshops.[30]

This nomadic approach, actively seeking other collaborators and unfamiliar workspaces where I could situate my making, has allowed me to understand my own craft practice in relation to a larger world system: a practice that cannot be solely self-reliant and self-reflective but that depends on others, and that intersects with complex world histories. Looking back at my move to Beijing, I had to let go of what I knew — my expectations and processes. I learned that history and heritage, especially when it comes to craft, are not necessarily things that are preserved or maintained in contemporary China. There is little time for the slowness implied by certain forms of traditional craft, particularly cloisonné, in a country facing exceptional economic growth. Perhaps craft will be cherished and rediscovered in coming years, by future generations of Chinese,[31] but that was not my experience while working in the cloisonné workshop in 2012–13.

Working with cloisonné in one of the last surviving workshops of its kind in Beijing offered me multiple possibilities for confronting cultural identity. I have been deeply influenced by the craft and design histories, theories, and methodologies of Scandinavia, the

Netherlands, and Italy, all places where I have lived, studied, and worked. In Beijing, I was exposed to a different perception of craft than what I became used to in the somewhat insulated academic context where I took my Masters and was first exposed to craft discourse. Observing the workers that I met in Beijing — the enamellists, the craftspeople pulling the wire for the *cloisons*,[32] polishing the enamel layers by hand, raising the copper bodies — it became clear that craft in this context is a survival skill: it is what puts bread on the table.[33]

The *Chinoiseries* (2013) project started as an investigation into how craft as a context functions in contemporary China. For instance, how craft confronts the contradictions of a country that prioritises economic over cultural power. In China, as elsewhere, some forms of craft heritage and tradition are dissolving. In the case of cloisonné production, trained labourers imitate traditional motifs and patterns countless times in order to accommodate an export and tourist market for souvenirs and gifts. The craftsmanship is watered down and limited to mostly replicas, leaving little room for experimentation or for cultural content or significance.

The *Chinoiseries* (2013) project aimed to look back at a precarious heritage in order to better understand how the rhythm of craft navigates the fast-beating heart of contemporary China — a country that has historically been associated with the production of the finest expressions of both art and craftsmanship, but where these forms have been corroded starting with the Cultural Revolution[34] and may soon dissipate in the name of economic power and technological progress. In such a dynamic and transitional context, affected by pervasive economic, political, and social change, the question of what is the *space* of craft — its practice and transmission — became especially relevant to my research.

In order to demonstrate how the space of craft emerges in different ways across various disciplinary concerns and traditions of thought, I have looked at how craft knowledge can shift from individual to larger cultural perspectives, from the personal to the collective. Central to this inquiry is Theaster Gates' approach to "place making"[35] as a means of enabling craft to have an economic, political and artistic impact.

## Craft Realities in Contemporary China

Prior to relocating to Beijing, I mapped out the history of cloisonné, from its origins in the Byzantine period to the various hypotheses regarding how it reached China and became one of the most coveted art forms in Asia. The Silk Road introduced luxury goods to a large international market, creating a demand and also a market for imitations. It is interesting to note how cloisonné, according to British collector of oriental art Harry Mason Garner, transitioned from being a Middle Eastern craft to a global craft tradition across both Europe and Asia, all because of trade.[36] Today, cloisonné is practised mainly in China and Asia. In Europe, one of the last foundries associated with its large-scale production was that owned by Ferdinand Barbedienne in Paris, which ceased its activity in 1952.[37] Because of the complexity of the process, which requires skill, labour, and time, it has not been possible to mechanise cloisonné production.

Craft historian Tanya Harrod, in her essay *Placing Craft*, has asked the question: “When did the handmade — as a concept, a practice or an actual thing — become of interest, become something worth discussing?”[38] This question resonates with craft scholar Glenn Adamson’s argument that modern craft, as we understand it today in terms of an autonomous and ideologically charged subject, came to be in the mid-nineteenth century, at a time when it was made to stand in opposition to the Industrial Revolution. Craft, intended as skilful, quality-driven work, artisanship, handiwork, material knowledge, became separated from production, manufacture and technology. It became the “other”.[39]

Craft has thus become synonymous with many things, such as small-scale production, authenticity, authorship, slowness, self-reflexivity, self-production, and self-reliance. Even today, craft is seen as an antidote to a post-Fordist work environment as well as to a service-oriented, postindustrial society.[40] Craft is often seen as being in opposition to a fast-paced, mass-produced, alienated, progress-centred worldview. It is a slow practice, learned by trial and error, by making and finding out for oneself, and eventually it becomes mastered. Craft can be identified as a form of tacit knowledge, as an intuitive experience of knowing how to work with materials and tools. By reflecting on the place of craft in contemporary China, I started to consider the possibilities of craft dissolving, or more precisely being transformed, in a society that is undergoing massive economic, technological, and political change. The impact of digital technologies and tools of communication on craft are examined more closely in Chapter Two of this thesis.

Facilities such as the cloisonné workshop I worked in, one of the last of its kind, are expected to be eventually shut down. The work offers little potential for profit in contemporary China, save for the occasional collector or art commission, public building projects, or the tourist market. As a result, this craft heritage is being incrementally lost in the name of progress and speed, becoming a memory to be preserved by a few individuals. This is somewhat ironic given that China today is sometimes defined as the "workshop of the world"[41], an economic and cultural superpower that produces most of the world's consumer goods, partly thanks to workplace ethics that are anything but transparent.

In traditional Chinese painting, it was commonplace for an ambitious artist to work in the style of a master. The test of success was how convincing the homage was: if the copy was indistinguishable from the source, it was a good thing.[42] Similarly, today, in the craft workshops and factories of China, like the Beijing cloisonné factory, traditional motifs and patterns once designed by only the most skilled masters are copied over and over, unfailingly, by trained labourers. These crafted objects are mostly souvenirs made for export or the tourist trade.

In my cloisonné work, I use traditional techniques and natural materials to create a sense of illusion through a trompe l'oeil effect. Rather than being "honest" to these time-honoured techniques and

materials, I try to imitate the surface motifs and patterns of stones, particularly jade and marble from the region around Beijing, by imitating the original veined pattern of the stone. What has emerged is a dialogue between natural and artificial, between real and surreal, imitation and original—what is perceived as authentic to a given place or territory. The final object is comprised of a set of vessels with a cloisonné interior, detachable parts reproducing the patterns of select local stones, and a darkened stainless-steel outer shell. The stainless steel, with its industrial appearance, seems to swallow the finely decorated cloisonné centrepiece. I see my cloisonné work as a game of references between the world of the mass produced object and the labour intensive craftsmanship associated with cloisonné.

## Entering the Workshop of the World—Between Flattery, Imitation, and Exoticism: Chinoiserie as Reproduction of the Self from the Reflection of the Other

The particular choice of where and how to produce this body of work—which examines craft's value and place in contemporary China—became even more meaningful in light of China's standing as the new workshop of the world. Universally associated with mass production and cheap labour, the country is fast-growing and hyper-kinetic. Given that we are inundated by everyday consumer goods and products that are made in China, can we refer to these objects as chinoiseries? How do we interpret the meaning of imitation? What is authentic in relation to the handmade in this scenario? Has "authenticity" become an irrelevant term in the globalised world? The project *Chinoiseries* (2013) revealed an important common theme that runs throughout my research practice: the ongoing

investigation of how certain craft traditions and forms reinforce the concept of "otherness" when culture is made and transmitted through appropriation.

The term "chinoiserie" became understood and popularised in Europe throughout the eighteenth century, as a style imitating—as in appreciating—the artistic forms and traditions of China and East Asia, exoticising and idealising them in a way that is far from the original cultures. The term becomes particularly interesting in the context of my project, when we consider the types of imitation that drive the manufacture of consumer products in China today. By thinking of chinoiserie as a transnational hybrid, and examining the exchange of influences from country to country, I argue that these mass-produced goods (e.g. consumer electronics, souvenirs, toys, counterfeits of various kinds) are a new kind of chinoiserie with inverted cultural and economic values as part of a process of convergence.[43]

In the work *Chinoiseries* (2013), I reinterpreted this term as a recurrent idea rooted in the past hyper-fascination between European and East Asian cultures. The term chinoiserie was often used to refer to high-quality handicrafts. It was thought of as a mode of culture and an upper-class status symbol. From a craft perspective, if we look at those objects (porcelain teacups, silk textiles, furniture) from eighteenth-century Europe, with its extreme passion for everything associated with the "Far East", we see they were not meant to truly imitate Eastern styles and techniques but to adapt them to what was familiar to European tastes, styles, and needs. Cultural authenticity was never a concern; rather, it was about the expectation of the viewer.

In today's globalised world, mass-produced goods from the same Far East have quite a different reputation. They are often associated with a decrease in value, status, and quality. What is made in China now has a totally different value system than what was made there in past centuries. This can be said of several other countries and regions, from Bangladesh to India, where the production of goods caters to global needs and desires. With the rise of global trade, infrastructure development, and cultural exchange, objects, styles, motifs, forms, and functions have become familiar. It is particularly interesting to consider how eighteenth-century chinoiserie objects are able to register histories of their creation (motifs, material choices, techniques) and how objects have been used to shape certain national norms, social codes,

power relations, and hierarchical systems of value. Think of the types of goods manufactured in China today: typical consumer products including electronic devices, plastic Christmas trees, souvenirs, toys, and counterfeit luxury goods. Why do we not consider these newly manufactured products to be a new kind of chinoiserie? One of the purposes of the past chinoiserie was to profile Europe's identity and needs in a time of global trade—to accentuate the distinction between self and the other.[44] This function remains, whether we are looking at eighteenth-century chinoiserie or made-in-China products with a very different value system from that of the past.

My experience working in the cloisonné workshop in China confirmed that craft there is mostly regarded as a survival skill necessary for securing basic living conditions. It is a concept of craft that is rather different from the one I studied in Europe: as a discipline that seeks technical or methodological innovation, and as an anthropological tool for understanding social and cultural phenomena.

## Stimulus Diffusion—Unfamiliar Familiar

The experience of living and working between Chinese and European cultures has caused me to question notions of familiarity, particularly how things (materials, behaviours, customs, and objects) that are originally from one region or culture are assimilated into another culture through a history of trade, exchange, and circulation of goods and people—so much so that they become familiar or even begin to constitute the secondary culture's identity. Through this process, people, institutions, and nations reinvent meanings for things they own. From a craft point of view, I have become interested in how the material artefact can be shaped by ideas, patterns, symbols, and natural resources that are appropriated from another nation or dominant culture; moreover, I am searching for possibilities, through craft, to gain a deeper understanding of material culture today and to define my ethical sensibilities as a contemporary maker/artist. When discussing craft, I think of it as a tool that people use to negotiate their place within material, social, and historical contexts.[45]

American anthropologist Alfred Louis Kroeber describes culture as being not only independent but also a process that is analogous to and imitative of biological heredity. During the

seventeenth century, European factories made plain imitations of Chinese porcelain. Then they began to reinvent Chinese porcelain by adapting patterns, motifs, and shapes to suit European tastes, needs, and lifestyles. This imitation or adaptation process of fitting into a new context is what Kroeber calls "cultural diffusion"[46]; it is the phenomenon in which people, goods, and ideas move across the world due to migratory movements or trade relations. There are three different subthemes that are part of the concept of cultural diffusion: hierarchy, contagion, and stimulus diffusion. I will focus on stimulus diffusion in relation to craft, particularly in reference to my project *Chinoiseries* (2013). In 1940 Kroeber published an essay to further explain the notion of "stimulus diffusion".[47] According to Kroeber, through simple imitation, an original idea from another culture is changed by the adopters' culture in a manner that is specific to the new context. This means a cultural element is transmitted from one group of people to another, but it is uniquely altered or transformed by those who receive it.

One example of stimulus diffusion in relation to craft can be traced back to the circulation of the Chinese porcelain that inspired Dutch delftware, also known as Delft Blue. During the sixteenth century, Chinese porcelain began to become popular in Europe. Over the course of the next two centuries, as more people became fascinated by the material quality and beauty of porcelain, the demand increased. Unfortunately, due to high demand and the cost of long-distance importation from China, these objects became prohibitively expensive. Thus, European craftsmen had to adapt in order to both find materials and reinvent a new process for manufacturing porcelain to supply local demand. Until the beginning of the seventeenth century, the Dutch East India Company imported huge quantities of Chinese porcelain, revolutionising Europe's pottery industry, from kitchen utensils to decorative objects, all with blue-and-white glazes in the Chinese style. The Dutch city of Delft was the European centre for the manufacture of these Chinese imitation ceramic wares until the mid-eighteenth century. Trade relations not only gave new production insights but also shaped societal values. In the case of the Dutch East India Company, the porcelain goods that it imported impacted everyday activities and contributed to shaping the tastes of the time in the Netherlands.

## Additive Method of Remaking

Chinoiseries are valuable entry points for understanding what happens to everyday objects, artefacts, motifs, and materials when one culture encounters another. Many craft artists, especially in the contemporary ceramic field, have touched upon the subject of chinoiserie to investigate new possibilities for creative intervention and critical reflection on today's society. Ceramic artist Paul Scott has famously worked with a willow pattern[48] that involves the digital manipulation of "borrowed" vocabularies of pre-existing willow motifs, patterns, and images from European industrial ceramic archives and engraved book illustrations. The willow pattern Scott refers to in his work was first created around 1790 in England, and is linked to the first engraved and printed glaze transfers that were developed in pottery workshops, such as those in Stoke-on-Trent, for the application of ornamental motifs on mass-produced tableware.[49] These wares, also called transferwares, reproduced the appearance of hand-painted blue-and-white glazed porcelain imported from China, and catered to the taste of British society at the time. The willow motif that developed in the context of the Industrial Revolution in Britain represented a highly idealised image of Chinese culture: with this motif, British manufacturers tried to evoke an idyllic, far-away place that was vaguely Chinese. The storytelling and imagery connected to this motif went so far that a tragic narrative involving the star-crossed love story of a Chinese king's daughter was fabricated to further contextualise and cement the scenery of the willow tree motif in the British collective imagination of the time.[50]

Scott's work draws on the identity of a blue-and-white glazed porcelain which, while initially being based on an imitation of coveted Chinese wares, has become quintessentially British: familiar and connected to personal and collective memories. Drawing from British porcelain factory records and archives, he complicates the process of distilling patterns and images by using an additive method of adding or covering blue-and-white printed ceramic decals on top of each other on second-hand ceramic plates; in so doing, he succeeds in revealing an image that we would normally be unaware of and that we would overlook. He uses the familiarity associated with these types of motifs and blue-and-white transferwares to destabilise them, posing critical questions and offering social and political commentaries about artistic appropriation.

One example of how past and present histories can be connected within a single object, and can be revealed through craft thinking as a way to create potent narratives that critically comment on current social and political issues, is Scott's work *Cumbrian Blue(s): A Willow for Ai Weiwei* (2011). In this work, Scott purchased[51] a plate featuring a typical willow motif, and erased key elements, such as the two fictional Chinese characters (the Chinese King's daughter with her lover) that are usually depicted fleeing across the small bridge in order to fulfil a life together, against the will of the princess's father. In their place, Scott applied a decal depicting the silhouette of Chinese dissident artist Ai Weiwei. The plate was made in 2011, during the period when Ai Weiwei disappeared for eighty-one days while being held prisoner by Chinese authorities.[52] Furthermore, a motif of sunflower seeds — a clear reference to Ai Weiwei's work that coincidentally opened at Tate Modern at the time of his disappearance, famously produced in the ceramic workshops in Jingdezhen — is integrated among the overlapping patterns of the plate.

Scott seems to refer to the ambiguous identity of these types of plates: their appearance and expression is suspended between the original Chinese-made, finely hand-painted blue-and-white glazed porcelain that had such an impact on Western tastes, desires, and identity; and the British mass-produced transferwares made in an idealised chinoiserie style, which had become authentic in their own context. His work refers to the commemorative function that this type of object assumes in Western society — a long-standing tradition of using such platters to commemorate notable people and events — to both comment on and memorialise Ai Weiwei's circumstances. In Scott's work, the relationship between familiar and unfamiliar visual elements plays an essential role: by seamlessly integrating newly printed pictorial elements — such as Ai Weiwei's silhouette and the sunflower-seed motif — into the existing patterns typical of the willow-motif platters, he creates hybridised narratives that draw attention to current political and social issues.

## Subtractive Method of Unmaking

Caroline Slotte is a contemporary ceramic artist who often uses everyday objects in her work, particularly second-hand, chipped, and worn-down ceramic and porcelain platters that the artist then

manipulates and elevates through her craft. Several of her well-known works are based on the same mass-produced platters that were manufactured in Europe in the chinoiserie style, and Slotte is highly aware of the histories and intercultural aspects associated with this type of source material.[53] In comparison to Scott, her artistic intention is very different. In her making, she often involves personal memories of place. She chooses to focus on the "personal sphere" instead of on the cultural history of her materials,[54] interrogating the traces of use and the marks that are recorded on the platters' surfaces leaving room for personal associations and interpretations.

Slotte emphasises parts of the motifs printed on the platters' surfaces through a subtractive method by which other parts of the surface are removed using sandblasting and diamond-tipped drills. As a result, the final image becomes unfamiliar and ambiguous, open to interpretation, so that viewers are able to project their own narratives and form their own understanding of what they are seeing. Her technical approach and gestures operate on the ceramic surface in a way that is opposite to Scott's. Scott adds new, manipulated layers of decals to the original transfers that were already there on the fired surface, creating narratives that draw attention to historical aspects of production or current political and social issues; Slotte erases details and layers of motifs in order to open up the potential for personal memories and new, subjective understandings.

At the same time, Slotte is aware of the historical and socio-cultural implications inherent in her ready-made materials of choice. In her work *Rose Border Multiple* (2008–09), for example, her starting point is a Maisema (Finnish for "landscape") dinner service, a popular tableware series in Finland, manufactured by Arabia, a Finnish company famous for its ceramic production from 1882 to 1975. Slotte points out:

> When you start to study an object such as this, you soon discover how intertwined our cultural history is. Firstly, it becomes clear that the landscape is a fictive composition bearing no relation to any existing Finnish landscape. The fact is that Arabia took the design from its Swedish parent company, Rörstrand, where exactly the same pattern had been used. The technique of transferring a copperplate print to ceramic goods was developed in Britain in the 1740s and was

> at its most popular in the nineteenth and twentieth centuries. [...] Rörstrand originally obtained the copperplates for its production from England, and Maisema is a direct adaptation of the popular English motif British Scenery. If we retrace the history of blue-and-white porcelain even further back in time, we end up in the Far East, with its ancient tradition of decorating porcelain objects with cobalt oxide.[55]

One service manufactured by Arabia condenses multiple cultural histories within it: from Asia, to Britain, to Finland, passing from Sweden, through an exchange of tools and material knowledge, and through a process of appreciation, copying, imitation, and imaginative adaptation and storytelling. Such objects have been made into familiar heirlooms and even into symbols of national identity.

Slotte continues:

> While these objects can nonetheless be said to have a Finnish connection, this is not a question of "authenticity" but simply a result of their physical presence over time. They have been a part of the Finnish cultural sphere so long that they have become national symbols. They have been pounded into the collective conscious until it would be wrong to claim that they were not part of our cultural history, the Finnish national character.[56]

Slotte and Scott represent two different positions working with similar material cultures and craft traditions. They also represent two different approaches to craft: while one embraces the cultural histories that are embedded in the material, using them to provide subtle social and political commentary, the other focuses on the poetic potential of material, its evocative power to foster personal memories, associations, and stories.

In my practice, through projects such as *Chinoiseries* (2013), *From Landscape to Timescape* (2016–17), and other works that I have been developing as part of my doctoral work, which I will discuss in the following chapters of my thesis, I look at craft as a way to reveal complex histories that are embedded in objects, gestures, materials, and processes. With reference to Tsing, I will call for a craft of noticing the complex, often invisible entanglements that bind us alongside multiple others, humans and otherwise, in a world that

is disrupted and to which we all need to respond and take responsibility. The craft of noticing, with particular reference to Tsing and Haraway, is a proposition that I will develop throughout this thesis, particularly in Chapters Three and Four.

It is important, in this sense, to think of craft as a series of actions that connects histories, enables us to observe, and sometimes reveals what has been wilfully hidden, or brushed under the carpet of history. The surface of things is the place to begin such an unpacking, so that these histories, behaviours, and entanglements may be acknowledged and/or challenged. In my work, recurring surface-treatment techniques such as trompe l'oeil, laser engraving, and erasing allow me to make, unmake and remake the familiar as a means of interrogating and unlearning them.

## *From Landscape to Timescape — The Floor*

The question of familiarity, how it is made and challenged, and more precisely the tension that exists between the familiar and the unfamiliar, is fundamental to a body of work I developed between 2016 and 2017: the project *From Landscape to Timescape* (2016), a series of ambiguous objects/pendants reminiscent of flint stones found in a fictional future excavation; and *From Landscape to Timescape — The Floor* (2017), a snap-together floor system/installation made from high-density foam laser-engraved with faux wood patterns that aim to seem at once familiar and exotic.

*From Landscape to Timescape — The Floor* (2017) entails working with what I define as fictional materialities: overlapping patterns of wood, stone, and abstract images collected from the internet, that are then laser engraved onto foam tiles to resemble a common or even familiar floor surface. The intention is to challenge the viewer's notions of material origin, sense of place, and what could be considered familiar or unfamiliar. I consider the floor to be a highly relevant medium for unlearning as well as embodying space,[57] in order to investigate the relationships between objects, space, and labour. I use the term "unlearn" here with a connotation of necessity: it is sometimes essential "to unlearn" as a means of gaining another perspective, to see and thoughtfully consider those things, patterns, habits that one would otherwise take for granted. The term is used with a similar connotation in a quotation by artist Olafur Eliasson:

> It is necessary to unlearn space in order to embody space. It is necessary to unlearn how we see in order to see with our bodies. It is necessary to unlearn knowledge of our body in three dimensions in order to recover the real dimensionality of our body. Let's dance space. Let's re-space our bodies. Let's celebrate the felt feeling of presence.[58]

The floor tile installation[59] is made out of high-density foam, normally used for model making, prototyping, and architectural modelling—thus for something that has not yet been realised, for a possible future scenario. Models and prototypes often imply a real or surreal narrative, and a creativity that is versatile, able to create endless versions. The model exists in the service of ideas being tested or realised; and models are often necessary in order to grasp phenomena or theories that are too abstract, too large to comprehend, too overwhelming, or impossible to experience in real human life. I think, for example, about models of the universe or of black holes, or models used to explain what it would be like if you happened to fall into a black hole. I also think about how knitting and crochet

—traditionally undervalued practices—have been the crafts that made it possible to model, and therefore prove, the existence of non-Euclidean geometry, as in the case of Latvian mathematician Daina Taimina and her crocheted physical model of hyperbolic space: a simple craft technique, crochet, applied to prove the existence of non-Euclidean geometry. This was disruptive and achieved significant scientific progress Taimina's craftwork resolved a mathematics problem that had stood for over a century, and later inspired the *Crochet Coral Reef* project [2005–present] created by Margaret Wertheim and Christine Wertheim of the Institute For Figuring.[60]

However, my floor tiles are models that speak of illusion, of assumptions and of the dissolving of distance and time, of places that cannot be easily placed, if at all; they are models of and for fictions. What seems like a familiar snap-together flooring system is a model made out of a material, a high-density foam, that will perish quickly as bodies interact with it. The floor has been activated in this sense, mostly in a Swedish context: at HDK in Gothenburg, during a presentation and seminar I held in connection with my PhD; and at the gallery Konsthantverkarna in Stockholm, where it was first exhibited publicly in April 2017, and where invited foot traffic damaged the material.

It was my intention for the floor tiles to be laid down by entrances. At Konsthantverkarna's gallery space and at HDK's lecture hall, in order to enter the space, the audience walked on the fragile surface of the foam floor, thus destroying or visibly changing the piece through their human movement. These particular settings invite visitor participation in order to create an act of destruction, stimulating perhaps a sense of guilt, or relief, which ultimately shifts the expectation that we usually associate with institutional space, particularly in the case of the university or the academy: that of stability. We expect the floor to be stable, resilient, a surface that would be strong enough to hold bodies and architecture. But what is revealed when the floor, an often-overlooked site and surface, misbehaves? Perhaps a behaviour, an action—such as that of entering a particular space in the case described above—suddenly becomes more noticeable or visible. Perhaps our expectations are confirmed or challenged.

Time after time, exposure after exposure, the half-destroyed faux wood pattern will be repaired for the next occasion, first by reapplying, by hand, a trompe l'oeil painted layer onto the damaged

surface, and then by re-engraving new, overlapping patterns with a laser. Within this process, the handmade (e.g. the trompe l'oeil painterly effect that I have learned through trial and error), the machine-made, and the digitally made (digitally sourcing and composing the faux-wood patterns, the laser-engraved surface, the cutting of the foam tiles) are all equally, labour-intensive processes and techniques that I use without hierarchy or sentimentality. All allude to hidden labour, care, and maintenance processes. When the floor is repaired and shown in a new context, the repair is invisible. The handmade blurs with the machine-made and the digitally made.

The laser-engraved patterns can be seen as illusions: at first glance they seem like familiar wood types; on closer inspection they reveal clashing wood patterns—from chipboard to briarwood to luxurious mahogany—overlapping on the surface of a single tile, across hierarchies of value. Other seemingly familiar patterns are in fact abstract images collected from the internet. Placed on the typically overlooked floor surface, the first impression they tend to give is that of some type of wood—albeit one that is slightly off, unfamiliar, perhaps vaguely exotic.

The laser burns the external foam layer, and I have noticed that different laser temperatures generate various vivid colourings that almost exactly evoke an array of luscious wood hues. The laser's temperature variations provide an effective illusion of nature's diverse palette. Furthermore, the heat released by the laser, which is so essen-

tial to the process, causes me to think of how heat is also essential to the growth of tropical woods such as mahogany. Associations such as these, which happen in the process of making, make me realise how everything is interconnected: some of the shades and patterns I have created with the laser have ended up replicating mahogany in a way that is surprisingly accurate — a fact that opened up further layers of complexity, entanglement, and storytelling in my work. Consider that mahogany was "discovered"[61] by one of Carl Linnaeus's[62] disciples, and ended up shaping Scandinavian tastes, fomenting a desire for luxury and a longing for the far away, for the exotic. Through trade, excessive deforestation, consumption and depletion of natural and human resources, mahogany became a recognisable, valued wood in North America as well as in Europe — one could say a familiar wood. And today it is considered endangered.[63]

By using the technique of trompe l'oeil, my intention is to challenge the conventions of originality and material values, as well as notions of origin and sense of place. By way of imitation, this craft creates illusory material patterns through the mimicry of material both far away and close by. The technique of trompe l'oeil is something that recurs throughout my practice; I often use this painterly, imitative technique, in combination with laser-engraving, as a way to conceptualise the complexity of cultural identity.

The interplay of familiar and unfamiliar, the tricks played by material illusion and trompe l'oeil effects and the reality or behaviour they reveal are essential to this work. Such intersections also occur in a series of works that I made previously and in parallel. These include the pendants and objects titled *From Landscape to Timescape*[64] (2016) and the shelves and tray pieces that were made with a similar technique combining both painterly and laser-engraved trompe l'oeil effects.

Under the title *From Landscape to Timescape* (2016), I refer to several bodies of works made during 2016–17 as part of my doctoral research. In all these works, I use a similar technique that I have developed, which combines a trompe l'oeil painterly effect and a laser-engraved type of trompe l'oeil. First I add a pattern by hand, using mineral pigments and imitating an array of stone and wood patterns. This is a technique I mastered through trial and error, helped by a research trip to the Van der Kelen Institute for decorative painting in Brussels (see Chapter Two of this thesis for reference

and for a detailed description of this field trip). Afterwards, I laser engrave—thereby removing parts of the painted layer—contrasting patterns onto the same surface. In a way, the surface is created both through an additive method (the trompe l'oeil painted layer) and a subtractive method (the laser engraved trompe l'oeil). The result is a hybrid: a clash of both familiar and fictive patterns, and a fictional materiality.

Works that have been realised with this technique, and that investigate similar subjects are the series of objects that make up *From From Landscape to Timescape* (2016), *From Landscape to Timescape—Silver Tray & String Shelves* (2017), and, as discussed here, *From Landscape to Timescape—The Floor* (2017). In all of these works, trompe l'oeil patterns of wood and stone from both near and far, local and exotic, inexpensive and luxurious, tend to blur the identity of materials and their origins, thus blurring the notion of geographic distance

and aesthetic value. By investigating the conflation of near and far, familiar and unfamiliar, I raise the question of how our material and cultural perspectives respond to issues such as trade history, economic turmoil, misuse of resources, instability, and the relationships between global and local, material and virtual.

I refer to these works as "material frictions" as well as "material fictions". Through them I attempt to consider what lies on the material surface as much as through the layers of history. How does something — an object, material, or behaviour, at times with a conflict-ridden history of trade and exchange — become familiar? On the other hand, what do we perceive as unfamiliar, or as "other"? In this specific case, I am interested in how materials originally sourced from one region are assimilated into another culture, so much so that they become familiar or even taken for granted, becoming an integral part of that cultural identity. For instance, Mahogany wood imported from North and South America first came to the attention of Europeans with the beginning of colonisation, and through time became essential to their iconic eighteenth century furniture and household silver objects aesthetic.[65]

Thus do I start to define my proposition: that craft can problematise the origins of materials, the way they are sourced as well as the complex histories behind artefacts. As makers and consumers we are active participants in these histories, and we not only have to learn to accept them, but we should also become more responsible towards them. Further, craft-based artistic practice can challenge what is commonly taken for granted in order to find diverse ways of understanding our world. As part of my reflection on this body of work as well as craft-based practice in general, the necessity of unlearning one's learning,[66] in order to challenge social norms, social structures, and habits that we have come to internalise and sustain, is used and will be discussed in the next section.

## The Necessity of Unlearning One's Learning

Craft has come to play a profound role in defining ideology, placemaking, value systems, and taste, as well as cultural identity. Craft was often associated with high-quality handiwork (as in the cases of cloisonné and Chinese porcelain discussed earlier); through the making process it transformed and embodied histories, ideas, motifs,

and social codes into a material object. Craft is powerful in this sense because we mediate it through direct contact, from holding a bone china teacup with Indian chai tea to having dinner on a white damask tablecloth. These objects mediate how we perceive and interpret the world, and what choices and decisions we make. Through these directed contacts and exchanges, something unfamiliar becomes ultimately familiar. Value systems are created. Different definitions of the everyday are shaped. Craft can manipulate our physical world through the objects we interact with in our daily routine.

For me, craft as a medium, through the making and thinking processes that are at its base, has the potential to problematise and illustrate a material's origins. This includes the way methods are sourced as well as the complex histories behind objects and materials. Craft is a useful tool to reveal hidden histories and adaptation processes. It helps us to see through what we thought we knew—to find a new way of understanding our world—by enabling us to observe how things are entangled. I have worked, for example in the project *From Landscape to Timescape*, with the idea of creating "fictional materialities" to challenge notions of origin, material value, and sense of place; and to eschew a view based on dichotomies such as natural/artificial, real/illusionary, and familiar/unfamiliar. The intention was to destabilise easy categorisations and to reassess what we consider to be "other"—whether it be nature, a culture, materials, or the unfamiliar.

In this section, I will consider the relationship between fact and fiction, and discuss the possibilities that fiction in particular may open up for my work. Furthermore, I will discuss the importance of unlearning one's learning and how fiction and storytelling may be important methods.

Haraway, in her work *Primate Visions* (1989), discusses the similarities between fact and fiction. Western culture and language have traditionally set the two in opposition, but Haraway explains that the affinities among them run deep.[67] At first she points out how "fact is the thing done"[68], something that traditionally, especially in North America, is accessed through privileged ways of knowing: through direct experience, testimony, or interrogation. From this traditional and privileged viewpoint "a reliable understanding of the world can be constructed".[69] Fiction, Haraway continues, can be thought of as a constructed, derivative vision of the world and of experience—often a "better" version. But Haraway also says that

fiction, just like fact, can be true: "Known to be true by an appeal to nature, [...] original truths are revealed in good fiction."[70] It is a narrative process in which facts and truths are formulated as unfinished features in an attempt to get something new to emerge — something we do not yet take as true, but might in the future. Haraway discusses scientific practice as storytelling. She sees primatology as a science composed of stories; she talks about stories as being: "always a complex production with many tellers and hearers, not all of them audible or visible. Storytelling is a serious concept, but one happily without the power to claim unique or closed readings."[71] Haraway suggests science fiction as a possible tool. Science fiction is involved in what Haraway refers to as SF: science fiction, speculative fabulation, speculative feminism, speculative fantasy, *soin de ficelle,* string figures, so far.[72] Science fiction, storytelling, speculative fabulation, etc. all point to open possibilities, multiple sensibilities, and not one but many truths. It is not about myths but about stories, some of which may have been unheard for too long. The question for me is: How can we make this shift from one omniscient truth to many interconnected truths? How can we learn to listen closely?

Unlearning can be an essential tool for questioning and collectively reassessing ingrained habits and behaviours, and thus for understanding the complexity of many entangled histories and stories. With reference to Gayatri Chakravorty Spivak, who first coined the phrase "unlearn one's learning", artist Annette Krauss discusses how rarely we question social norms, social structures, and habits that we have come to internalise, own, and sustain. The project documentation for *Case Study #2: Site for Unlearning*, produced as part of Krauss's collaboration with Casco — Centre for Contemporary Art in Rotterdam, reads:

> Krauss deploys "unlearning" as a tool to collectively reflect on our (unconsciously developed) habits, so that we can adapt our ways of behaving and thinking towards a more common practice. A key question for the artist is how to "unlearn one's privilege." This is not meant to be taken as turning our backs on these privileges; rather, the aim is to think how they might help us in individual and communal ways of envisioning non-capitalist futures that embrace social values like well-being, care relations, and collective responsibility.[73]

The aspect of unlearning also resonates in Norwegian textile artist Toril Johannessen's body of work and exhibition "Unlearning Optical Illusions". In an exchange with craft professor Jessica Hemmings, Johannessen discusses early theories of geometrical optical illusion and what most of them held as a common belief: "How you see an illusion is due to differences in interpretation, meaning that what you see is a result of what you can recognize and of your expectations; meaning that how you see is dependent on what you already know."[74] So the question seems to be: How can we challenge that which we already know, and therefore our expectations, in order to be able to consider other perspectives as well?

In her short essay for Johannessen's exhibition catalogue, Hemmings sheds light on how interconnected histories and multiple cultural references to wax-resist cloth production across Africa and Europe have changed people's habits and perceptions connected to this particular batik cloth — exchanges that have led to it becoming ultimately familiar. Hemmings writes:

> When West and Central African nations began to gain independence from colonial rule in the late 1950s and 1960s, wax-resist cloth was adopted as the symbol of a new national costume associated with independence. What was once a colonial import was adopted as a post-independence national costume. Dutch companies such as Vlisco, which have been producing wax-resist cloth for the African market since the late nineteenth century, are part of an atypical global trade: former colonial power (the Netherlands), now the producer (at their design and manufacturing facilities in Helmond near Eindhoven) of high-end textiles made in Europe for sale on the African continent.[75]

Johannessen's work, especially when read through a postcolonial lens, as in texts written by Hemmings and curator Jakob Vengberg Sevel for the exhibition catalogue, points to how our sight, perception, and cognition are closely related to each other, and how sight is typically represented as an objective access to the world. Such objectivity needs to be challenged, unlearned, as the very exhibition title — "Unlearning Optical Illusions" — seems to suggest. According to curator Vengberg Sevel:

> The word "unlearning" in the title of the work may refer to the wish to escape the notion of essential identifications. Toril Johannessen's unique and idiosyncratic blend of colonial history and history of perception might have the potential to shift the "essential images" of orientalism, which in many ways still seem to dominate our understanding of non-Western cultures.[76]

The process of unlearning, moreover, is proposed as an examination of whether it is possible to forget, or maybe even learn, an alternative way of seeing and understanding the world: That is, seeing as visual perception but also in a metaphorical sense.

My take on the proposition of unlearning is aligned with Spivak's and Krauss's: unlearning is a necessary tool that allows for Speculative Fabulations, for positing future possibilities without denying troublesome histories either personal or collective. To some extent, I employ a speculative method in my research and practice, for example in the work *From Landscape to Timescape—The Floor* (2017), when making fictional materialities, an overlapping of patterns of wood, stone, and abstract images collected from the internet, laser engraved on foam tiles to resemble a common or even familiar floor surface. The intention is to challenge notions of origin, sense of place, and what we define as unfamiliar, by creating speculative objects and fictional materials that, while seeming familiar, on closer inspection cannot be easily identified. These floor tiles are activated in the moment somebody walks on them, when cracks and damages the surface that looked just like wood expose the illusion of a "real". The familiar floor is revealed through the embodied experience of those walking on and thus destroying it.

Building from these propositions—Haraway's suggested use of SF/science fiction and storytelling as powerful tools for "staying with the trouble of a damaged world"[77] and Spivak's call for "unlearning one's learning" in particular—and inspired by Tsing's definition of fieldwork practice,[78] I will discuss in the next section how situated learning and situated making have become essential methods in my craft practice. These methods allow me to render myself more vulnerable but also more open to others, both human and nonhuman. They enable me to pay attention and respond to my surroundings and to observe connections and entanglements, what I will refer to as a craft of noticing.[79] Through noticing, new possibilities emerge, and new models can be proposed and made.

## Situated Learning, Situated Making

Prior to—and especially during—my PhD studies, I have self-organised field trips and residencies to small, still functioning craft-related workshops, institutions, and factories (the Institut Supérieur de Peinture Décorative Van der Kelen-Logelain in Brussels, TextielLab in Tilburg, E-waste Industrial Factory in Taiwan). I refer to this as situated learning within a workshop context. Through a range of context-specific methods, individual and collaborative projects, self-initiated activities, and cultural exchanges, this way of working and making (and, simultaneously, of learning) becomes site-specific and situated. An immediate experience is produced from the space itself, from the encounter with tools, skills, techniques, behaviours, collaborators, and environments I may not be familiar with, but also through a cooperative process of dialogue and shared knowledge.

One purpose of the self-initiated field trips and residencies was to observe the dynamics of spaces variously defined by craft practices—made by and for craft expertise—and to analyse how they function, both in the past and in the present. A focus here is to identify relationships between craft traditions and notions of cultural identity, and, by extension, corresponding ideals, value systems, and behaviours. I also look at how complex, present-day socioeconomic situations have contributed to the development of certain forms of craft (or their disappearance and dissolution), and focus on collaboration and technology as important tools for preserving and passing along craft knowledge, but also for transforming it. The methods I adopted for these self-initiated field trips and residencies mostly involved situated learning, hands-on making, loosely structured interviews with key practitioners and representatives of institutions, and direct and participatory observation. For me, all of this was essential to understanding what situated knowledge could mean, and how it might function as a means of developing craft and artistic practices.

Haraway defines the term "situated knowledge" as the politics and epistemologies of location when specific to a particular sociocultural situation and structured into the relationships between subjects and objects of knowledge.[80] It demands specificity and difference, and these in turn require that we learn to see faithfully from another position and point of view. In this way knowledge becomes specific to a particular situation, accessible via experiential learning across individual practices

with distinct embodied cultures. In my research and practice, I am motivated to understand how a place or a location affects our knowledge. How do culturally specific ideas, values, practices, and norms change over time and space? What knowledge comes from being part of a dominant culture in a given place? Can the integration of situated knowledge be a useful tool for challenging dominant systems and ways of knowing? And can attempts at collecting subjective perspectives come to embody a "view from somewhere"?[81] In my research, I try to find ways of reconsidering ingrained behaviours and what I experience as normalised to the point that I take it for granted, and do not question. The immersiveness of my making, especially when bound to the practice I carry out in the studio and to a monologue with myself and my materials, can often lead to losing touch with the complexity of our world. Through collaboration, making together with and in a dialectic relation to others, and especially through situated making and learning in contexts that I am not familiar with, I seek to challenge a privileged perspective as well as what may be considered a detached, even neutral, approach to making. I seek to learn from and in response to others rather than about them.

Travelling and relocating somewhere in order to carry out my research in specialised workshops, through self-organised residencies and field trips, has become a primary mode of action in my work. Travelling, not relying on the comfort of a defined studio space and a sets of tools, materials, and techniques that I am familiar with, certainly allows me to question and challenge myself and my knowledge. But I cannot ignore the histories and connotations that come with the very notion of travel, which are inherited from our colonial past. For this reason—the impossibility of ignoring such uncomfortable histories, notions, and traditions that we have inherited—Haraway's proposition of situated learning becomes absolutely relevant to my research practice.

Travelling as a researcher can be seen as a problematic approach, especially when it involves other people, places, and communities, as one is often put in a position to study one's "subject" in a detached manner, from a distance or from above. Data is analysed and findings are presented through writings or other media in a way that is supposedly objective. Especially in the context of science and philosophy, Haraway calls objectivity a "god trick"[82]: objectivity intended as a gaze conquering the subject from nowhere,

from a distance or from above (instead of a view from somewhere), is an illusion. She suggests a radical shift of perspective that, while still aiming for "faithful accounts of the real world"[83], also takes into account ways of positioning ourselves within the research context. This is an embodied perspective, allowing for a new kind of knowledge-making: situated knowledge. Haraway urges researchers to think of objectivity as something that "turns out to be about particular and specific embodiment, and definitely not about [a] false vision promising transcendence of limits and responsibility".[84] If we learn to look at objectivity in this way, and position ourselves accordingly, then as researchers we can be held accountable for our claims, and we can also become more response-able, more able to respond to others, and to take responsibility for the histories, particularly colonial histories, that we have inherited and cannot deny. Situated knowledge is a way of knowing and positioning oneself, and is extremely important within craft research: it offers an alternative approach to the analysis of craft, which normally operates in relation to a classification of objects, institutions, or people.[85]

As a craft practitioner, I avoid staying within my own comfort zone — working with a specific set of materials, techniques, and traditions — without questioning the ways in which everything is entangled. In my research, I have chosen to consider the possibilities offered by a rhizomatic approach[86] to craft, to be open to thoughts and connections in the complex reality of the world system where the ethical material production and consumption of everyday objects takes place. This way of knowing requires multiple responses from different perspectives; in order to understand one's own practice one must take responsibility for it in a larger world system. This is an ethical approach to craft, concerned with the sociopolitical, economic and material implications of making in a postindustrial context and in response to the Anthropocene.

Rhizomatic thinking and nomadic learning are well suited to my research subject and approach. In my case, the research subject is nonlinear, and it encompasses different situations in which materials, objects, people, histories, and their places are interconnected and interwoven. This nonlinear approach to thinking opposes an idealised and rational way of understanding knowledge within artistic research. It allows me to better see the subject of my research as a more subjective, recursive, tangled, and sprouting structure.

Originally, "rhizome" comes from the botanist's term describing horizontal root systems that explore connection, reconnection, and establishing new shoots. When I approach my research within craft practice, I consider it from multiple perspectives, thus adopting diverse methods in an ad hoc fashion.

Rhizomatic thinking and learning is inherently nonlinear, but it encompasses infinitely interconnected directions and shoots. It has no end or beginning; by following my curiosity, and by being able to respond to certain contexts, encounters, or situations, I can travel along unexpected segments of a rhizome and learn and know together with others. In this way, through exchange, collaboration, and engaged dialogue with others, it is possible to reconceive what I am looking for. This is a long process of becoming, in which I change the way I perceive the world based on new understandings rather than fixed categories or meanings. The process is not a search for meaning but rather the observation of new possibilities in an evolving world. These processes of learning are constantly changing, always adapting. They are comprised of a multiplicity of lines and associations; they aim to preserve their dynamics and imbalances, producing differences and making new connections.

According to Karen Barad, knowing is a distributed practice in which humans participate in larger material configurations. She argues that "it is not an ideational affair or a capacity that is the exclusive birth right of the human", nor is it "a play of ideas within the mind of a Cartesian subject that stands outside the physical world the subject seeks to know". Rather, "knowing is a material practice, a specific engagement of the world where part of the world becomes differentially intelligible to another part of the world".[87] This way of knowing can allow us to be more aware of craft's essential role in worlding (the making of a realm of culture from that of nature) and its subaltern politics[88] — how we embrace the condition of the other, especially through its association with the marginal.

Tsing has demonstrated this perspective of knowing from fieldwork practices by bringing marginality itself under the anthropological lens. She states that: "instead of simply taking it for granted, it is possible to write about out-of-the-way places without distancing, romanticizing, or eroticizing them."[89] Through Tsing's writing,[90] I gained better ethical sensibilities as a maker in order to critique and deepen my understanding of material culture in a

time of globalisation; the goal is not only understanding oneself, but rather understanding oneself in relation to the other — in order to understand how the image of ourselves today is constructed via a complex set of relationships encompassing colonial history and capitalism.

In my research, I consider *fieldwork practice*[91] to be an essential method that allows for situated learning and situated making; when travelling to an institution or production facility such as the cloisonné workshop in Beijing, I place myself in a situation where I am learning and making in relation to and together with others in a specific environment. The result is always an unexpected and exciting form of cooperation and even collaboration. For me, collaboration is truly unexpected: it does not rely on previous expectations, nor is it possible to quantify who did what in the process or the outcome. Cooperation is more defined: it is easier to track and define the impact of different skill sets on different parts of the process. While researching the history and practice of craft in such places, I often carry out physical work: I produce in facilities that I actively seek out and engage with. I then often take techniques and knowledge that I encounter in these contexts and apply them in my work back in my own studio or in another workshop. This may seem a little like appropriation at first, with all the problematic connotations that this term brings. More often I build upon and develop further, in my own way, the techniques and knowledge I pick up. This is not, however, a free, limitless process of experimentation: I try to be alert and find ways to stay mindful of the troubled[92] histories, traditions, and uncomfortable inheritances that my making is inextricably connected with. A good way to achieve this, as I will discuss next, is to employ a diffractive method.

## Diffractive Methodology

As a practitioner and researcher, I confront myself with skills, tools, and craft knowledge that are often new to me. I learn in temporary, self-initiated residencies and workshops, in spaces and facilities that eventually become part of my own production and learning network. What I may define as a "workshop" is constantly adapted, reshaped, and expanded. Furthermore, this way of working and making (and simultaneously learning) becomes site-specific and situated: an immediate experience is produced from a space itself,

from an encounter with tools, skills, techniques, and behaviours I may not be familiar with, but also through a cooperative process in which I encounter others through dialogue and exchange.

In my case, when travelling to production sites, workshops, and laboratories, I am aware of my privileged position as a researcher. But my intention is to gain a more layered understanding of things I thought I already knew or could know by myself. This specific knowing is a material practice, a specific engagement with the world, in which part of the world becomes differentially intelligible to another part of the world.[93] What I am interested in exploring are the repercussions that a craft scenario of response-ability may bring to the condition of decision-making. This requires research from within the field of craft, but craft is in itself not the only focus. Rather, the main focus is on the knowledge that arises by encountering others, by asking critical questions, and by exchanging common social and environmental concerns. This process allows a new perspective on one's own practice through exchange, collaboration, and engaged dialogue with others (practitioners from both within and outside the field, collaborators and experts from other institutions and facilities, but also nonhuman collaborators such as tools, techniques, and physical spaces). My aim is to put into focus what it is I am doing and looking at, and how to become more response-able. The need is for my own knowledge to be diffracted by that of others, and in doing so to understand how craft and my own making are not exclusively self-reflective and self-reliant endeavours. As Haraway says:

> Reflexivity has been much recommended as a critical practice, but my suspicion is that reflexivity, like reflection, only displaces the same elsewhere, setting up the worries about copy and original and the search for the authentic and really real. Reflexivity is a bad trope for escaping the false choice between realism and relativism in thinking about strong objectivity and situated knowledges in technoscientific knowledge. What we need is to make a difference in material-semiotic apparatuses, to diffract the rays of technoscience so that we get more promising interference patterns on the recording films of our lives and bodies. Diffraction is an optical metaphor for the effort to make a difference in the world.[94]

The notions of *diffraction*[95] and interconnectedness, and particularly what these concepts can offer to the practice of craft, are considered closely in my research, especially through my own research methodology, which is restructured and adapted ad hoc, depending on the context and situation I am considering or studying.

One of the case studies that I find useful for understanding the proposition of diffraction and situated-ness in my research is offered by the collaborative doctoral dissertation in Interaction Design and Media and Communication Studies titled *Patchworking—Publics in the Making*,[96] authored by Kristina Lindström and Åsa Ståhl at Malmö University in 2014. These researchers raise issues regarding research methodology in the arts, crafts, and design, and the necessity of developing methods that are situated.

Their thesis project is relevant to my research in several aspects, in part because of the themes it addresses (public engagement with mundane issues of living with technology; interdisciplinary and collaborative practices; participatory design; important questions about knowledge ownership and production), but also in particular because of the situated methodology that it attempts to build and implement in order to support the researchers' main objectives of their thesis. Lindström and Ståhl state their main objectives as "exploring potentialities in-the-making", a proposition that refers to eventual new publics that emerge from making things together, "where issues and participants are not present but in the making"; and "adding an exemplar to the existing repertoire of how to accountably create knowledge across disciplines and practices. This means to recognize previous work, but also to acknowledge that it is possible to re-pattern it." In order to address the latter objective, the two researchers come up with the figuration of "patchworking", which can be interpreted as an attempt "to perform the argument that knowledge is produced in specific relations and thereby challenges the privileging of discrete knowledge producers".[97]

What I find interesting in Lindström and Ståhl's figuration of patchworking is that they frame it as a response to the need, in a technological society, for knowing mess and complexities. From this perspective, patchworking seems to refer to a speculative design method and applying a strategy of improvisational bricolage as strategic processes in the creation of a new knowledge in both making and foresight: drawing upon possible future scenarios to test ideas, processes, and materialities.

Lindström and Ståhl's practice is mobile and flexible, capable of inhabiting diverse realms, both in terms of disciplines both and institutions: their projects travel and are adapted to many different contexts, raising specific questions on each occasion. Furthermore, their practice is grounded in an interdisciplinary and collaborative intention, which is something that I recognise in my practice too. These case studies argue for the potential of craft research as a method to reveal, problematise, and illustrate what is behind a material object and its possible role in challenging dominant systems and ways of knowledge.

As I move among disciplines, I see in situated learning an essential way to become response-able together with others. My practice is in its essence collaborative, interdisciplinary, and peripatetic. But most often my research is conducted through craft practice: making and looking closely at craft while actively collaborating with others, bringing in their perspectives and employing a diffractive methodology to challenge myself when it comes to issues of authorship, transparency, and ownership.

Bringing together a self-reflective methodology (which is commonly associated with arts and crafts reflexive research methods) with what Haraway describes as diffractive methodology—which, as she writes, is a critical practice for making a difference in the world[98]—is something I strive for in any project. Diffractive methodology can be used within my research to challenge a dichotomous view of the world (subject/object, digital/physical, public/private, thinking/doing). Haraway says:

> Diffraction patterns record the history of interaction, interference, reinforcement, difference. Diffraction can serve as a useful counterpoint to reflection: both are optical phenomena, but whereas the metaphor of reflection reflects the themes of mirroring and sameness, diffraction is marked by patterns of difference. Diffraction is about heterogeneous history, not about originals. Unlike reflections, diffractions do not displace the same elsewhere, in more or less distorted form, thereby giving rise to industries of story making about origins and truths. Rather, diffraction can be a metaphor for another kind of critical consciousness.[99]

A diffractive method becomes especially relevant in the context of a situated craft practice in which one is confronted with value systems often associated with ideas of place, material origin, authorship, and authenticity; and when working with materials and resources charged with a complex history.

## Summary and Introduction to Chapter Two

In this introductory chapter I provide some background to my research and the methodologies I have explored. I started by examining the term "chinoiserie" through the lens of craft in China from the eighteenth century to the present time of globalisation, focusing on how the tradition of reproduction of the "self" from the reflections of the "other" is at play in this context, and on how certain craft traditions and forms reinforce the concept of "otherness" when culture is made and transmitted through appropriation. What constitutes craft tradition in this complex context is dynamism and transition. The question of what is the space of craft in a globalised world becomes especially relevant, particularly how craft—its practice and transmission—is affected by economic, political, and social changes.

Discussing notions of familiarity, particularly how materials and objects that are originally from one region or culture are assimilated into another culture through a complex history of trade, exchange, imitation, and appropriation, so that they become familiar, even constituting that culture's identity, I suggest that we as craft practitioners should be sensitive to past and present histories. We should strive to contextualise the objects, processes, technologies, and materials that are the basis of our making and to situate our practices in a larger world-system where things are entangled. As a means of achieving this I have proposed the possibilities offered by a diffractive method and the process of unlearning one's learning. To look at craft as a verb, as a series of actions can problematise and illustrate a material's origins—the way they are sourced as well as the complex histories behind the object. Craft is a useful tool for revealing such hidden histories, and thus finding other perspectives through which to understand our world.

In the following chapter, *From Dissolution*[100] *to Becoming*, I discuss craft case studies and offer possibilities for craft to become fluidly cross-pollinated—to play an active, chameleonic role in

today's society, whereby a shift will occur: from craft dissolving to craft becoming. I will discuss how the links between skill, creativity, and the hand are renegotiated in a digital era, and how modern technology can be seen as a significant tool for the future of craft discourse.

In particular, I am interested in how certain craft forms and histories tend to dissolve in contemporary socioeconomic landscapes, only to evolve into something that was not there before. I will argue that modern communication and digital technologies have a crucial role to play in this process. I look at how craft is dissolved in today's digital world, and how, through cross-disciplinarity, its forms are transformed, hybridised, or integrated with new communication and digital manufacturing technologies, offering many more possibilities for craft to exist, develop, circulate, and change. Dissolution is thus intended as a creative and transformative process, rather than as a dead end.

As part of this proposition, I will suggest that craft can be seen as a connector: able to become a dynamic, recombinant catalyst in other areas of human society. By sharing knowledge and connecting traditions, skills, and communities in our contemporary society, craft can constantly reclaim new spaces for its propositions and positions between independency and interdependency. When networked, craft can open up and adapt itself to countless contexts for human production and social interaction.

28. William F. Alexander and Donald Keith Gerber, *Cloisonné Extraordinaire,* Des Moines: Wallace-Homestead Book Co, 1977.
29. Walter Davis, "China, the Confucian Ideal, and the European Age of Enlightenment" in Julia Ching & Willard G. Oxtoby (eds.), *Discovering China: European Interpretations in the Enlightenment,* New York: University of Rochester Press, 1992, p. 16.
30. In my most recent projects and collaborations discussed in my PhD thesis, I have become more critical of the tendency to travel. This is because of the dilemma that air travel in particular presents from the point of view of sustainability and environmental impact.
31. A case study from this perspective is the recent rediscovery of Yixing pottery in China. This revival has a political undertone, and stands in opposition to the "ideological manipulation" undertaken by Mao Zedong's Cultural Revolution, which contributed to the marginalisation of craft and to the dissolution of its heritage in China. Further reading: Chunmei Li, *Crafting Modern China: The Revival of Yixing Pottery,* MA Diss., OCAD University, Toronto, May 2013. The essay is published in Fabien Petiot and Chloé Braunstein-Kriegel (eds.), *Crafts: Today's Anthology for Tomorrow's Crafts,* Paris: Éditions Norma, 2018.
32. *Cloison* refers to the wire fillets or metal dividing strips used in cloisonné. Once soldered onto a metal base or body, the fillets create patterns and areas that will then be filled with enamel. In the Beijing workshop where I worked, few workers were assigned to the specific task of pulling the copper wire that would then be used to produce the cloisons. The French term *cloison* means "a partition, a dividing band", 1690s, from vulgar Latin *clausionem* (nominative *clausio*), a noun of action from the Latin past-participle stem *claudere*, "to close, shut." Source: https://www.merriam-webster.com/dictionary/cloison [Accessed: 2019-07-08].
33. Through interviews and exchanges I shared with the artisans and workers in the cloisonné workshop during my time in Beijing, it emerged that most would prefer to work in a different field.
34. See Chunmei Li, 2013.
35. Artspace interview, "Theaster Gates: Using the Art Economy to Funnel Funds to Underserved Communities", published on 2017-02-24: https://www.artspace.com/magazine/art_101/book_report/theaster-gates-on-using-the-art-economy-to-funnel-funds-to-underserved-communities-54586 [Accessed: 2019-07-08].
36. Harry M. Garner, *Chinese and Japanese Cloisonné Enamels (Arts of the East),* London: Faber & Faber, 1971; Edward Said, *Orientalism,* New York: Pantheon Books, 1978.
37. See William F. Alexander and Donald Keith Gerber, *Cloisonné Extraordinaire,* Des Moines: Wallace-Homestead Book Co, 1977, pp. 79–81.
38. Tanya Harrod, *Placing Craft,* from the *Think Tank* publication *Place(s) - Papers and Exhibitions,* Gmunden, Austria: 2006, p. 29.
39. See Glenn Adamson, *The Invention of Craft,* London: Bloomsbury Academic, 2013, p. xxiv.
40. See Harvey 1989, pp. 132–133; Sennett 2008, pp. 22.
41. "Workshop of the world" was an informal term for England in the eighteenth and nineteenth centuries; the expression was used by Benjamin Disraeli in the House of Commons in 1838, in reference to British manufacturing and industry. In the eighteenth and nineteenth centuries, Great Britain was a leader of the Industrial Revolution. The definition in general describes a workshop that is part of a worldwide economic network linking production to markets. In particular, there is a division of labour between manufacturing industries and market services. http://www.bbc.co.uk/history/british/victorians/workshop_of_the_world_01.shtml [Accessed: 2019-07-08]. Today, China is often described as the world's workshop. See: Yuning Gao, *China as the Workshop of the World: An Analysis at the National and Industry Level of China in the International Division of Labor,* London: Routledge, 2012, pp. 212–223.
42. Tanya Harrod, *The Real Thing: Essays on Making in the Modern World,* London: Hyphen Press, 2015, p. 131.
43. See Sarah Teasley, Giorgio Aiello, and Glenn Adamson (eds.), *Global Design History,* London and New York: Routledge, 2011.
44. Oliver Impery, *Chinoiserie: The Impact of Oriental Styles on Western Art and Decoration,* London: Oxford University Press, 1997, p. 104.
45. Wilkinson-Weber and Alicia Ory DeNicola (eds.), *Critical Craft: Technology, Globalization and Capitalism,* London, New York: Bloomsbury Academic, 2016.
46. Alfred L. Kroeber, "Stimulus Diffusion", *American Anthropologist,* vol. 42, no. 1, Berkeley: University of California, 1940.
47. Ibid.
48. The British willow pattern was inspired by the blue-and-white china that Britain imported from China during the late eighteenth century. For further reference, see Paul Scott's essay, "Willows, Windmills and Wild Roses: Recycling and Remediation", 2011. Available from: http://cumbrianblues.com/wp-content/uploads/2016/08/tingtangessay.pdf [Accessed: 2019-07-08].
49. Factories that specialised in the mass-production of such wares included Spode, Wedgwood, Worcester, Caughley, Liverpool, Lowestoft, Bow, New Hall, Coalport, Vauxhall, and Derby. More information on the history of the willow motif and the development of transferwares can be found at: http://blogs.ucl.ac.uk/eicah/the-willow-pattern-dunham-massey/the-willow-pattern-case-study-the-willow-pattern-explained/ [Accessed: 2019-07-08].
50. Ibid.
51. Most original plates that Paul Scott manipulates and uses in his work are bought in second-hand stores or on eBay. See also Jorunn Veiteberg (ed.), *Thing Tang Trash: Upcycling in Contemporary Ceramics* (exhibition catalogue), Bergen National Academy of the Arts and Art Museums, 2011, pp. 114–15.
52. https://www.artspace.com/magazine/interviews_features/qa/the-most-shocking-image-i-can-remember-is-seeing-myself-in-the-mirrorchinese-artist-ai-weiwei-55832 [Accessed: 2019-07-08].
53. See Caroline Slotte's chapter of reflections, "Second Hand Stories", part of her fellowship essay, pp. 33–36. See http://artistic-research.no/wp-content/uploads/2015/04/Slotte-Reflections-on-the-project.pdf [Accessed: 2019-07-08].
54. Ibid., p. 35.
55. Ibid., p. 34.

56. Ibid., p. 35.
57. See Olafur Eliasson, "Unlearning Space – Spacing Unlearning", first published in Nikolaus Hirsch and Markus Miessen (eds.), *Critical Spatial Practice 1: What Is Critical Spatial Practice?,* Berlin: Sternberg Press, 2012, p. 38.
58. Ibid.
59. The installation *From Landscape to Timescape – The Floor* (2016–17) was first exhibited at Konsthantverkarna in Stockholm, as part of the duo exhibition "Friction, Resonance", from 2017-04-01 to 2017-04-25. http://konsthantverkarna.se/galleri/499-beatrice-brovia-och-nicolas-cheng [Accessed: 2019-07-08].
60. Donna Haraway, *Staying with the Trouble, Making Kin in the Chthulucene,* Durham and London: Duke University Press, 2016, p. 76.
61. In 1748, Pehr Kalm, a protégé of the famous Swedish botanist Carl Linnaeus, embarked on a three-year tour of North America to identify valuable trees that might grow in the Scandinavian climate. He was deeply impressed by the quantities of high-quality true mahogany, a species that grows in a tropical climate, which has since been almost entirely cut down, consumed, and exported. Since then, rare mahogany has become popular as an exotic luxury commodity, defining personal taste and material regional preferences. See: Jennifer L. Anderson, *Mahogany: The Costs of Luxury in Early America,* Cambridge, MA: Harvard University Press, 2012, pp. 1–17.
62. Carl Linnaeus (1707–1778) is considered the "father of taxonomy" who developed the Linnaean system of species classification for classifying all organic life in a single universal system. His two most important contributions to taxonomy were a hierarchical classification system and the system of binomial nomenclature. The fulfilment of Linnaeus's vision depended on developments in transportation and navigation, which not only enabled bolder forays into remoter places but also fed the popular enthusiasm for exploration and created a trade relation for large-scale globalisation at the beginning of the nineteenth century.
63. See *CITES,* a multilateral treaty to protect endangered plants and animals. https://www.greenworldlumber.com/blog/mahogany-wood-comeback [Accessed: 2019-07-08].
64. This particular body of work was discussed, among others, as part of the 25% seminar of my Doctorate at HDK Gothenburg. It was also exhibited as part of "(IM)PRINT" at artist-run space easy!upstream in Munich, an exhibition that I self-organised and co-curated with my colleagues Hanna Hedman, Kajsa Lindberg, and Beatrice Brovia. Writer and artist Benjamin Lignel, reviewing the exhibition, also discusses this work specifically in his article: "Nicolas Cheng's placing of fifteen blocks of wood and stone look-alikes on a two-inch-high pedestal anchored his fictional *objets trouvés* close to the ground — where they come from — but also resonated with Vija Celmins's seminal inventory of fake rocks. This careful placement summoned art-historical precedents — like Celmins — but also referenced the archeological strategy of presenting findings on the ground, in the position in which they were dug out. This in turn highlighted the fakery of these fakes, and lifted them back to ornamental, post-Flintstone status." "WE ARE ALL IN THIS TOGETHER. WE ARE NOT IN THIS TOGETHER", published on Art Jewelry Forum, 2016-03-28, available from https://artjewelryforum.org/we-are-all-in-this-together-we-are-not-in-this-together [Accessed: 2019-07-08].
65. See: Jennifer L. Anderson, *Mahogany: The Costs of Luxury in Early America,* Cambridge, MA: Harvard University Press, 2012, pp. 18–32.
66. The proposition of "unlearning one's learning and unlearning one's privilege" was initially posed by feminist critic Gayatri Chakravorty Spivak. See, in particular: Sara Danius, Stefan Jonsson, and Gayatri Chakravorty Spivak, *Boundary 2,* vol. 20, no. 2 (Summer, 1993), Duke University Press, pp. 24–50.
67. Donna Haraway, *Primate Visions. Gender, Race, and Nature in the World of Modern Science,* New York: Routledge, 1989, pp. 3–5.
68. Ibid., p. 3.
69. Ibid.
70. Ibid.
71. Ibid., p. 8.
72. Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene,* Durham and London: Duke University Press, 2016, p. 31.
73. See http://casco.art/casco-case-study-2-site-for-unlearning-art-organization-0 [Accessed: 2019-07-08].
74. Jessica Hemmings, "Textile, Taxes and Translations: The Changing Meaning of Dutch Wax Resist", in *Toril Johannessen: Unlearning Optical Illusions* (exhibition catalogue), Aarhus: Narayana Press, 2017, pp. 24–26.
75. Ibid.
76. Jakob Vengberg Sevel, "Our Eyes Deceive us: About Toril Johannessen's Art", in *Toril Johannessen: Unlearning Optical Illusions* (exhibition catalogue), Aarhus: Narayana Press, 2017, pp. 38–44.
77. See Haraway 2016.
78. See Tsing, *The Mushroom at the End of the World,* 2015 and Friction, 2005.
79. See Tsing, *Friction: An Ethnography of Global Connection.* Princeton, NJ: Princeton University Press, 2005, P. 37.
80. "Situated knowledge" is Donna Haraway's subjective position that informs her central methodology and epistemology: an allusion to the community, it is an attempt at collecting a subjective perspective into an embodiment of a viewpoint from somewhere. For more context, please see: Donna Haraway, "Situated Knowledge: The Science Question in Feminism and the Privilege of Partial Perspective", *Feminist Studies,* 14(3), 1988, pp. 575–99.
81. Ibid., p. 582.
82. Ibid.
83. Ibid.
84. Ibid.
85. Glenn Adamson, *Thinking Through Craft,* London: Bloomsbury Academic, 2007, p. 4.
86. Félix Guattari and Gilles Deleuze, *A Thousand Plateaus: Capitalism and Schizophrenia,* Minneapolis: University of Minnesota, 1987, p. 23.
87. Karen Barad, *Meeting the Universe Halfway,* Durham, NC: Duke University Press, 2007, p. 342.
88. Donna Haraway, "Situated Knowledge: The Science Question in Feminism and the Privilege of Partial Perspective", *Feminist Studies,* 14(3), 1988; see chapter three for a development of this theme, p. 582.

89. Anna L. Tsing, *In the Realm of the Diamond Queen: Marginality in an Out-of-the-Way Place,* New Jersey: Princeton University Press, 1993, p. 9.
90. Anna L. Tsing, *Friction: An Ethnography of Global Connections,* Princeton and Oxford: Princeton University Press, 2005.
91. I approach fieldwork as a method that is situated. My goal is to map out the space of craft—from workshop to factory—and to investigate its interconnected production realities, discourses, and practices, both through physical travel but also virtually by using the internet, Google Earth, etc. Anna L. Tsing is an ethnographer who has developed several complex arguments around a narrative account of fieldwork practice. This narrative character is an important aspect of her book *Friction* (2005), which is an example of how ethnographic accounts might develop arguments about the impact of globalisation. Her analysis can be helpful in understanding my fieldwork practice, especially when it comes to physical travel and working together with artisans on a local, regional, national, and even transnational scale.
92. See Haraway, *Staying with the Trouble,* 2016.
93. Barad (2007), p. 342.
94. Donna Haraway, *Modest-Witness@Second-Millennium,* New York: Routledge, 1997, p. 16.
95. See Donna Haraway but also Kajsa G. Eriksson and Lena Berglin's project, *The outdoor as a common site of experience and collaboration in Art and Technology Education – A workshop model,* 2017; and Kristina Lindström and Åsa Ståhl's PhD thesis *Patchworking – Publics in the making,* Malmö University, 2014.
96. See Lindström and Ståhl, *Patchworking – Publics in the Making,* 2014.
97. Ibid.
98. Rick Dolphijn and Iris van der Tuin, *New Materialism: Interviews & Cartographies,* Ann Arbor: University of Michigan, 2009. http://quod.lib.umich.edu/o/ohp/11515701.0001.001/1:4.3/--new-materialism-interviews-cartographies?rgn=div2;view=fulltext [Accessed: 2019-07-08].
99. Ibid.
100. A brief consultation of the definition of the word "dissolution" in the Merriam-Webster Dictionary shows that it is the noun form of the verb "dissolve", a term that can be understood in a few different ways: 1. to *dissolve* as in to "close down", "terminate", "dismiss", "disintegrate or break into component parts", "cause to disappear or vanish, to dispel"; 2. to *dissolve* as in chemistry: "to incorporate", "to cause to pass into solution", "to reduce (solid matter) to liquid form"; 3. to *dissolve* as in "to cause to lose definition, blend, or blur." Although in my research I look at case studies in which craft heritage has somehow been dismissed, terminated, or broken into parts (e.g., the closing down of historical craft factories and the dissipation of their related histories, knowhow, and traditions in the cases of Rörstrand and Kosta Boda in Sweden), I am mostly interested in the connotation of dissolving as "reducing solid matter into liquid form" and causing something "to lose definition, to blur."

# Chapter Two
# Craft as Facilitator: Creative Economy

## *Terroir*

In this chapter, I look at notions of distance relative to local production and the global economy, and how these considerations impact the perceived value of materials, artefacts, goods, and the labour necessary to produce them. I consider the use of local, self-organised networks in the context of collaboration; the role of technology in preserving and passing on knowledge, but also in opening up new possibilities for craft-based practices and for making; and craft's potential to function as a "connector" in social and production networks. These are all aspects of the project *Terroir* (2015), which I will discuss in the early sections of this chapter.

These ideas are further expanded throughout Chapter Two: through case studies, I will look at how craft, as a method, can be activated to build a network, and whether craft practices can be deployed as social and even economic "connectors", not just within urban areas but also across larger territories (regional, national, transnational). Furthermore, I will consider how the links between skill, creativity, and the hand are renegotiated in the digital era. By shifting the perspective on making from a D.I.Y. activity to a "Do It with Others" (D.I.W.O.[101]) proposition, aided by the impact of the internet and digital technologies such as 3-D printing, I will question ideas of authorship and ownership, and will examine how uniqueness is redefined in the digital era. The *Terroir* (2015) project allows me to discuss relevant mechanisms of craft that lie behind global production, either distant or local, with the objective

of expanding self-organised local networks. Another objective is understanding craft as a practice that is interdependent with other realities and histories of making—that is, a practice that is not self-reliant or autarkic.

Questions of how digital technologies and communication support, transform, and affect craft knowledge, practice, and dissemination—as well as how craft can be seen as a connector across multiple production and educational realities, both locally and globally—are touched upon in *Terroir* (2015). These questions are further expanded in the subsequent sections of this chapter, through discussions of self-organised field trips and relevant case studies.

In *Terroir* (2015) I worked with different collaborators at the crossroads of disciplines such as craft, digital technology, and gastronomy. In the early stage, my research included visits to the collections and archives of the Tilburg TextielMuseum, and the development of artefacts (a series of napkins made from conductive smart textiles that I then electroformed in silver) in conjunction with experts in the museum's TextielLab.[102] This particular space exemplifies a contemporary, cutting-edge model where craft heritage and innovation are strongly interconnected; furthermore, traditional craft knowledge is not only preserved, but is constantly developed through the innovative application of modern digital technology to textile knowledge.

The TextielLab is a laboratory space in which craft heritage (from the region's former textile industry), research and development, creativity, the latest technologies, and education are all fostered. It is also a business model that, while operating locally, attracts customers, researchers, and innovators not only from the region, but from all over the world. The TextielLab is a thriving creative and open working space where artists, architects, fashion and interior designers, as well as students, can develop their projects supported by highly skilled technicians, craftsmen, and material researchers. These resources, in tandem with a constant, active collaboration between TextielLab and a large number of both local and international artists, designers, and companies on a wide range of projects, make it possible to push the boundaries of textile craft and technology. This highly creative and experimental context enabled me to reflect, through my research, on the complex relationship between local material cultures and craft traditions versus global production methods. What happens

when local materials and resources for craft practices are displaced by digital technologies? It also represented for me an excellent case study on how relevant craft languages can be preserved — integrated into our human and material landscape, no matter how immaterial or progress-oriented our future may look. Perhaps technology can not only contribute to craft's preservation, but also help transform craft rather than speed up its demise.

The TextielMuseum stimulates interactions between the long-standing and the new: old, craft-related techniques enter into a dialogue with the newest weaving and knitting machines, laser cutters, digital printers, and a tufting studio. In the Lab, development is paramount, and knowledge, technique, and material come together in innovative creations. On one hand, the TextielLab is a relevant example of how craft can be seen as a contemporary open laboratory: most research projects there originate from students or researchers — groups, individuals, private foundations, or companies — and build upon existing knowledge provided by experts in the TextielLab. Through discussion and conversation, research and development, the projects begin to transform to the next level of experimentation. On the other hand, based on my experience and observations while working in the embroidery workshop at TextielLab, the rather high production costs may limit the potential for experimentation with techniques and materials. This is true especially in the case of an independent artist, student, or researcher who approaches the TextielLab with a limited budget, or without previously secured financial support such as grants and scholarships. In this scenario, it becomes necessary to search for time-saving solutions to be able to carry out a project, and this may in turn affect works that require a more experimental approach and more trial and error. Furthermore, designers, artists, and companies that turn to TextielLab for their projects are not required to have specific skills or any previous knowledge about textiles; this results in a clear division of roles between the technicians — who work in a hands on manner, researching and developing the project, finding suitable solutions along the way, responding to the technical, material, and creative challenges in the making process — and the artist, company, or designer who commissions and owns the project. Based on my experience, there is not much room to challenge this separation of roles in a model like that of TextielLab.

Furniture maker and educator David Pye illustrates a specific relationship between hand and tools, craft and mass-production in his 1978 book *The Nature and Art of Workmanship*. He proposes a theory of making based on the concepts of "workmanship of risk" and "workmanship of certainty".[103] Pye argues that craft knowledge depends on each individual's skills and the risk taking throughout the process of making the final work, which is unpredictable and the outcome is not guaranteed to be successful. In contrast, mass production guarantees a certainty quality through the industrial application of tooling, but one cannot introduce difference in the process. Although my research focus is not on the differences between hand and industrial production, Pye's concept of risk intrigues me: there is risk in caring, knowing, searching, doubting and constantly making decisions through hands, tools and materialisation processes. In my view, it is important to allow more freedom to explore uncertainty, dialogue, and collaborative efforts across disciplines. The goal is to strike a balance between experimentation, innovative thinking, and preservation of material knowledge with a new generation of artists, makers, designers, and technicians. This value of craft knowledge is crucial for the survival of craft and for encouraging the continuation of craft heritage in relation to the innovative application of modern digital technology to textile knowledge.

As part of the project, I was invited by the Dutch Cultural Embassy and by the gastronomy organisation Steinbesser—both headquartered at Amsterdam's Lloyd Hotel—to produce a dining set—composed of plates, tablecloths, and other elements—for an event that would be hosted at the hotel for a group of American art collectors and cultural entrepreneurs. My plates and tablecloths served a meal prepared by a local chef, based on locally harvested produce. During my visit to the TextielMuseum I was inspired by the museum's white damask collection, in particular by the subtle chromatic effect of the white-on-white motifs in the works of Art Nouveau textile artist Chris Lebeau (1878–1945), and the still-functioning Jacquard looms for production of damask. I decided to reference this textile heritage as a starting point for my work. To understand damask, we need to acquire some historical and technical knowledge regarding the production of this woven fabric. First of all, the word "damask" evokes the far away, the exotic, and bears connotations of luxury and exclusivity. In the early Middle Ages damask

spread along the Silk Road as a weaving technique typical of Islamic and Byzantine trade and production centres such as Damascus.[104] At some point in history it became a very scarce—and therefore treasured—good. To this day, artefacts woven with this technique seem to retain a sense of luxury and expense. In the Art Nouveau textile works of Lebeau that I viewed at the TextielMuseum, damask is often a single colour, white on white. The subtle, delicate patterns are only revealed when the fabric is viewed from the correct angle.

I therefore decided to focus on tablecloths and napkins as categories of objects for further investigation, keeping in mind how and why the word *damask* has become synonymous with luxury. Is this still relevant today? Can we talk about damask relative to social status and class hierarchies? For that matter, in these environmentally charged times, is this bleached whiteness acceptable? During the nineteenth century in Europe a white damask table linen was a standard covering for a dinner table. It was essential for elite society.[105] These thoughts opened up many possibilities for reflecting on the politics and ethics of production, labour and luxury, locality and exoticism, and the space of craft in local versus global production and distribution networks. The project also allowed me to work across a diverse array of collaborators and institutions, thereby reflecting on craft's potential as a connector. It became a context for me to investigate concepts such as the near-produced[106] in relation to the far-produced, and how these concepts affect how we perceive value.

Thus, craft as connector is an idea that I started to develop in *Terroir* (2015), a project in which I set out to explore more specifically the mechanisms of craft that lie behind global production—from

distant to local—and to expand on local, self-organised networks. Through making processes, I attempted to blur the line between near-ness and far-ness, and in the course of this particular project I activated diverse spaces, contexts, and methods of crafting. I conducted part of my work by travelling to Tilburg and Amsterdam. Other parts of the work were made both in my studio and in dialogue with other producers located in Stockholm, whom I actively engaged in the project. Throughout the project, "network" was a key concept—from the local network constituted by small-scale workshops (e.g., digital and laser engravers and machine embroiderers) in my studio's neighbourhood in Stockholm, to a global network of institutions including the Lloyd Hotel & Cultural Embassy in Amsterdam and the production facilities of TextielLab in Tilburg.

One of the underlying questions was whether craft can address complex socio-political and economic issues—whether it can facilitate responsiveness and the implementation of making processes whereby equality and the material ethics of value[107] are central. One such issue that I explored in the project is the question of value creation and value attribution in a system of global production and exchange: in particular, how certain ideas of luxury and desirability have shifted in a global economy, whereby the locally produced, the artisanal, and small-batch manufacturing are seen as aspirational, as opposed to the mass produced, which is often manufactured "far away". (Designations such as "Made in China" come to mind.) This aspect also raises questions about how craft is used as an ideological tool to create and shape value systems, and to support economic and political agendas that reinforce stereotypes, power relations, and dichotomous worldviews (here versus there, us versus them, local versus global, etc.). The crafted and the artisanal—from handmade sausages and small-batch beer to natural soaps and body products made from locally harvested ingredients—have in recent years become a seal of lifestyle approval to attain, one of authentic experiences and good health. It has become a slogan that suggests a particular product is better and more valuable, worth paying more for, because of how, where, and by whom it is made. This value system is often moulded on ideas of the local and a sense of place and origin. With my work I set out to look closely at this, intending to challenge ingrained notions of authenticity and easy categorisation.

With this in mind, I tried to shift my perspective on standardised objects and materials that might be considered cheap or even worthless because of the fact that they were mass-produced elsewhere. By de-industrialising their industrial appearance, employing time-consuming hand processes and surface treatments such as whittling and engraving, in combination with sand-blasting and machine embroidery, I tried to subvert the identity of mass-produced material. Through the time invested in hand-polishing and wood carving,

and the machine time of digital embroidery and laser engraving, I was able to re-surface and re-tell the stories of these objects. In essence, I re-crafted these products. The typology of objects I chose to focus on consisted of tablecloths, silver napkins, and tableware in natural wood, stainless steel, and black slate stone: in total 145 pieces. For the tableware and tablecloths, I started by using ready-made standardised products that are mostly sourced from far away; these semi-finished products that I gathered included cotton and linen curtain fabrics, wooden cutting boards, and slate tiles: a mix of more-or-less functional goods that are related to the domestic space. I then re-crafted all of these ready-made and semi-finished products, manipulating their surfaces by hand or engraving patterns and motifs in my studio in Stockholm.

In the making of the tableware and tablecloths for *Terroir* (2015) I explored the idea of repetition through my own hand and through machine work, particularly laser-engraving. Here, my hands play an active role in cultural re-production and bestow monetary value (my hourly wage as a PhD student from Sweden versus that of a distant labourer in another part of the world). The objects are eventually institutionalised as my PhD project, and thus re-enter the cultural organisation context as cultural products: from far-away, cheaply produced raw material to re-localised, handcrafted objects. This is a problematic paradox: from the labour of mass-production to artistic labour. It betrays the uncomfortable position I am in and need to acknowledge in order to consider my own role and responsibilities as a craft practitioner. The materials I use; the histories of which I am a part; the place where I situate my work; the artefacts I surround myself with; the world system in which my practice is inscribed: none of this can be naively overlooked or taken for granted, especially not in a time of unprecedented environmental, humanitarian, and political challenges.

## Google Earth and the Local, Self-Organised Network

The project *Terroir* (2015) represents a springboard for further discussion about the notion of the craftsperson as a nomad, and concepts of nearness and farness in a globalised world. After having travelled to Tilburg to work on site in the TextielLab facilities alongside their expert craftsmen and technicians, and witnessing

how diverse yet specific bodies of knowledge, skilled immaterial labour, and the most advanced as well as the most long-standing technologies could all coexist under the same roof, I started to reconsider my own working environment: my studio in Stockholm. What are the production dynamics in my neighbourhood? What types of expertise are accessible within a certain radius? How do I define my locality?

These questions constitute one of the main threads of my research, and eventually led to several other works, in particular the final project discussed in Chapter Four of this thesis, *Craft Remediation* (2018–19). This path has informed my understanding of the craft artist's studio not as a secluded, autarkic space, detached from the rest of the world, but rather as a space that is flexible, that can be expanded, shrunk, and adapted: a space that is inserted into larger systems of production and exchange, and that can be connected, shared, and reconfigured ad hoc. As a space, the studio exists both physically and virtually.

Even before I travelled to Amsterdam, during the early stages of the project, I sat in front of my computer screen in Stockholm and used a distinctly modern tool to "get a sense of the place": Google Earth. It was a sort of virtual travel. Tools like this make me reflect on how our concept of distance and time has changed. Thanks to these new technologies we can make plans and look at places in detail before we ever physically go there. I started to use tools like Google Earth to map out and informally connect workshop spaces and production facilities, starting with my studio and its neighbourhood of

Hägersten, Stockholm. I began to look for a potential network of production for craft-based projects. Could I reconnect local facilities and diverse expertise? Or better yet, could I reclaim spaces and tweak production processes, activating a network of potential collaborators?

As a second phase of *Terroir* (2015) I started to look for and engage with small-scale workshops and commercial facilities in my studio neighbourhood (digital and laser engravers of sports trophies and plaques, digital machine embroiderers that normally take on large-scale commissions) in order to continue with the material-based experimentation that I had initiated in TextielLab in Tilburg. The intention was to test whether the same specific conversations on making that I exchanged with the experts in the TextielLab could be expanded, adapted, and activated in my local neighbourhood with its small-scale workshops, which normally carry out repetitive custom work, such as embroidering names on workers' uniforms or engraving commemorative objects. The aim was to reclaim environments for on-site creation or production by activating networks and collaboration systems, collecting new skills and knowledge, and redefining spaces and tools in postindustrial societies to build linkages between pre-existing gaps: "A rhizome ceaselessly establishes connections between semiotic chains, organizations of power, and circumstances relative to the arts, sciences, and social struggles."[108]

Some of the activated spaces of craft that I managed to engage in my neighbourhood are almost invisible; if you are not a company or, for example, a restaurant owner who needs custom-embroidered uniforms, you probably will not notice that this type of workshop space exists. In such spaces the machines serve relatively narrow purposes. It can almost be seen as a ready-made concept of an ad hoc craft space that is waiting to be engaged. Still, it is adaptable; one needs to imagine and propose how to connect and cooperate with it. One of the things I learned from the experience of working with experts at the Tilburg museum was how to facilitate interaction and exchange through dialogue, but also a willingness to explore the unknown. As design scholar Otto von Busch explains, curiosity should also be considered as a skill: "For me, skill is not only a matter of ability but equally one of curiosity. Skill is in this sense something more than a linear path forward, it is also about taking an inquisitive

look at adjacent fields."[109] Furthermore, sociologist Richard Sennett reminds us that cooperation is a skill, and that our ability to perform this skill is diminishing in contemporary society, at the very moment we could use it the most. Because of late capitalism's flexible economy, namely short-term and insecure employment, the impulse for the kind of cooperation that evolves from long-term and sustained interaction is eroded in the workplace—and in our neighbourhoods as well.[110] By acquiring and practising this dialogical skill, and by looking at craft as a catalyst, I can, as a craftsman thinking through craft, connect different workplaces and realities within a neighbourhood.

## Craft as Connector

In this section I contemplate the workshop as both a physical space and an elastic reality that can be expanded, reconfigured, and activated through the creation of networks of production, education, research, and exchange. I posit the craftsperson as a new nomad or internaut who is more flexible and adaptable in global culture, who embodies "the line of flight" that Deleuze and Guattari (1987) saw as a means of escaping hierarchical power, control, and structure.[111] Rhizomatic thinking helps to break dichotomies, thereby pluralising and disseminating, producing differences and multiplicities, making new connections—effectively a diffractive method, as discussed with reference to Haraway in Chapter One.

A linear research method could result in abstractions or a series of actions conducted in a predictable order. But in my case, the research method consists of different courses of action that go through various craft spaces, from small-scale workshops to local neighbourhoods, from city to global production facilities. I refer to my main research approach as situated learning and situated making. It is a process of constantly becoming through crafting and knowing, the relationships that hold our things together. As part of this process, I continuously draw possible connections and eventually activate them in dialogue with and in response to others (other makers and producers, but also spaces and workshops that I may not be familiar with, old and new technologies, tools, disciplines). Such new forms of mobility, flexibility, and transversal skills are indispensable to today's craft practitioner. I have investigated in particular

how craft as a connector (a proposition that emerged through my own practice, as exemplified in the project *Terroir*) is mapped out in different contexts through relevant case studies. What are the new possibilities, scenarios, and identities that arise when material and digital cultures collide? Can a network of collaborative, craft-based realities, well embedded in the urban fabric, provide an answer?

The interconnectedness of network production and modern technology affects the way we understand our material culture—and at the same time has complicated it. If we look at the first prehistoric examples of flint knapping—stone tools that were systematically shaped with other stones by hand—archaeologists are able to trace the material flow[112] by examining physical properties (colours, signs, and facets) and measuring the symmetrical marks along the axis from thin to thick and from front to back. In this way we begin to see a tooling knowledge unfold: from stone axes to hand tools, to ornaments and weapons.

With today's mass production and outsourcing fabrication models, material properties and labour traces are somewhat concealed across a global distribution system. Thus, we are hardly able to track how things are made and their material origin (e.g., electronic devices, fast-fashion items, and clothing such as blue jeans).[113] In the case of electronic and technological devices (smartphones, computers, home appliances such as toasters, etc.), the material flow and their inner functioning has become opaque, so much so that we only focus on their input-output, not on their internal complexity.[114]

When producing, be it physically with a material or through a virtual interface, the value of intellectual property is always in play, in tandem with issues such as the definition of labour, the ethics of production and consumption from raw materials to final goods, and production processes. One could say that we are now living in a global culture in which there are no geographical boundaries for circulation in the developed world; resources and materials are seemingly always available and within reach. But if we consider the urgencies of our time, particularly human-caused phenomena such as climate change, overconsumption and overproduction, pollution, and mass species extinction, among other issues, we know that resources are absolutely limited, and this awareness demands a rethinking of our own roles and responsibilities as makers.

Especially today, when our sense of time and geographical distance has all but collapsed in a globalised world, and with digital methods of production and communication becoming ubiquitous in our daily lives, it is harder and harder to trace materials and things (what things are made of and by whom they are made) back to a specific place or origin: in this sense, words such as “authentic” and “original” have begun to lose their meaning. This is true also of ethical questions such as where materials are sourced, how, and by whom (e.g., conflict minerals contained in portable devices and electronics): the more opaque the relationship between material and source, the less easy it is to question and challenge.

Through collaboration, situated learning and making, and by looking at craft as a connector across different realities of production and learning, a rhizomatic approach has emerged in my research. This approach aids my understanding of complexities and renders me better able to respond to specific situations. A rhizomatic approach allows for engagement within the world (rather than being about the world). Most of the projects that I have developed as part of my PhD have led me to identify with a nomadic, wandering approach to craft. I began to see my workspace, the workshop—starting from my own studio in Hägersten in Stockholm—as a space that is not clearly defined, but that is integrated into larger networks of production, cooperation, and possible collaboration. This has led to a shift in perspective from “do it yourself” (D.I.Y.) to, at least in part, “do it with others” (D.I.W.O.); from self-reliance to cooperation.

This shift has been facilitated in large part by the digital revolution; new communication technologies and digital fabrication have had an enormous impact on craft and on how making is understood today. The pervasiveness of the internet since the mid-1990s has helped shape what is referred to as the “maker movement”, redefining the relationship between production and consumption, and rendering the very notion of fabrication open and accessible to potentially anyone, hobbyists and professionals alike. Through the maker movement, fabrication has transcended its relationship to industry; it has been reclaimed and has gained a collaborative dimension. Open-source models that enable us to collectively share and develop software and products, as well as centres of production and experimentation such as Fab Labs, which have become ubiquitous in urban centres, have deeply affected the

way we make across networks of knowledge and production. In short, the digital revolution has opened up the experience of making to new possibilities for collaboration and contamination. This has in turn affected the reality of where and how we make.

The workshop thus may embrace the virtual and the physical, the public and the private, the institutional and the noninstitutional, and all the other dimensions and possibilities in-between and beyond: the workshop can be understood in terms of a network-based system in which both human agents and nonhuman agents (machines, digital tools, apparatuses, devices, other workshops and facilities) are interwoven. Through cooperation across differences and multitudes, and especially through making together with others (the latter being a proposition that I will expand on in Chapters Three and Four), this approach to craft allows for the sharing of knowledge and manifold connections with others; and this in turn allows for understanding craft as an interdependent discipline in a much broader social, historical, and economic context.

## Do It with Others

Networked society can be traced back to communities such as guild systems, artist workshops, and training practices in the late Middle Ages. Guilds regulated, enforced, and institutionalised standards, but at the same time also provided protection and security according to the law of corporate collective action.[115] In today's craft landscape, with our awareness of current socioeconomic challenges, what can we learn from the past guild systems in terms of the sense of community they represented? In the following sections, through selected case studies, I consider how a similar collective spirit can be applied to supporting the sustainability of craft practice today, in a postindustrial context where certain craft traditions and economies fight for survival. The aim is to highlight alternative organisational models, whereby craft's production and its knowledge is activated ad hoc, across potential networks of sites (small-scale companies, workshops, ateliers) that are dispersed in the city fabric, and often overlooked.

Design scholar Otto von Busch, in his article "Collaborative Craft Capabilities: The Bodyhood of Shared Skills"[116], proposes a shift in perspective from a do-it-yourself culture to a do-it-together

one. He draws on the concept of Nobel laureate Amartya Sen's "capabilities approach", while also citing, among others, the works of Sennett. Von Busch comes to the conclusion that "it would be a mistake to see craft skills as a 'do-it-your-self-practice'; it is rather a 'do-it-together' emergent and uncontrollable phenomenon, beyond the command of one single author or maker."[117] Thus we move from the ideals of self-reliance, independence, and, to some extent, autarchy implied in the DIY vision, to a sense of interdependency implied in the idea of doing together,[118] wherein one learns through discussion and the sharing of knowledge.

In one of his previous projects, *Adventures in Local Knowledge Production*, von Busch started by mapping out all the small actors and informal networks, from serious hobbyists to professional amateurs, that do not appear in the business directories or entrepreneurial maps of Innsbruck, Austria. The aim of the project was to understand how these creative potential actors, which are normally invisible in our current organisation of society, can be reconnected to each other and to other systems through open-source models.[119] Von Busch's project examines the interdependence of craft and technology. It is in line with the network theories of Andreas Broeckmann, in particular with his observations regarding the politics of the internet, which he notes as moving from a collective to a "connective dimension".[120] Can craft, looking at the internet as inspiration and possibly as a relevant space that facilitates communication and the sharing of resources, function as a connector, readapting and circulating to facilitate interconnected production realities?

## Crafting Neighbourhoods—*Made in Sishane*

In this and the following subsections, I explore instances in which craft facilities are scaled up to accommodate a neighbourhood and activated within the urban fabric. Instead of being considered outdated or obsolete business models—separate units or factories—existing infrastructures are seen as a network of realities representing the cultural heritage of a certain place or territory, while at the same time constituting potential new scenarios for making. An example of this is the project Crafting Neighbourhoods—*Made in Şişhane*[121] by architect and designer Asli Kiyak Ingin, presented during the First Istanbul Design Biennale, "Adhocracy", curated

by Joseph Grima in 2012. The Şişhane district is an area with a hundred-year-old tradition of lighting production and trade in Istanbul. Since 2006, urban transformation has taken place rapidly in Istanbul. The project *Made in Şişhane* looks at the unmediated design practices and craft knowledge of a neighbourhood that is threatened by gentrification and by the enforcement of communal policies of urban development. The *Made in Şişhane* project surfaced in 2006 as a series of exhibitions and panel discussions, subsequently developing into workshops and integrated into craft and design-related courses at various universities, including the "Mapping Design in Istanbul" course that inspired the original project. The main strategy of this project was to give visibility and recognition to issues in the Şişhane cluster, where craft activities—and therefore livelihoods—are threatened because of gentrification and property development speculation. By publishing the process in a book, producing a documentary, and mounting an exhibition at the First Istanbul Design Biennial, the project's craft-related content was able to reach a wide audience.

At the core of the project are questions such as: What is the untapped potential that small, local enterprises and production areas offer to designers and creative disciplines? Is it possible to join together small-scale artisanal realities in a creative and productive network, both to preserve their intangible cultural heritage and to stand up against the threat of eviction by urban development and gentrification processes? How can these realities adapt to new economic systems and protect or reactivate abandoned workshop spaces? At the same time, the project also focuses on processes, local stories, and experiences rather than final products: the emphasis is more on the intangibility of craft, rather than the object.

The progressive evacuation, loss, and dismissal of artisanal neighbourhoods—areas that constitute the identity of a certain place and its craft heritage—is something that I personally experience in my hometown, Hong Kong. Every time I go back, I witness the progressive disappearance of entire neighbourhoods where small-scale workshops and businesses used to enrich local life, only to be replaced by corporate chains or shopping malls. This has led me to wonder how the cultural heritage of a place could be preserved and made relevant again, and if a network of collaborative, craft-based entrepreneurial realities, embedded in the urban fabric, could

be the answer. This is a question that, in my view, is addressed by case studies such as Crafting Neighbourhoods—*Made in Şişhane,* and Otto von Busch's *Adventures in Local Knowledge Production*. These examples offer possible scenarios whereby networked workshops and production realities may sustain craft practices in a postindustrial society, thus allowing the communities that rely on these practices for their livelihood to collectively benefit by cooperatively sharing projects, commissions, and know-how.

The project Crafting Neighbourhoods—*Made in Şişhane* brings to mind the concept of "community workshop" as posited by anarchist writer and social historian Colin Ward, who sees the workshop as a place where a set of tools can be shared by a neighbourhood. The "community workshop" thus takes on a social role: important values are created not only by sharing tools, but also by exchanging and transferring knowledge by bringing people together.[122] In my own practice, especially in projects such as *Terroir* (2015) and *Craft Remediation* (2018–19)—the latter discussed in Chapter Four of this thesis—my intention is to research how the relevance of craft practices can be integrated into our human and material landscape, regardless of how immaterial or progress-oriented our world may be in the future. Modern communication tools and digital technology can contribute to craft's preservation, helping to transform it rather than speeding up its demise.

## Re-Crafting Neighbourhoods: the case studies of Theaster Gates's practice in the South Side of Chicago and Design Lab Skärholmen

Mobilities in a socio-spatial sense refer to social change and movement through public and private space by way of intention and action; they are interwoven into the spaces between people, histories, objects, capital, contexts, and other disciplines. Potter and social activist Theaster Gates has a wide-ranging artistic practice that includes object making, performance, and urban planning. In one of his urban-planning projects, Gates transformed a group of abandoned buildings in the Dorchester neighbourhood of Chicago into a creative community hub, known as Dorchester Projects. The hub includes the Rebuild Foundation, founded and led by Gates himself. The aim of Dorchester Projects and the Rebuild Foundation

appears to be that of serving, bringing together, and connecting with the local, low-income, and predominantly African American community in the South Side of Chicago. The Dorchester Projects building, in its new incarnation as a cultural centre, hosts special events for invited guests and the local community. Gates, alongside residents, has developed multifaceted programming that facilitates affordable housing, workshop and studio space for artists, and live-work spaces. The end result is an enhanced social and cultural condition for this locality, although it should be noted that accusations and complaints have been issued against Gates by former employees of the Rebuild Foundation, who claim that the foundation is poorly organised, and that it capitalises on black violence and death in order to garner press and visibility in the art world.[123]

In his TED talk "How to Revive a Neighborhood: With Imagination, Beauty, and Art", Gates begins by describing himself as a potter. After spending about fifteen years as a practising ceramist he came to certain conclusions: "One of the things that really excites me in my artistic practice and being trained as a potter is that you very quickly learn how to make great things out of nothing. As a potter you also start to learn how to shape the world."[124] This knowledge of and capacity for shaping materials with his own hands led Gates to wonder what happens outside of his studio, in the neighbourhood, in the surrounding buildings. Could he think about these buildings as an extension or expansion of his artistic practice, along with other creative disciplines like architecture, engineering, and even real-estate finance expertise? Perhaps what Gates meant by "shaping the world" was to start by reshaping the South Side of Chicago, by bringing together expertise from different fields and activating abandoned residential buildings in the neighbourhood. Over time, he has renovated several abandoned buildings, including a historic bank building that is now a cultural institution for art exhibitions, performances, and archives.

One might naturally wonder how such projects are financed. In fact, Gates describes his method in terms of a "circular ecological system"[125]: most of the community building projects he financed himself through the sale of artworks that he created from the materials salvaged from these interventions. Here we are talking about a position of advantage in which Gates can leverage his artistic value within a certain art market system.

Yet if we look at Gates's approach to blurring the line between artwork and more community-based participatory projects, it is not radically new. African American artist Rick Lowe, in his work *Row Houses*[126] (1993), has worked along these lines with an experimental community housing/art residency/socially engaged project in Houston. In this project, Lowe and his collaborators purchased several small abandoned homes in the Third Ward with grant money from the National Endowment for the Arts and the Elizabeth Firestone Graham Foundation, and then restored them with help from Houston's art community. Another example of an experimental community project with a craft- and object-oriented practice is the London-based multidisciplinary collective Assemble. This collective works together with local communities to train collaborators in building trades and other crafts.[127]

This type of socially engaged art has its roots in what Joseph Beuys described as the theory of social sculpture[128] — the idea that a work of art can simultaneously be a practical social action. Nicolas Bourriaud draws from Beuys's concept of social sculpture and contextualises it further in terms of relational aesthetics.[129] Works of social sculpture differ slightly from those of relational aesthetics, in some cases because of political content. Gates's Dorchester Projects explore individual subjectivity (making the neighbourhood's past history relevant to the present), amplify craft history in the case of his work about Dave the Potter[130], and highlight the potential for social change through networks of collaboration. Gates's practice is different to most socially engaged art projects, which tend to maintain a hands-off approach, commanding rather than actually making. Gates's works are still rooted very much in the process of making. Objects and their materiality matter, and the outcome takes on many forms, including ceramics, sculptures, paintings, dinners, and musical performances. For Dorchester Projects, he engages audiences with his participatory approach and derives meaning through collective responsibility, but also by virtue of the diversity of its audiences. He meanwhile maintains a pedagogical intention to enhance the cultural life of the neighbourhood. A certain social value and local economy is preserved and developed in the process. Gates's practice demonstrates a social contribution in relation to craft, whereby craft functions as a connector in a complex world. Examples such as this seem to propose a shift of focus for

craft practitioners: from “me, myself, and I” to a more reflective and socially engaged dimension, “we, us”.

Another recent, relevant example of a community project is the ongoing Design Lab Skärholmen in Stockholm. The project is run by designer Samir Alj Fält, who frequently collaborates with arts and crafts institutions and museums as an exhibition designer, and has worked closely with his project coordinator Alicia Donat-Magnin. Since 2013, Alj Fält and Donat-Magnin have been engaging with children between the ages of nine and thirteen years old from the local neighbourhood of Skärholmen, a suburb outside Stockholm. They have been inviting children from the neighbourhood to explore collective creation and design knowledge through the process of making with a hands-on approach to material.

Design Lab S is a place where neighbourhood children come to explore design thinking — a making space for identity, belonging, and dreams in relation to the participants' own identities and stories. Design Lab S started with a grant from Svenska PostkodLotteriets Kulturstiftelse (the Culture Foundation of the Postcode Lottery). In 2015, Allmänna Arvsfonden (the Swedish Inheritance Fund) supported its activities for a three-year period. In early 2018, Design Lab S closed its activities in Skärholmen due to a lack of funding needed to maintain its programming. Meanwhile, it also sought a permanent location for the Design Archive Skärholmen, a place where materials relating to the project could be stored pending future development of the neighbourhood.

One recent Design Lab S project is *Skärholmen Interiör*[131] — a publication that hacks the appearance of a glossy, conventional Swedish interior decoration magazine. This kind of magazine mostly focuses on an idealised Scandinavian-chic style of home interior, and on the requisite minimalist designs, objects, and furniture. These publications tend to show one particular style of home, and the same images of perfectly styled and fabricated interiors are reproduced over and over again in other media. They become the norm for what one should aspire to. *Skärholmen Interiör*, while recalling the material appearance of the glossy, stylish Scandinavian interior decoration magazine, is a new type of publication, in that it functions as a survey of real contemporary design and attempts to show alternative images of what Swedish homes look like today. The project was carried out in collaboration with children from the Skärholmen neighbourhood, as well as leading Swedish design and interior photographers. The children are invited as equal employees, providing stories and insights, with equal participation in the design process together with the professional photographers. As a result, by representing real homes with multicultural backgrounds and aesthetics, the magazine offers radical insights into design and interior decoration in Sweden today.[132]

Skärholmen is a densely populated, multicultural place; its most tangible features are large, late-modernist apartment buildings, which were built during the 1960s and the early 1970s as part of the Million Dwelling Programme in Sweden.[133] *Skärholmen* is also home to the world's biggest Ikea store. *Skärholmen Interiör* provides multiple layers of what the representation of "home" could mean today, as it raises awareness of how complicated this term is in relation to recent and current histories, in Sweden and elsewhere. By seeing homes through the eyes of the children that live in them, letting a local voice shape the direction of the content, the magazine reveals not only a sense of belonging, identity, and collective memory, but also addresses issues such as hidden norms, race, and class in our society. Using a magazine as an informal network to expand the idea of "home"; representing what homes actually look like in the lives of the people of the Skärholmen neighbourhood in Stockholm; hacking an existing system of production and information distribution; operating locally but with a global reach — the example of *Skärholmen Interiör* touches upon all of the above, and in so doing it

destabilises the rigidities and certainties of public and commercial media.[134] It becomes community media, producing differences. This, in my view, is rhizomatic thinking.

Comparing Lowe's, Gates's, and Fält's community projects, the difference lies in where they were able to secure funding — for purchasing abandoned buildings and renovating them in the cases of Lowe and Gates, and for maintaining their respective programmes of activities. Furthermore, one question that arises from such projects is how to create a self-sustaining economic system and maintain it in the long run, without relying heavily on grant money. Lowe's and Fält's projects are mostly funded by the cultural-organisation sectors, while Gates's strategy is what he describes as a "circular ecological system" dependent on the sale of artworks created from the materials salvaged from the renovations. In this way he is able to sustain further building and maintenance costs, and subsidise multiple activity programmes. The flip side of this strategy, particularly in the case of Gates, is that it can easily prompt real estate speculation: buying run-down, cheap buildings, renovating them and applying creative thinking in order to turn the buildings and, by extension, the neighbourhood, into something that is culturally valued will eventually cause that property market to recover. Thus the same neighbourhood may become gentrified.

Most of this type of socially engaged work aims to facilitate social change, discussion, educational initiatives, and community engagement. In turn, much of this work tends to rely on grants and academic support. There is a risk that socially engaged art practices may become not only more institutionalised, but also more professionalised or even commercialised. If funding is cut, most of these projects will not be able to continue. If gentrification occurs after the neighbourhood becomes a creative culture hub, the artists and their outreach activities will typically have to relocate or else seek additional non-profit funding.

The previous examples of artist-run social practices and self-initiated projects can and do facilitate change when networked. The space of craft as well as the idea of workshop can be expanded by engaging a local community for site-specific creation or collaboration, by activating local creative networks and collaboration systems, collecting new creative skills and knowledge, and redefining spaces

and tools. Furthermore, such efforts may eventually be scaled up to a global dimension with the help of communication technologies, in particular the internet and open-source models for production and knowledge dissemination: from the individual studio, to small-scale artisanal or production realities in the neighbourhood, to a city-wide presence, all the way up to a global scale. Both a rhizomatic approach and a shift in perspective from a do-it-yourself to a do-it-with-others mind-set is essential to this process.

These case studies propose inspiring models for craft practices. For my practice, they suggest ways to test and build possible future scenarios in which craft can act as a connector through both physical travel but also virtual travel using tools like Google Earth and digital fabrication, and by activating alliances both on a local scale and on the scale of world-wide networks. Furthermore, these examples represent multiple possibilities for collaboration across sites and also across different positions. Through them, I am reminded of Sennett's proposition that, in order to face the challenges posed by diversity and difference (ethnic, religious, ideological, political) within a complex society, cooperation is a craft that needs to be rediscovered and practised by paying attention, listening to others, and fostering discussion. Notions of collaboration and making-together-with (*sympoiesis*)[135] will be further discussed in Chapter Four of my thesis. They are central to what I will refer to as a craft of noticing, and they are also essential propositions in order to understand responsibilities, situated histories and practices, and complexities of the Anthropocene.

## The Reemergence of Craft in the Digital Age

My practice has led me to question the impact of digital technology and communication on craft today. In a progressively dematerialised world that is more and more service- and experience-oriented, is it possible to think of the traditional space of craft as coinciding with (or being expanded by) the digital space, where knowledge and skills are learned, passed on, and transformed at great speed? Modern communication tools and technology have increased our access in terms of cultural interaction and exchange. It makes sense that they would affect the ways craft knowledge is preserved, taught, and shared.

Traditionally, much of the discourse around studio craft, especially goldsmithing and silversmithing, has focused on the skills of the artisan-genius, immersed in a mostly self-reliant practice in his or her studio space.[136] Here, the emphasis is on the maker's use of experiential and tacit knowledge. The late craft theorist Peter Dormer discusses tacit knowledge in terms of Ludwig Wittgenstein's argument in 1919 about the fundamental problem in philosophy, which is the difference between what cannot be expressed theoretically but only shown physically and what can be expressed theoretically via language or sensory perception. Traditionally, craft in general is seen as practical knowledge, with learning by doing as its central activity. It is related to tacit knowledge and connoisseurship—often used to describe the artist's expertise. Craft consists of tacit knowledge that is hard to verbalise and hard to convey to others, but can often be demonstrated through concrete example and comparison. Craft knowledge is difficult to learn through books without actual practice. Thinking through doing can be described in terms of how thought (mind) and action (body) are deeply integrated and co-produce learning and reasoning. Since Greek antiquity, as early as Aristotle, the concept of *episteme* (theoretical, intellectual knowledge) has been contrasted with that of *techne* (practical knowledge, which is required for making, poiesis, and doing, praxis). As part of my research, I looking at how different types of knowledge, which have traditionally been thought of as contrasting, can be integrated or even merged in a complimentary way.

Professor Kristina Niedderer has argued that: "practice is being used as a means of making tacit knowledge available to research, because it includes the experiential part of knowledge which evades conventional communication by verbal or textual means and which is otherwise neglected by research because of the prioritization of propositional knowledge."[137] Her argument on practice-based research has as its starting point an examination of craft and tacit knowledge through making that focuses on the similarities of tacit knowledge with other types of experiential knowledge and perspectives, placing craft in a larger context. When tacit and experiential knowledge are combined with other types of knowledge, for example verbally articulated or theoretical knowledge,[138] new possibilities become evident—possibilities that are engaged in the world, that allow for participation in and sharing of experiences. In social and

interactive design, but also in contemporary craft practices, makers are increasingly putting their skills and knowledge to the benefit of participatory, socially engaged projects. This is in part thanks to the potential offered by information, communication, and digital technologies that allow for people to connect — to share knowledge and experience — and to develop projects or share databases via open-source models.

In the following subsections, through selected case studies and with reference to my own practice, I will look at how craft is affected and transformed by contemporary digital technologies: how craft is learned and taught, and how it is practised and produced. I will discuss relevant case studies from a craft learning/teaching perspective, such as the Van der Kelen Institute (the Brussels-based institution for decorative painting where I conducted part of my research, where they practise a guild system that relies on experiential and tacit knowledge) and Otto Solomon's *slöjd* system in comparison to goldsmith and silversmith Fredrik Ingemansson's *Friday Techniques* YouTube channel. Through these case studies, I aim to look at how, from the *slöjd* system to the era of digital communication, craft knowledge is dissolved and passed on in a fluid way through YouTube, social media, digital communication, and more. What are the consequences of this changing modality?

At the centre of this investigation is the transformation of dialogical learning in craft from the traditional workshop as a social space[139] in which people used to deal with one another and work in face-to-face situations to today's digital environment where most work-related and educational interactions are mediated by a screen-to-screen situation. The virtual world becomes then an intimately interconnected reality through which people and things are intertwined together.

The comparison of two pedagogical case studies in Sweden (Solomon's *slöjd* system and Ingemansson's *Friday Techniques*), despite being over a century apart temporally, helps to cast light on important aspects of craft education, including the potential for passing on craft knowledge via new digital technologies. I will then look at how complex present-day socioeconomic situations have contributed to the development of certain craft forms, and will address instances in which digital technologies have challenged and expanded craft knowledge and practice. I will focus on the

works of sculptor Barry X Ball and activist/media artist Morehshin Allahyari's project *Material Speculations: ISIS* (2015–16), discussing how the links between skill, creativity, and the hand are renegotiated in a digital era, and how modern computer-aided tools (like 2-D and 3-D modelling software, CAD/CAM applications, and rapid prototyping) continue to significantly alter craft discourse. Through the above-mentioned case studies, I will look at the potential of technology to enhance individual mobility and flexibility in support of sustainable structures for craft practice during a time of social, economic, and political flux.

## Craft Dissolving—Craft Becoming

In 2003, UNESCO passed a convention on "intangible cultural heritage" that says:

> Any efforts to safeguard traditional craftsmanship must focus not on preserving craft objects—no matter how beautiful, precious, rare, or important they might be—but on creating conditions that will encourage artisans to continue to produce crafts of all kinds, and to transmit their skills and knowledge to others, especially younger members of their own communities.[140]

As of 2018, the convention has been signed by 171 countries, from Afghanistan to Zimbabwe, but not by Sweden or the United Kingdom[141]—the latter being a country historically associated with arts and crafts: suffice to think of the influence that John Ruskin and William Morris had on the Arts and Crafts movement, which became prominent at the end of the nineteenth century and continued into the beginning of the twentieth century. The movement emphasised the preservation of vernacular crafts, democracy, and cultures of sustainability and well-being—this in the face of the rise of mechanical and factory production and the accompanying decline in the quality of mass-produced commodities. These issues remain hugely relevant to craft discourse today.

Craft had a social role with an aim to construct, to preserve, and to pass along knowledge. Furthermore, historically, the tenets of protection, preservation, and conservation have often had an

ideological and political motivation. In the context of craft, these tenets have been used to reinforce conservatism and nationalist agendas that idealised and promoted tradition and heritage, and that hindered experimentation, contamination, and innovation.[142] An example of nationalist agendas can be observed in the rise of the *Mingei* (Japanese folk-craft) movement during the 1920s and 1930s in Japan. Initiated by a group of potters, collectors, and connoisseurs, the most prominent voice was that of philosopher and crafts theorist Yanagi Sōetsu. the movement promoted the "hand-crafted art of ordinary people".[143] Researchers, such as Yūko Kikuchi, have stressed how ultra-nationalist and imperialist ideals lie at the core of this movement and theory. When discussing *Mingei* theory and its guiding criteria, Kikuchi talks about "Oriental Orientalism": the appropriation of Western Orientalist ideas, hybridised with Zen Buddhism principles, applied to Japan's own nationalist ambitions and imperialist project within Asia.[144]

Craft has traditionally been connected to a sense of place; locally produced objects typically thrived (economically and aesthetically) thanks to the resources within a given territory such as Carrara marble, Murano glass. This aspect has also contributed to creating a value system whereby a material or artefact originating from a specific geographical area has been considered more precious, rare, or desirable — a luxury item. Today, new makers are redefining craft through the use of digital fabrication methods, fast communication, and widely available tools and materials, which together question and confront accepted notions of skill, time, and value.

But my interest in craft is not necessarily grounded in traditional ideas about craft or studio practice. I am drawn to those instances in which craft is able to break free from old schemes and become dynamic, interacting with other areas of human society and behaviour. I see craft as being able to subvert hierarchies of power, defy geographic borders and nationalistic thinking, and challenge the perceived dichotomy between global and local. When craft thinking, for example, employs digital fabrication methods, adopts fast communication, and comments on society and on methods of production and consumption — when craft tools and ways of knowing are easily circulated and shared — then, I argue, it is possible for craft to become fluid and cross-pollinating, taking on an active, chameleonic role in today's society. That is the shift from craft dissolution (that

is, from craft disappearing in light of massive economic and social changes) to craft *becoming* in a postindustrial context.[145]

The term "dissolve" when applied to craft is meant to indicate a form of craft that is disappearing or is in some way endangered during a time of economic, political, and social change. In my research I look at case studies in which craft heritage has been dismissed, terminated, or broken into parts (e.g., the closing down of historical craft factories and the dispersal of their related histories, tools, know-how, and traditions). I am mostly interested however in the connotation of dissolving as "reducing solid matter in liquid form" and "to cause to lose definition, to blur".[146] In particular, I am drawn to how certain craft forms and histories become dissolved within a contemporary socioeconomic landscape, only to reemerge as something new with a potential that was not there before. I argue that modern communication and digital technologies have a crucial role to play in this process. Thus, I look at how craft is dissolved within today's digital landscape, and how, through cross-disciplinarity, its forms are transformed, hybridised, or integrated with new communication and digital manufacturing technologies, offering many more possibilities for craft to exist, develop, and circulate. Dissolving is thus intended as a creative and transformative process rather than a dead end: from dissolution to becoming. From this perspective, in the following sections I consider how craft teaching/learning and craft practice have evolved via tacit experiential knowledge and explicit knowledge[147] while under the influence of modern technologies such as social media, internet-based communication platforms for sharing and publishing, 2-D and 3-D modelling software, CAD/CAM applications, rapid prototyping.

## The Van der Kelen-Logelain Institute, Brussels

In order to understand if and how craft learning has been affected by the digital revolution, I will start with one of the case studies that has remained largely unchanged for the past 127 years: the Brussels-based Van der Kelen-Logelain Institute for decorative painting. The way that knowledge is passed on in this context is still deeply rooted in an apprentice-like system. The Institute specialises in the teaching of trompe l'oeil decorative painting, a craft that I employ often in my work (particularly in the projects *From Landscape to*

*Timescape* and *Chinoiseries*) with the intention of making fictional materialities, destabilising perceived value systems, and challenging easy categorisations; the Van der Kelen-Logelain Institute was also the site of one of my self-organised field trips.

The Van der Kelen-Logelain Institute in Brussels is one of Europe's leading and oldest institutions dedicated to the teaching of decorative painting and trompe l'oeil techniques. It was founded in Brussels in the nineteenth century and remains a family-owned

institution, run by Denise Van der Kelen, wife of Clément Van der Kelen (representing the family's third generation, whose skills have been passed down from his grandfather to his father to him). It would normally take seven years to become a master of the craft of decorative painting; the Institute has now established a course aimed at condensing what would amount to seven years of experience into a six-month, six-day-a-week intensive training programme. The institute represents the merging of two Belgian schools: an industrial school for painting created by Pierre Logelain in 1882, and the Institut Van der Kelen, founded by Alfred Van der Kelen in 1892. Both Logelain and Van der Kelen were originally decorators specialising in the art of trompe l'oeil during the antiquities revival of the late nineteenth century. They mostly worked on the painted interiors of churches, public buildings, and middle- or upper-class homes. During my field trip visit there in February 2016, I was able to join three lessons in the workshop and to attend a demonstration by Denise Van der Kelen. According to my observations, the teaching method there can be summarised by the following principle: "Produce the maximum effect with the minimum means."[148] The school is obviously not about a conceptual approach, but about learning a strict discipline from tooling to application.

Upon entering the building, I had the impression of entering a medieval castle, its cavernous space is cold and quite dark. Before entering the studio space, mobile phones must be stowed away in a cardboard box labelled "Silence!". This admonition emphasises that talking and texting during lessons or painting sessions is not permitted. The studio space feels like a laboratory more than a painter's atelier: it is divided into four sections, each filled with eight-foot-high easels. Before each easel is a small wooden box full of brushes and sponges. Students are to guard this kit until the culmination of their studies.

The training is very specific, almost military in its precision; at each lesson, students silently observe a demonstration during which the teacher paints on a long piece of canvas, mounted on the wall, over the course of about thirty minutes. Then everyone goes back to their easel and tries to mimic what they have just observed, using watercolour on a special nylon sheet, for the rest of the day. Every act of trial and error will leave no permanent traces or marks on the special nylon surface. At the end of the day the paint will be washed

off, and the surface will once again become a blank canvas. The next morning the process will start over again from scratch, although hopefully the students' movements and gestures will be a little more confident in rendering the imitation. This way of practising gestures speaks to me of tacit knowledge: the focus is not so much on a physical outcome or result (as the painted pattern is ephemeral and washed off after each lesson) but on the body learns how to act.

The Van der Kelen manner of practice implies research through self-accomplishment or improvement, which in turn modifies the student's perception and understanding of the material. For instance, faux marble or wood as decoration — and at the same time as illusion — gradually takes shape according to specific pictorial qualities, colours, and surface treatments. Such treatments were commissioned even in places of power, according to an objective that was not simply to imitate real marble or wood, but to surpass it in its ornamental character and its usability. Paint is not used as a device to cover up the surface of a vulgar material. On the contrary, paint and faux marble may be used to finish the most valued masonry. Thus, decorative paint was not considered a mask, but an enhancement — a method of protecting but also embellishing a given facing.

Based on my observations and dialogue while I was there, it seems that the students at Van der Kelen rarely learn to mimic marble or wood using original samples of those materials. Instead, they work from the teacher's reproductions, thus the students produce simulacra from simulacra. By witnessing an established methodology and technique through observation and interpretation, the aim is to expand the student's individual knowledge

as well as their understanding of technique in relation to their own imagination. One of the students there told me that she was enrolled at an academy of art for three years before studying at Van der Kelen. In her previous education most of the knowledge she learned was based on conceptual thinking; she rarely learned any solid implementation skills to accompany the intellectual knowledge she acquired during those years. The Van der Kelen school inaugurated a new method: relentless practice in the service of developing and expressing the individual's taste or talent. At the same time, the school encouraged personal expression, as long as it was justified and followed the set rules of balance and aesthetics. This approach is in line with craft thinking, and can be described as embodied knowledge, the merging of tacit and practical knowledge. But I wonder: What kind of embodied knowledge is produced in relation to artistic practice?

The student I quoted above had sought to bridge epistemological knowledge (acquired through the conceptual approach at the fine arts academy) and the tacit and practical knowledge, the *techne*, that she could acquire through the practice at Van der Kelen. In an apprenticeship practice, skills are traditionally learned by following the works of a master. Learning by doing is considered to be one of the most effective ways to learn. Before industrialisation and the rise of formal schooling as a universal method of education in the nineteenth century, apprenticeship was one of the most common methods of learning craft skill in Europe.[149] Knowledge was directly passed on from masters and experts in fields as disparate as goldsmithing, painting, and pharmacology. Dialogical skills were learned informally through situated learning, and knowledge was transmitted by observation, coaching, and practice through a variety of assigned tasks. Today, knowledge taught in formal school settings via didactic teaching methods such as transmissive lecturing has become abstracted from practical uses in the world.[150]

## *Slöjd* Education in the Nineteenth Century

During the nineteenth century, the Scandinavian *slöjd*[151] educational system was developed and promoted by Otto Salomon. *Slöjd* was a highly methodical educational approach that followed a strict set of rules and guidelines for the teacher as well as the student. The

teacher had a guiding role in *slöjd* education: while the student was supposed to work independently and methodically, the teacher was to be as passive and unassertive as possible. According to the tenets of *slöjd* the teacher should never touch a student's work, and his or her instruction should provide as little explanation as possible in order to encourage the student to use his or her own hands and head to discover the right way. Effectively, students were to learn how to apply their own knowledge by themselves. They learned hand-eye coordination, obviously, but also accuracy — the importance of quality in workmanship and an understanding that handwork and physical labour were to be honoured, even if the student was not going to work as an artisan. Through *slöjd*, students learned — and still do so today in Scandinavia — to make things with their hands in order to understanding the world around them.

The aim of *slöjd* teaching was to promote home industries by teaching young generations traditional Swedish handicrafts. When industrialisation transformed Swedish society, work and school were removed from the home and became institutionalised. At first glance, *slöjd* training might seem an unlikely point of departure for reforming education in an industrialising country. But Salomon believed children learned systemically by developing a series of foundational concepts on which other concepts could then be built. He articulated several principles of educational *slöjd*:

To instil a taste for and an appreciation of work in general.
To create a respect for hard, honest, physical labour.
To develop independence and self-reliance.
To provide training in the habits of order, accuracy, cleanliness, and neatness.
To train the eye to see accurately and to appreciate a sense of beauty in form.
To develop a sense of touch and to give general dexterity to the hands.
To inculcate the habits of attention, industry, perseverance, and patience.
To promote the development of the body's physical powers.
To acquire dexterity in the use of tools.
To execute precise work and produce useful products.[152]

For me, this curriculum seems to reflect the strict mindset of its time. For example, to train the hands in preparation for work in a factory setting—an eventuality upon which most students would depend for their livelihood. *Slöjd* was established during the nineteenth century in a context of industrial revolution; factory work was the main economic driver in Scandinavia. Skill as a means of survival and empowerment for the working class was a key component of civil society at that time. Today, in postindustrial Sweden, many factories are either closing down or relocating to areas with lower labour costs. As of 2017, *slöjd* education now includes computer skills among its traditional offerings. This integration of digital technology suggests new possibilities for the future of craft education.[153]

## Fredrik Ingemansson's *Friday Techniques*

Ever since the romance of making with one's own hands began to fade in the 1990s when Personal Computers were introduced, keyboards and screens have become ubiquitous. School curricula shifted; pupils began to be trained to become *symbolic analysts*,[154] to use the social science phrase for white-collar information workers. Computer class replaced shop class.[155] Once the old generation of shop teachers retired they were rarely replaced; the tools were sold or put into storage. "Home economics"[156]and "shop class" have disappeared from most school curricula in North America and Europe due to school budget cuts (although *slöjd*, which in some aspects is similar to shop class, is still practised in Scandinavia). A new generation was seduced by software and the infinite worlds to be created online. This all contributed to the digital age we live in today.[157] New generations now grow up with computers and social media, not drills and handsaws. That is how the world shifted from atoms to bits.[158] We currently face major changes as the world transitions to a more intangible dimension, where the internet is the main, seemingly democratic communication channel, and new technologies tend to suggest that we are all makers, with infinite customisation possibilities. Crafts, especially in North America and the United Kingdom, have undergone a radical change since the rise and circulation of digital culture, and educational systems have changed alongside them: the idea of learning and teaching a skill or a craft is quite different today. How we understand craft now or in

the near future will no doubt differ from the past. It might disappear in some forms, or be merged, tweaked, and adapted for new needs and contexts.

Fredrik Ingemansson is a Swedish metalsmith specialising in techniques pertaining to goldsmithing and silversmithing practices. He was a former teacher at Ädellab's Jewellery and Corpus faculty at Konstfack, and is known for his "Friday Techniques", an online video project that Ingemansson started in 2012, in which a weekly technical experiment is uploaded to YouTube. The project was initiated in order to push Ingemansson's practice in a new direction, as well as to develop his methods of teaching at Konstfack, the University College of Arts, Crafts, and Design in Stockholm. The metalsmith records his technical and material experiments with his iPhone. This is secured with a headband to his baseball cap, so that the angle appears to be almost from the maker's perspective, as if the viewer is inhabiting Ingemansson's body. The metal craft experiments that he develops in his studio, in which he intuitively combines long-standing metalsmithing and silversmithing techniques with more unconventional ways of working with metal (for example, using a BB gun instead of a hammer to treat a metal surface), are filmed in this way. He then uploads the short videos online and lets them go viral. He does not provide any commentary or any "how to" manual of instructions or explanation; instead he lets the viewer freely interpret and adapt the visual information.

I remember watching Fredrik Ingemansson's videos on my smartphone on the bus: the space of Ingemansson's silversmithing studio and my own physical space became the same through the internet, without temporal or spatial boundaries. The *Friday Techniques* series is also a thought-provoking reflection on how craft skills can be transmitted from the physical working space to the virtual one. It is a uniquely successful educational experiment within craft. For one thing, not all information is provided on how to make exactly the same object or attempt the same technical experiment, as is often the case with DIY YouTube videos or TV programmes. Ingemansson has the video focus on what his hands do — how they move in his working space, how they unconventionally process the material — but he never provides an exact recipe. This is a clever invitation to his cyber audience to be inspired and try for themselves, with all the trial and error that craft, and honing one's own skills, inevitably requires. This is, in a way, similar to the concept of the "flipped classroom".[159] *Friday Techniques* is an example of how digital technologies can establish new methods of teaching craft, including the tacit and experiential knowledge that is at its base. Furthermore, it highlights how the experience of the virtual workshop space differs from a classroom environment's face-to-face situation.

*Slöjd* education cultivated logical and abstract thinking, as well as dexterity and resourcefulness. It contributed a meaningful pedagogical development in craft education with applications for both cognitive and metacognitive knowledge. Ingemansson's educational experiment with craft knowledge explored technology-aided teaching starting from a higher-education context (at first Ingemansson had his own students in mind, who are mainly jewellery and metalsmithing students at undergraduate and graduate levels). His experiment is particularly interesting in light of the emerging movements dedicated to home schooling, workplace learning, distance education and Massive Open Online Courses (MOOCs).[160] It offers concepts and possibilities for how craft education could be negotiated and expanded, and it also takes into account the need to develop ways to sustain students' motivation and curiosity.

Ingemansson's online video project motivates students and prospective craft lovers and makers across the internet to engage more actively with the content presented. It is not about following a manual or recipe, reproducing or copying what the teacher does,

as was the rule at Van der Kelen — it is rather about providing a storyline with plenty of room for others to fill in the blanks with their own interpretations and twists. This invitation can lead to a multitude of new experiments — more than one mind and body alone could ever come up with in a lifetime. The possibilities are practically limitless. Ingemansson's project seems to build upon a *slöjd* pedagogical tradition, in that the teacher does not force his or her vision onto the student's work and process, but rather provides as little information as possible in order to allow for an independent, self-reliant development of the student (or viewer). At the same time, the documenting and publishing tools that Ingemansson relies on (an iPhone digital camera and an online platform such as YouTube) allow for his knowledge and his experiments to be infinitely diffracted. Furthermore, the way Ingemansson works, bringing tools, materials, techniques, and apparatuses together in an immersive way, brings to mind what Haraway refers to as "diffractive": a concept I restructure and adapt ad hoc, depending on the context and situation.

### Barry X Ball's *Masterpieces*

Digital technologies and processes have enabled craft to become more elastic and dynamic, combining its thinking and methodology with other areas of human society and behaviour. Furthermore, digital technologies applied to craft problematise the nature of authorship — the ownership of ideas and how appropriation may be redefined. Sculptor Barry X Ball's practice represents a case study of how new media projects — in his case the 3-D scanning of original museum sculptures in Italy, which are then refabricated using CNC milling — have the potential to re-democratise authorship of an original artwork, therefore shifting our perspectives on authorship, originality, and the value systems that are associated with such notions.

Most of his stone sculptures are rendered with today's most advanced techniques, including 3-D laser scanners and CNC milling robots. The use of five-axis CNC milling systems enables Ball to produce works in materials such as onyx stone with decorative patterning. Traditional stone-carving techniques, such as stone chipping, would cause such materials to fracture uncontrollably.[161]

As part of his "Masterpiece" series, the artist scanned two Italian sculptures in Ca'Rezzonico in Venice: Antonio Corradini's *Dama Velata* (*Purity*) and Giusto Le Court's *Medusa Vecchia* (*Envy*). After processing the scans, adding slight differences and details, he used them to reproduce the Italian sculptures via CNC milling in materials such as onyx, calcite, and black marble.

Instead of using traditional white Italian marble, the artist used onyx because the material has a translucent quality that allows light to pass through the veils of *Purity*. He also used veined calcite stone in order to camouflage *Envy*'s folds and sweeps, creating a visual complexity that is not present in the original sculpture by Giusto Le Court. All these sculptures are mirrored in order to add a narcissistic element, and Ball also digitally fixed several of Corradini's sculptural "errors". As suggested by the artist himself in his "Masterpieces" statement published on his website, his reproductions are arguably—from the artist's perspective—refined versions of the historical originals, as they embody the complexity of both historical references and material thinking combined.[162] Using digitally manipulated files of the original sculpture in combination with CNC milling systems, the artist is able work with virtually any stone from anywhere in the world. The reproduced sculptures seem to propose a new understanding of appropriation and of what is or is not a copy. Through them, new material identities, ownership models, and narratives are made possible, and new origins and geographies are created.

### Morehshin Allahyari's *Material Speculations: ISIS*

An artefact is a carrier of both collective and personal data: how it was made, its material composition, and the signs of interaction it has collected throughout its life cycle all convey information about the world and culture we live in. The value of an artefact is constantly moving and hard to grasp: it can be monetary, emotional, cultural, or all these at once. Today, with the emergence of a 3-D production ecosystem that is both affordable and user-friendly, 3-D printing and 3-D scanning technologies have become of immediate interest to museums for the purposes of research, collections management, archiving, exhibition production, conservation, and restoration.

In her project *Material Speculations: ISIS* (2015–16), activist/media artist Morehshin Allahyari explores the implications of 3-D

imaging technologies as a means of preserving cultural heritage and as a tool for political activism. Allahyari began the reconstruction of twelve original artefacts destroyed by ISIS [Islamic State] in 2015, and subsequently released a collection of free 3-D printable files online or on-site, the latter in the form of a digital "dead drop" where attendees to the artist's public presentations could plug their own device into a USB port in a wall and receive the files. The artist explained:

> The more files that are saved on people's computers, even if they're never printed, the number of PDF files that are read or kept, the more that history that was initially removed by ISIS will be saved. [...] Like time capsules, each object is sealed and kept for future civilizations. The information in these flash drives includes images, maps, pdf files, and videos gathered in the last months on the artifacts and sites that were destroyed.[163]

Her intention with the project is not to replace those destroyed artefacts, but instead to raise questions about the nature of cultural ownership in the digital age, and to draw attention to the very specific purpose of using 3-D technology in restoration contexts. One of the many challenges the artist faces is to find a platform or museum for the release and preservation of all the digital files and models from this project. In the context of a museum or cultural conservation platform, what are the issues such an institution would be confronted with? What would it mean to present this heritage in this manner to a public audience? Allahyari's political project using 3-D technologies is thus a valuable case study in the museum context, where the intention is to inform audiences and tell the stories of our time in an engaging way.

Barry X Ball looks at how new media has the potential to re-democratise the authorship of the tools of production, allowing him to use materials, such as certain types of onyx stone, that others could not work with in the past. Allahyari explores the implications of 3-D digital technologies for preserving cultural heritage and as a tool for political activism. Both Ball and Allahyari see digital technologies as instruments of potential that may help to engage social and cultural awareness. This same potential is relevant to expanding

craft discourse as well, particularly when it comes to investigating new digital technologies in relation to craft, and to questions of preservation, shared authorship, and collaboration. In my craft practice, I question and confront accepted notions regarding skill and time: in this sense, the relationship between traditional forms of craft and digital technology is an essential consideration. It is in part due to the introduction of digital fabrication methods, fast communications, and the widespread circulation of tools and materials, that the value systems that rely on these notions have been both challenged and reinvigorated.

In the previous examples I discussed how the act of "dissolving" pertains to craft in the present—a time in which the transition from analogue to digital is in full force in the crafts and beyond. In short, I see digital media pushing craft to "dissolve" in the sense of its being "caused to lose definition, blend, or blur" or "to reduce (solid matter) to liquid form".[164] The idea of learning or teaching a skill or craft is quite different in such a context. The case studies of the Van der Kelen Institute (based on a guild system and on the training of embodied and tacit knowledge), and that of Otto Solomon's *slöjd* system in comparison to Fredrik Ingemansson's *Friday Techniques,* show how craft knowledge can be dissolved and passed along in a fluid way as we enter the era of digital communications.

From my perspective, this represents an opportunity to both discuss and problematise the supplemental quality of craft. As the idea and definition of craft has become elastic and digitised, defying geographic borders, accepted notions of skill, time, and ways of passing on craft knowledge have been transformed, or hybridised. It is a process that leads to something that was not there before. Case studies such as Barry X Ball's marble sculptures, Morahshin Allahyari's *Material Speculations: ISIS*, and Fredrik Ingemansson's *Friday Techniques* suggest that the idea of authorship and ownership are undergoing transformation due to new forms of cultural production based on collaborative and cooperative attitudes towards knowledge-sharing, openness, and participation.

## Summary and Introduction to Chapter Three

In this chapter I have described how certain craft forms and histories become dissolved within a contemporary socioeconomic

landscape, only to reemerge as something new with a potential that was not there before. Crafts have undergone a radical change since the rise and circulation of digital culture, and educational systems have changed alongside them: the idea of learning and teaching a skill or a craft is quite different today. These changes have affected craft's position in our contemporary society as well as its embodied theory and practice. From this perspective, digital technology has the potential to enhance individual mobility and flexibility in the service of developing sustainable structures for craft practice in today's climate of social, economic, and political flux.

In this chapter I have introduced how nomadic learning is relevant to my nonlinear research subject. My research and projects encompass different situations in which materials, objects, people, histories, and their places are interconnected and interwoven. The rhizomatic approach to craft is sustained through exchange and responsiveness. It allows for sharing knowledge and responding to and reconnecting with others. This in turn allows for understanding craft in a much broader social, historical, and interdependent context. The introduction of digital fabrication methods, fast communications, and the widespread circulation of tools and materials both challenge and reinvigorate notions of skill and time, and the value systems that rely on these notions. These changes push craft to "dissolve" in the sense of its being "caused to lose definition, blend or blur" or "to reduce (solid matter) to liquid form".[165] The idea of learning or teaching a skill or craft is quite different in such a context, and, by extension, craft practice is transformed or renegotiated across disciplines. The case studies of the Van der Kelen Institute (based on a guild system and on the training of embodied and tacit knowledge), and that of Otto Solomon's *slöjd* system in comparison to Fredrik Ingemansson's *Friday Techniques,* show how craft knowledge can be dissolved and passed along in a fluid way as we traverse the era of digital communications and fabrication. On the other hand, the case studies of sculptor Barry X Ball's marble sculptures, Morahshin Allahyari's *Material Speculations: ISIS*, and Fredrik Ingemansson's *Friday Techniques* suggest that the idea of authorship and ownership are undergoing transformation due to new forms of cultural production based on collaborative and cooperative attitudes towards knowledge-sharing, openness, and participation. When certain craft forms and ways of passing on craft knowledge are transformed, hy-

bridised, and made elastic, a shift happens: instead of dissolving they become fluid and cross-pollinating, taking on an active, chameleonic role in today's society.

I have discussed, through case studies as well as in my own project, *Terroir* (2015), how craft can be seen as a connector, particularly when it is able to become a dynamic, recombinant catalyst in other areas of human society. By sharing knowledge and connecting traditions, skills, and communities in our contemporary society, craft can constantly reclaim new spaces for its propositions and positions between independency and interdependency. When networked, craft can open up and adapt itself to countless contexts for human production and social interaction.

Starting from the idea of craft as a connector, in the following chapter, *Maintaining and Caring—Making the Invisible Visible*, I discuss case studies from the art and craft fields in which invisible labour may be uncovered through the mapping out of human and nonhuman agencies in various institutional spaces, production sites, and workshops. I focus on the floor as space, as well as the ground as a notion and a three-dimensional, layered spatial concept, with the aim of connecting threads that bring to the surface unsung practices, hidden histories, and unnoticed labour. In this context, craft becomes a method to reveal power structures, hidden hierarchies, histories, and value systems. In the next chapter, I will also look at the doorstop as an object that speaks to numerous concepts and questions that are essential to my research and work: the floor as both a physical and metaphorical place for investigating hidden behaviours, societal norms, and histories. In particular, the doorstop helps me to understand the concepts of agency and craft as a verb; craft reveals what we would rather conceal, or what would otherwise go unnoticed.

101. See Fabien Petiot and Chloé Braunstein-Kriegel (eds.), *Crafts: Today's Anthology for Tomorrow's Crafts,* Paris: Éditions Norma, 2018, p. 146.
102. TextielLab (textile lab) is an in-house digital laboratory space connected with the TextielMuseum in Tilburg, where new technologies and textile craft heritage (from the former textile industry in the region), research, education, and exhibition are all fostered. The museum also has a vast archive and textile collection.
103. David Pye, *The Nature and Art of Workmanship,* New York: Cambridge University Press, 1978; reprinted by Cambium Press, 2002; pp. 20-29.
104. Kenneth G. Ponting, *Discovering Textile History and Design,* London: Shire Publications, 1981.
105. Alice Dolan, *The Fabric of Life: Linen and Life Cycle in England, 1678–1810,* PhD thesis, University of Hertfordshire, 2015, p. 68.
106. "Near-produced" refers to local food, materials, and other agricultural products (for example wool, flowers, or vegetation) that are grown or locally produced, processed, and then sold within a certain area.
107. Eugene Kelly, *Material Ethics of Value: Max Scheler and Nicolai Hartmann,* Berlin: Springer, 2011, Chapter One: The Idea of a Material Value-Ethics, pp. 1–15.
108. Gilles Deleuze and Félix Guattari in *A Thousand Plateaus: Capitalism and Schizophrenia,* Minneapolis: University of Minnesota, 1987, p. 7.
109. Otto Von Busch, *Fashion-able: Hacktivism and Engaged Fashion Design,* Gothenburg: Art Monitor, University of Gothenburg, 2008, p. 45.
110. Richard Sennett, *Together: The Rituals, Pleasures and Politics of Cooperation,* New Haven: Yale University Press, 2013, pp. 58–59.
111. "Line of flight" designates an infinitesimal possibility of escape; it is the elusive moment when change happens, as it was bound to, when a threshold between two paradigms is crossed. Gilles Deleuze and Félix Guattari in *A Thousand Plateaus: Capitalism and Schizophrenia,* Minneapolis: University of Minnesota, 1987, p. 17.
112. Tim Ingold, "Materials against Materiality", *Archaeological Dialogues* 14.1, 2007.
113. See Daniel Miller & Sophie Woodward (eds.), *Global Denim,* London: Berg, 2010.
114. In this case, I consider Bruno Latour's concept of "black-boxing": "When a machine runs efficiently, when a matter of fact is settled, one needs to focus only on its inputs and outputs and not on its internal complexity. Thus, paradoxically, the more science and technology succeed, the more opaque and obscure they become." See Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies,* Cambridge, MA: Harvard University Press, 1999, p. 304.
115. George A. Barnett, *Encyclopedia of Social Networks,* Thousand Oaks, CA: SAGE Publications, 2011, p. 58.
116. Otto von Busch, "Collaborative Craft Capabilities: The Bodyhood of Shared Skills", *The Journal of Modern Craft,* vol. 6, issue 2, Bloomsbury Publishing, 2013, pp. 135–146.
117. Ibid., p. 144.
118. Later in Chapters Three and Four of my thesis I will focus on the idea of *sympoiesis* (making-together-with) as put forth by scholar Donna Haraway. According to Haraway, "Nothing makes itself; [...] *sympoiesis* is a word proper to complex, dynamic, responsive, situated, historical systems. It is a word for worlding with, in company. *Sympoiesis* enfolds *autopoiesis* and generatively unfurls and extends it." (Haraway, 2016, p. 31) To me, *making together with* is a much stronger proposition than *doing together.* It entails a responsiveness and urgency that are necessary in the space-time of the Anthropocene, whereby irreversible environmental damage has been sustained by our planet. As these subjects become more prominent in my own practice, I will be discussing *sympoiesis* rather than *doing together* as a relevant proposition for craft.
119. See Otto von Busch, "Adventures in Local Knowledge Production", Innsbruck, published 2005, pp. 48.
120. Andreas Broeckmann, "Subject: Urban Agencies", *Read Me! ASCII Culture and the Revenge of Knowledge,* New York: Autonomedia, 1999.
121. Pelin Derviş, (ed.), *Made in Şişhane: On İstanbul, Small-Scale Production and Design,* Istanbul: A4. Offset, 2011.
122. Colin Ward, *Anarchy in Action,* London: Freedom Press, 1996, p. 92.
123. See, for example, the article: https://southsideweekly.com/cracks-in-theaster-gates-rebuild-foundation/ [Accessed: 2019-07-08].
124. For a TED talk video, "Theaster Gates: How to Revive a Neighborhood: With Imagination, Beauty and Art", see https://www.youtube.com/watch?v=S9ry1M7JIyE [Accessed: 2019-07-08].
125. See http://whitecube.com/artists/theaster_gates/ [Accessed: 2019-07-08].
126. See https://projectrowhouses.org [Accessed: 2019-07-08].
127. See: https://assemblestudio.co.uk/projects [Accessed: 2019-07-08].
128. Social sculpture is a theory developed by the artist Joseph Beuys in the 1970s, based on the concept that everything is art, that every aspect of life can be approached creatively and, as a result, that everyone has the potential to be an artist. Social sculpture united Beuys's idealistic ideas of a utopian society together with his aesthetic practice. He believed that life is a social sculpture that everyone helps to shape. Many of Beuys's social sculptures had political and environmental concerns. The work *7000 Oaks* began in 1982 as a five-year project to plant seven thousand trees in Kassel, Germany. It raised many questions about city planning, the future of the environment, and social structures.
129. Relational aesthetics is a term coined by curator Nicolas Bourriaud for the exhibition "Traffic", held at the CAPC musée d'art contemporain de Bordeaux in 1996. It refers to installations and interactive events designed to facilitate community among participants (both artists and viewers). Rather than producing objects for individual aesthetic contemplation, relational artists attempt to produce new human relationships through collective experiences. See also Nicolas Bourriaud, *Relational Aesthetics,* Les Presse Du Reel, 1998.
130. David Drake (1800–1874), also known as Dave the Potter, was an enslaved African American in Edgefield, South Carolina. He is known today for his masterfully made stoneware pots and jars, and for the poems and engravings that he used to mark the surface of his pottery with. He also

signed his vessels with his name, 'Dave'. This happened at a time when enslaved people were forbidden from literacy, because of anti-literacy laws in force in parts of the United States. The Dave Project originated from "To Speculate Darkly: Theaster Gates and Dave the Potter" (2010), an exhibition at the Milwaukee Art Museum in which contemporary Chicago artist Theaster Gates celebrated the legacy of Dave the Potter. For further reading: Orron Kenyetta, *Outlasting Denial: A Case Study in Curatorial Activation Around Dave the Potter,* Milwaukee: The Chipstone Foundation & The Green Gallery Press, 2012.

131. Samir Alj Fält, *Skärholmen Interiör,* Stockholm: Design Lab S, 2018.
132. Ibid., pp. 14–15.
133. The Million Dwelling Programme was a government-initiated reform to solve the need for family apartments in Swedish cities and smaller local communities during the 1960s. The building of new rental dwellings started in 1965 and continued until 1974. Approximately the same number of dwellings were built during the period 1945–1965. In total more than one million apartments were built.
134. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia,* Minneapolis: University of Minnesota, 1987, p. 7.
135. Haraway 2016.
136. Glenn Adamson, *The Invention of Craft,* London: Bloomsbury Academic, 2013; Elaine Cheasley Paterson & Susan Surette (eds.), *Sloppy Craft Postdisciplinarity and the Crafts,* London: Bloomsbury Academic, 2015.
137. See Kristina Niedderer, *A Discourse on the Meaning of Knowledge in the Definition of Art and Design Research*, Izmir, Turkey: European Academy of Design Conference, 2007; "Mapping the Meaning of Experiential Knowledge in Research", *Design Research Quarterly,* 2 (2), 2007.
138. See Kristina Niedderer, "Designing Craft Research: Joining Emotion and Knowledge", *Design Journal* 17(4), 2014, pp. 624–647. In this article, she introduces the emerging need for creative research in the crafts and contrasts it with the current strictures of research and exposes the tensions between traditional perceptions of craft and research.
139. Both the dialogic and dialectic are important parts of learning. The dialectic approach dissected since the time of Aristotle, is used to clarify debated topics in academia and is generally meant as a discussion exchanged between people to handle a disagreement; on the other hand, the dialogic, according to sociologist Richard Sennett, is more open-ended, local, pluralist, and modest in its approach. Sennett emphasizes the importance of dialogue rather than debate. See Richard Sennett, *Together: The Rituals, Pleasures and Politics of Cooperation,* New Haven: Yale University Press, 2012, pp. 19, 109–116.
140. See UNESCO, Intangible Cultural Heritage, Heritage Craft Association, http://heritagecrafts.org.uk/intangible-cultural-heritage/ [Accessed: 2019-07-08].
141. An English Cultural Heritage representative, interviewed by researchers Smith and Waterton in their paper, stated that the cultural institution believes the United Kingdom has no intangible heritage and no obvious examples you could come up with as intangible heritage beside Morris Dancing. This gives an insight into why the safeguarding and celebration of intangible heritage is not so well served by Eurocentric conceptions of world heritage. See Laurajane Smith and Emma Waterton, "The envy of the world? Intangible heritage in England", in Laurajane Smith and Natsuko Akagawa (eds.), *Intangible Heritage,* London: Routledge, 2009, p. 297.
142. See Barbara E. Thornbury, "The Cultural Properties Protection Law and Japan's Folk Performing Arts", in *Asian Folklore Studies* 53, no. 2, 1994, pp. 211–25.
143. Yanagi Sōetsu, The Beauty of Everyday Things, London: Penguin Classics, 2019.
144. See Yūko Kikuchi, "Hybridity and the Oriental Orientalism of Mingei Theory", in *Journal of Design History 10,* no. 4, 1997, pp. 343–54. https://readingeastasia.files.wordpress.com/2013/09/yuko-kikuchi-hybridity-and-oriental-orientalism.pdf [Accessed: 2019-07-08]. And also, Kim Brandt, *Kingdom of Beauty: Mingei and the Politics of Folk Art in Imperial Japan,* Durham, NC: Duke University Press, 2007.
145. See Stacy Jo Scott, "Unfold Interview – The Virtual Potter's Wheel", *The Journal of Modern Craft,* online article, 2011. Source: http://journalofmoderncraft.com/responses/unfold-interviewthe-virtual-potters-wheel [Accessed: 2019-07-08].
146. See the dictionary definition. https://dictionary.cambridge.org/dictionary/english/dissolve [Accessed: 2019-07-08].
147. Niedderer, K. (2007). "Mapping the Meaning of Experiential Knowledge in Research", *Design Research Quarterly*, 2 (2), pp. 1–13.
148. See the catalogue of the Van der Kelen-Logelain Institute, Brussels: Edition Vial, 2009, p. 86.
149. Stephan R. Epstein, *Guilds, Innovation and the European Economy, 1400–1800,* Cambridge, UK: Cambridge University Press, 2010, p. 58.
150. Allan Collins and Manu Kapur, "Cognitive Apprenticeship", chapter 6, in Keith Sawyer, ed., *The Cambridge Handbook of the Learning Sciences,* Cambridge, UK: Cambridge University Press, 2014, pp. 109-127.
151. The Swedish word *slöjd* is translated as *sloyd* in English. The Scandinavian word means handicraft or manual skill.
152. See Otto Salomon, "The Teacher's Handbook of Slöjd" http://www.archive.org/stream/teachersbookofsl00saloiala#page/n15/mode/2up [Accessed: 2019-07-08].
153. See https://utbildning.gu.se/kurser/kurs_information?courseid=SLF30G [Accessed: 2019-07-08].
154. "Symbolic analysts", a term coined by Robert Reich in *The Work of Nations* (1991), are workers who occupy a strong position in today's globalised service- and information-driven economy.
155. The term "shop class" is mostly used in North America. In general, shop class pertains to certain skills learned in high school — building, fixing, and making things, usually using drills, saws, and other woodworking tools. (Such skills were required because they were the sole means of getting any manual labour or fixing done around the house.) See Matthew Crawford's *Shop Class as Soulcraft: An inquiry into the value of work,* London: Penguin Books. 2010.
156. The definition of "home economics" is the study of how to run a household. A course that teaches cooking and sewing at school is an example of home economics.

157. Chris Anderson, *Makers: The New Industrial Revolution,* London: Random House Business Books, 2012, p. 54.
158. See "In the Next Industrial Revolution, Atoms Are the New Bits" https://www.wired.com/2010/01/ff_newrevolution/ [Accessed: 2019-07-08].
159. Chemistry teachers Jonathan Bergmann and Aaron Sams are considered pioneers of the Flipped Class Movement. The concept of the "flipped classroom" is one in which students view didactic materials at their own pace at home, and come to class to perform shared activities that reinforce and deepen those lessons, guided by their peers and teachers. Delivery of the basic content online gives students the opportunity to set the pace of their learning, allowing them to slow down or repeat sections of content they do not understand, and to skip material they already understand. Students decide what to watch and when, which affords them the flexibility to identify the best times for them to absorb and learn new material. Further reading: Jonathan Bergmann & Aaron Sams, *Flipped Learning: Gateway to Student Engagement,* Publisher: Int Soc for Tech in Education, 2014.
160. See http://mooc.org [Accessed: 2019-07-08].
161. See Barry X Ball, "Masterpieces: A Collection of Selected Statements", http://www.barryxball.com/files/process/7.pdf [Accessed: 2019-07-08].
162. Ibid.
163. See the artist's website for more context on the project: http://www.morehshin.com/material-speculation-isis/ [Accessed: 2019-07-08].
164. See the dictionary definition. https://dictionary.cambridge.org/dictionary/english/dissolve [Accessed: 2019-07-08].
165. Ibid.

# Chapter Three
# Maintaining and Caring — Making the Invisible Visible

## The Horizontal

In this chapter I focus on the horizontal, particularly the floor and the ground, as a site that allows for hidden hierarchies, histories, and behaviours to be revealed by paying close attention to often-invisible yet labour-intensive practices of maintenance and care. The floor—but also "the ground", with its many geological layers beneath—is a site where mechanisms of inclusion and exclusion can be traced. Invisible labour may be uncovered through the mapping of human and nonhuman agencies in various institutional spaces, production sites, and workshops. I will also refer to and discuss the doorstop as a literal and metaphorical object that helps edify such agencies in these contexts. I refer to both agencies—human and nonhuman (e.g., artefacts, organisational structures, etc.)—as equal and interdependent, particularly as related to Latour's and Haraway's writings on agency.[166]

In her essay "Negotiating Between Gravity and the Upright Body",[167] architect and Yale professor Keller Easterling starts by saying how the floor has somehow been less scrutinised than other architectural elements such as the wall or the façade. There is something hierarchical in this; in an "optical culture", she states: "vertical surfaces are arguably favored as the canvas […]—a lens as well as a projection of mental constructs. The modern mind, elevating the human from cruder instincts, can keep afloat a number of immaterial constructs, but the heavy inevitabilities that it can no longer

suspend must fall to the floor."[168] This tension between the floor as a site that is taken for granted, overlooked, but that also is where the most primordial forces are at play, is what has led me to consider this architectural element through the lens of craft. What is this site and horizontal surface about? What agencies are activated there, well below our dominant gaze?

Citing Bruno Latour, Easterling continues by discussing the potential of the floor for architecture scholarship:

> Because the floor has often been regarded as an inert supporting player to the vertical, it has been, in a sense, free or wild. It is a reservoir of more primal or potent desires. It is also the untutored surface that escapes the dominant logics of modern man. More recently, the floor has even been able to slip away, to gather intelligence and technology on the flip side of those logics, and it may now return to architecture for an important chapter in its history as something like an expressive software for space with enormous powers to shape building morphology. But that is just one of many unexploited capacities of the floor — an element for the non-modern man.[169]

As part of my research through practice, I am compelled to look at the floor — to analyse what lies on the surface as much as the layers within the ground — bringing forth practices, workmanships, materialities, and histories that may not have always been visible or given space, while at the same time acknowledging more explicit existing hierarchies and value systems. In my practice I return to craft-making processes by using materials and techniques for thinking about, revealing, questioning, and challenging societal norms and the perceived order of things; by making on and from the floor, I explicate the unspoken rules and hidden behaviours that belong to this particular space.

For me, craft is a method of revealing; it allows me to notice what often remains hidden.[170] In my experience, this usually means a history or narrative that belongs deeply to us, that defines us as humans, but that we do not really want to be acknowledged. It may be something which we are ashamed of or do not wish to confront. Sometimes it is absolutely necessary to expose the dust that we would rather sweep under the carpet, in order to understand where we are and what needs

to be done. I look at craft, a discipline that is very elastic, a shape-shifter that can reach into the interstices, as a method that allows me to do just that: search for the dust, the dirt, the mud, what we would rather discard—the hidden histories and behaviours—and then figure out what needs to be done. Through situated making, it is possible to begin to notice, and that in turn opens up new possibilities that were not detected or observable before.

The floor as a space—as well as the ground as a layered, three-dimensional spatial concept—seems to me to be the ideal starting point to observe unnoticed, complex entanglements, as well as to begin to recognise unsavoury histories towards which I have, as a maker, my own share of accountability and responsibility. In order to connect the dots and develop a theory through my practice and observations, I also look at case studies from the fields of craft and fine art. My aim is to expose connections between unsung practices, hidden histories, and unnoticed labour. In this context, craft becomes a way to reveal tacit power structures, hierarchies, and value systems. In particular I examine the writings of Haraway, who has considered the ground as a primal site that, in contrast to the logic of "the modern individual" or "modern man", is full of complexities and significance.[171]

Most of all I am interested in this site from a craft perspective: from less-scrutinised practices of floor making and floor laying, to maintenance and repair activities, all the way to works of contemporary craft and fine art that select the floor as the surface of choice for displaying objects and communicating ideas in a conventional institutional context (galleries, museums, etc.). In her often-cited 1997 essay "Sculpture in the Expanded Field"[172], the art critic Rosalind Krauss examined the increasing materiality in sculptural practices within fine art media. Years later, in her essay "Horizontality", she described Jackson Pollock as "bearing witness to the horizontal's resistance to the vertical".[173] When sculptures were removed from the plinth and placed directly on the floor, something happened to both our understanding of them and our relationship to them as art objects. Both emotionally and intellectually, this shift suggests that art objects placed on the floor are counter-monuments: the anti-monumental and the dialogical become opposed to the basic logic of standing upright. The horizontal suggests something deflated, with humility and strength, as a consequence of vulnerability.

I believe that the floor and the ground are spaces that can tell us much about who we are, how we live with one another, how we relate to our surroundings, what we value and why. I aim to analyse the floor as a place for both inclusion and exclusion; as a space that can perhaps offer an unpolished sense of a culture and society at a given time and place in history or memory. The floor is a place that, especially in an institutional setting, can be discussed and activated in order to challenge hierarchies and value systems.

## Scraping the Surface

In Gustave Caillebotte's *Les raboteurs de parquet* (The Floor Scrapers, 1875), half nude male bodies, drenched in natural light, are depicted on their knees, robustly scraping the wooden floor of a Parisian apartment. The setting — a bourgeois, beautifully finished flat — and the painting's subject — three workers performing a labour-intensive task — present the viewer with a stark, emblematic contrast: it is one of the first paintings to represent the urban proletariat[174] as its subject matter, at a time when most of the fine art traditionally accepted by the academy was concerned with grander or more bourgeois motifs and subjects. At the same time, there seems to be a clear hierarchy in the painting: a clash between the social class that the painter, Caillebotte, belonged to (he came from a wealthy family, and the finely decorated interior in the painting is thought to be his own studio)[175] and the working class the floor scrapers belonged to. This is accentuated by the high-angle perspective. The observer (the painter himself) is looking down on the workers, but he also centres them in his composition, highlighting their idealised bodies in a sensual manner (their nude torsos are reminiscent of the bodies of the heroes of antiquity) via the abundant light that is cast through the window.

The subject matter of this particular painting was deemed provocative at the time it was first presented to the public and was rejected by the 1875 Salon,[176] the prestigious art exhibition gathering the highest expressions and accomplishments of French contemporary art. While being masterfully executed according to the principles recognised by the academy — Caillebotte was academically trained and studied under Léon Bonnat — the jury considered the central motif too vulgar: workers depicted in their trade, their bodies

exuding a certain sensuality. Despite the rejection, Caillebotte later presented the painting at the second exhibition of the Impressionists. The painting offers a relevant view of labour within the context of caring and maintaining. The workers are only visible while performing a maintenance job in a bourgeois house. Caillebotte wanted to represent a real subject, highlighting the proletarian class rather than the aristocracy. The contrast between wealth and human labour value lies at the core of the capital accumulation process, and speaks to the reality of living conditions during nineteenth-century modernity, in an era of industrial revolution.

## Whose Labour, Whose Craft?

The floor scrapers captured in Caillebotte's painting are preparing the floor and levelling what are probably hand-cut wooden boards to make them flat. This was a process traditionally done on site. Once the hand-cut, imprecise boards were laid down, the workers would flatten them by hand using scraping tools. Nowadays this process is mostly used for aesthetic reasons, on machine-cut modern floors, to replicate an antique-like, distressed finish, or as a way to remove the upper worn layer of wood without damaging an older floor—a means of gentle conservation.[177] Floors—no matter how modern and technologically advanced—require constant cleaning and maintenance. A dirty floor is socially unacceptable, and some cultures have developed meticulous practices of cleaning and maintenance, as in the Shaker tradition of hanging utensils and small furniture on peg rails, in an attempt to keep things off the floor.[178]

The floor is a support, a foundation, the basis of all else that happens in a space. If we think about moments in history, fiction, or drama in which someone throws themselves or is thrown to the floor, or kneels down on it, it is usually to signify despair, subjugation, submission, or annihilation. Alternatively, the loss of control can be pleasurable, as in abandoning oneself to passion, daydreaming, or lust. Likewise, things thrown on the floor, or allowed to fall down onto it, are often rejected, unwanted. As Easterling points out: "Failed things, no longer able to resist gravity, lose their place and become detritus on the floor."[179] In this process of separation of matters (what is useful from what is considered unnecessary), the floor plays an essential role. Acting almost as a sieve, or as a gatekeeper,

it represents more of a catalyst, attracting to itself via the force of gravity and depending on the context and system of values in place, what is to be kept or thrown away; what is noticed or unnoticed; what is to be included or excluded. Sometimes more than one of these categories coexist on the floor, and depend on each other.

If we think of the threshing floor, which is, as described by Easterling "an outdoor floor technology predating the ancients"[180], and the purpose which this hardened bit of paved ground came to serve — that of stamping, thrashing or grinding grain — there seems to be a connection between the floor (or hardened ground as in the case of the threshing floor) and labour. It is a surface where intense work practices (cleaning, maintaining, separating chaff from grain) are activated. When it comes to artistic practice in relation to floor practices of cleaning and maintenance as depictions of repetitive and alienated labour, Japanese-German jewellery artist Yuka Oyama's artwork *Helmet — River*[181] comes to mind. In Oyama's artwork, a performative video piece, the artist uses black helmets to convey the sense of groups of people turning into mechanical ants and/or soldiers: one commands while the other eight participants obey with a sequence of choreographed military-like movements that take place in the hall of a neoclassical-style building. Each of the eight participants holds a kit of rags and a bucket filled with blue paint. All wear the same white protective uniform and a futuristic cyborg mask.

The video performance is also reminiscent of a factory production line, where human body movements are mechanised by the repetitiveness of labour: the eight participants, one following the other, push their rags, impregnated with blue acrylic paint, across a large rectangular canvas on the floor. This reading of Oyama's artwork as

a commentary on factory labour and mechanisation is supported by craft scholar Stephen Knott, who visited the exhibition "(IM) PRINT" in Munich, at easy!upstream[182], where this particular work was shown. Knott writes:

> To orders barked out by the diminutive leader, the eight participants, each equipped with a cotton towel and watery blue acrylic paint in a blue bucket, crouched at the ready on either side of a large rectangular canvas on the floor and then proceeded to push their charged towels across the canvas, making streaky blue marks. This was not like Pollock's drip paintings, replete with spontaneity and artistic expression, but a tightly controlled orchestration, painter-workers pushing a towel up and down a floor in a humiliating and self-destructing ritual. The footsteps of each participant immediately marked the just-painted section of floor, and they stuttered and faltered as a result of the slipperiness of the surface they were creating. The video recalls similar ephemeral choreographies of labor, from Revital Cohen and Tuur Van Balen's assembly line/dance *75 Watt*, shot in the White Horse Electric Factory in Zhingshan, China,[183] to ceramist Simon Carroll's "beach painting"—pattern designs normally seen on pots etched into the sand with a humble rake.[184]

This sequence also brings to mind the Japanese floor-cleaning practice *soji*. However in this case, instead of a glossy surface, the result is a painted blue surface, on which the brushstrokes (more like "rag strokes") and footprints remain visible; this action is recorded from above and presented as a moving image on a flat screen (at easy!upstream gallery in Munich) so as to evoke a kind of digital flag. Through Oyama's artistic methods and tools (the repetitive choreography, the blue acrylic paint) and the efficient and collective actions of the performers, a ritual is presented that highlights the alienation of modern life and the mechanisation of human labour.

Oyama writes in her thesis[185] that she was inspired by Yves Klein's *Anthropometrie* performance at the Gallery of Contemporary Art in Paris in 1960, in which three naked women painted their bodies in Klein's blue and pressed them on sheets of white canvas placed on the floors and walls of the gallery. Meanwhile, male

musicians dressed in suits played Klein's composition *Monotone Symphonie*.[186] Oyama also comments that she was reflecting on her dream-like memories of seeing many samurais swimming in a blue river, and on her personal experience at elementary school of floor-cleaning practice, when she was seven years old and her family had returned to Japan from Malaysia. The cultural struggle and the fear of not belonging to a group was a recurring aspect of her private life, pushing her further in her artistic development.

In both Oyama's *Helmet—River* and Yves Klein's *Anthropometrie*, the floor is used as a main support for their artistic activities and actions—a spatial software for both technologies and bodies. The fact that such different artists, Oyama and Klein, have made the floor a poignant site for expression is noteworthy. Easterling points out, in reference to Latour:

> Architecture's vertical surfaces may often serve as the readable registration of formal silhouettes and signs. But more than mental abstractions or signifying stories and texts, the floor communicates information about relationships and activities—not only "knowing that" but also "knowing how". It is the medium of another intelligence—a rich field of information that is not declared but rather enacted. Since the floor does not manifest as an object form to be admired for shape, outline or profile, often the most sophisticated thing about it is that it can be flat. While architects are well versed in making object form, the floor is a medium of active forms that organize interplay and interdependence with spatial consequence. [...] Presumed to be in place as a rationally engineered silent player that never fails, the floor often communicates some of the most modern banal logics. Still, as a place to which the base, corporeal or non-modern, is often banished, it also bypasses the modern, leading away to forgotten histories and neglected opportunities. An elemental contemplation of the floor often offers to cultural and disciplinary habits some breathtaking trap doors.[187]

This brings us back to Caillebotte's painting—how it was rejected by the 1875 Salon and excluded from the academic discourse of the time, precisely because of its proletariat subject matter. Even if

Oyama's intention is not to comment on labour, or on hierarchies existing in the factory and other working environments marked by repetitiveness and mechanisation, the reading of her artwork *Helmet—River* from this perspective is particularly tempting. There is a clear alienating charge to the performance that takes place in the video: viewers do not get to see the faces of the participants or the leader who is imparting the orders. This is much like Caillebotte's floor scrapers, whose faces, and therefore their distinctive traits, expressions, and identities, are largely concealed: we catch only a glimpse of them, but mostly we see their bowed heads and kneeling bodies. Oyama's performers, or floor painters, are similarly anonymised. The masks and the uniforms are the only physical details that can be seen. Furthermore, the choreography in *Helmet—River* evokes what F.W. Taylor defined as a "military type of organization" in reference to his method of scientific management of work processes.[188] Her choreography is reminiscent of the "rationalization of work processes where every second is counted and every extraneous movement eradicated"[189] that is at the core of scientific management. In Oyama's work, however, the floor painters' movements are far from efficient; they are stilted, somewhat goofy. In fact, the same choreography they are ordered to perform seems to be engineered to make the performers slip on the wet blue paint. The result of their labour is a large blue-painted canvas that records the traces of their footprints and slippery movements—the only memory, perhaps, of their otherwise faceless presence.

Questions of the identity (or lack thereof) of the labourer or craftsperson whose hands make the work—the hidden histories behind the surface of an object or consumer good, practice, or labour—have been addressed by both practitioners and theoreticians in the crafts and arts discourses.[190] As a further example of this quandary, I will discuss two case studies that I consider to be particularly resonant from a fine art and craft perspective, and relevant to my own making and thinking: potter and artist Theaster Gates's tar works made using tools specific to roofing; and *Manifesto for Maintenance Art, 1969! Proposal for an exhibition "CARE"* written by artist Mierle Laderman Ukeles, particularly how it inspired the staff at Casco—Office for Art in Utrecht to reconsider the relationships between public, commons, labour, and management (the "front" and the "back") in the specific context of a communal art institution.

## Theaster Gates's Horizontal Surface

Speaking about his father, who was a professional flat tar roof restorer by trade, Gates recounts his own youth in Chicago and how he would join his father in his work. That experience and the inheritance of his father's tools of the trade eventually opened up an entirely new way of working and thinking in his artistic practice:

> When my dad gave me his tools, when he was retiring from roofing, I thought maybe there was a way that I could use these tools initially in honor of his work and see if that may open up a new working way for me. And it did. [...] And I get to give a nod not only to my dad, but to the black hand. Decades and decades of black labor in the United States that has gone unacknowledged for the fact that the black men and women built Philadelphia, built Washington DC, built Charlotte, North Carolina, built parts of Chicago, that there is a kind of unsung presence of the black hand in the making, the physical making, of the bricks and mortar of our country.[191]

Gates, one of the strongest voices in contemporary American art, maintains a cross-disciplinary practice that is deeply rooted in an understanding of craft as a powerful medium for social commentary, restoration, and change. He seamlessly moves between social sculpture,[192] pottery and ceramics, installation, performance, carpentry, music (he was a choir singer in his youth, and frequently uses singing and playing music in his performances), painting, and urban planning. He also collaborates with practitioners and experts from across fields, from politicians to activists, to locals living in the Greater Grand Crossing neighbourhood of Chicago.

Matters of memory and history—not to be relayed in a nostalgic way, but with an empowering intention—and particularly the memories and histories of African American people, have been central to his artistic practice.[193] As he points out in the excerpt quoted above, he seeks to honour the "unsung presence of the black hand in the making, the physical making, of the bricks and mortar of our country". This is certainly empowering and meaningful in more ways than one; as he points out on the website of the Rebuild Foundation that he leads in Chicago: "Our work is informed by three core values: black people matter, black spaces matter, and black things matter. We leverage the power and potential of communities, buildings, and objects that others have written off."[194]

While all of Gates's oeuvre would be worth discussing in detail, I am drawn in this section of my thesis to these tar works in particular, because of how their very existence is reliant on the experience and understanding of a labour practice that is very close to my experience and understanding of craft. Inspired by "brooming" and tar roofing techniques, tools, and materials—the intense labour that roofing entails, and how it is often employed as a repair practice, to fix and mend a broken, leaking roof—I find a common theme connecting the floor, the ground, or even a flat horizontal surface (as in the case of Theaster Gates and his father when they tarred roofs in Chicago, free of charge) as meaningful sites of interaction. Reflecting on these horizontal surfaces and the practices that are bound to them—typically regarded as boring or invisible domestic work (the chore of cleaning the floor and the working space, as in the case of the staff at Casco—Office for Art, Design and Theory); alienating (Oyama's floor cleaners); unworthy (Caillebotte's floor scrapers); unnoticed (Gates's father's work as a professional flat tar roof restorer)—I aim to expose their unsung practices, hidden histories, and unnoticed labour. In this context, craft becomes a method to reveal power structures, hidden hierarchies, histories, and value systems.

Recalling the experience in an interview with *The Guardian* for the opening of his 2016 exhibition at Fondazione Prada in Milan, Gates said: "It takes a certain kind of muscly body to push a fourteen-foot tar mop around, but when you do it, you do it like you're dancing."[195] This remark seems to speak directly to the practice of training and learning by doing that is intrinsic to craft; a lot of trial (and error) is involved in order to hone one's skills and for

knowledge to become embodied. Movements become progressively smoother, as in a tacit choreography, or, indeed, a dance that one has practised millions of times. In a way that is similar to Caillebotte's depiction of his floor scrapers, I can picture Gates and his father, heads bent over the surface of the roof first, and later canvas, torch and mop at hand, performing this labour-intensive process. It is notable that Gates's father used to employ the skills of his trade to repair or re-do the roofs of poor families, often African American families that lived in the Gates family's own neighbourhood. This free, voluntary gesture and "unsung" work that Gates and his father contributed to their local community no doubt left a mark on Gates. By learning his father's skills and trade, and by infiltrating the fine art context and the white cube with his canvases and sculptures painted with tar made with his father's tools, Gates ingeniously subverted power structures and hierarchies. The art context becomes a platform where the untold, usually written-off histories of, in this case, black people, now resonate all the more powerfully.

With this shift in context that Gates negotiates — from the tarring of the roof to the tarring of the canvas or a bronze sculpture,[196] from the context of the impoverished neighbourhood of run-down houses, to the context of the art institution and the art market — very specific, vivid histories and practices that would otherwise be largely silenced and written off are made visible and public. The unsung is given space, and so is Gates father's legacy and "the black hand" that contributed to "the physical making, the bricks and mortar" of America, through Gate's practice and sensibility, which I have also discussed in Chapter Two.

## Cleaning Chores: From the Manifesto for Maintenance Art, 1969! to the Staff at Casco —Office for Art, Design and Theory

In 1969, American artist Mierle Laderman Ukeles wrote the *Manifesto for Maintenance Art, 1969! Proposal for an exhibition "CARE"* just one year after the birth of her daughter. The experience of motherhood and the struggle to reconcile her time as a mother and as an artist inspired her to write the manifesto, which called for: "a readdressing of the status of maintenance work both in the private, domestic space, and in public. Through this she [Mierle

Laderman Ukeles] attempts to break down the barriers between what we think of as "work" and what can be labelled "artwork.""[197] Ukeles recalls the moment in which she understood the need to see domestic chores — caregiving and child-rearing, cleaning and maintaining the house — as potential artistic labour:

> I felt like two separate people [...] the free artist and the mother/maintenance worker. [...] I was never working so hard in my whole life, trying to keep together the two people I had become. Yet people said to me, when they saw me pushing my baby carriage, "Do you do anything?" [...] Then I had an epiphany. I have the freedom to name maintenance as art. I can collide freedom into its supposed opposite and call that art. I name necessity art.[198]

In 2015, the staff at Casco — Office for Art, Design and Theory in Utrecht,[199] in collaboration with Utrecht/Vienna-based artist Annette Krauss, developed a case study[200] as a way to "unlearn"[201] a specific type of institution: the art organisation. Some of the core questions that motivated the case study were: "How do we deal with the contradiction between having a responsibility to the public in a neoliberal society (Casco is a public institution after all) and the desire to unlearn many of the core values of neoliberalism? What is the role of an artist in all of this? And how can we actively practise a commons-based approach in our daily work?"[202]

There is a possible space for friction in an institution such as Casco, which strives to be a "commoning art organization"[203], between its "front" (the institution's public presentation, which entails art exhibitions, publications, public programmes such as events, talks, etc.) and its "back" (management, maintenance work, and organisational tasks, all of which are oftentimes hidden, not published).[204] Inspired by Ukeles's *Manifesto of Maintenance Art, 1969!*, and by the actions and performances that the artist developed throughout the 1970s, the team at Casco tried to address their case study question by paying closer attention to the relationship between business and busyness:

> Why are we always so busy? Why do we feel the constant need to be productive? What does being productive mean

> to us? How does this particular feeling of responsibility affect our bodies and our minds? We realized that running a business, the business of an art institution, is irrevocably tied up with our personal feeling of "busyness," the latter bringing stress and nervousness. Moreover, it became apparent that we continuously undervalue certain reproductive tasks, such as cleaning, cooking, hosting, and non-public administrative and organizational tasks. However, without this "domestic" work, our institution would not exist.[205]

This observation led the staff to take on tasks such as cleaning the floor of their workspace and the public areas of the building as well, specifically the entrance to Casco's premises—which is, I posit, a symbolically charged space. The stairs that lead to the art institution (to its doorway, the gate, the access point) become a resonant metaphor for all that an institution may or may not include. Traditionally, art curators, museum directors, and their institutional teams are considered the gatekeepers—of taste, of value, of cultural relevance. This aspect is subverted when the staff at Casco so visibly start to clean house, therefore proposing themselves as fixers, maintainers, labourers. Seeming to value so openly those chores such as cleaning and tidying up the workspace, usually considered domestic and thus disregarded, or else normally hidden because of being purely administrative (such as sending emails, taking calls, planning), the actions and interactions carried out by Casco's staff attempt to challenge traditional or neoliberal hierarchies, value systems, and rules. The staff, by valuing reproductive value as part of productivity, attempt to unlearn the overvaluing of productivity and busyness that are intrinsic to neoliberal culture. From gatekeepers, they become gate sweepers and gate cleaners.

## Praxis of Care: Ursula K. Le Guin's Metaphor of the Carrier Bag

Author Ursula K. Le Guin, in her essay titled "The Carrier Bag Theory of Fiction"[206], presented a thought-provoking figure for care: that of a carrier bag or basket. This figure, in my view, challenges the notion of unproductive care. In the text, Le Guin describes how the weapon, used for hunting as well as warfare, was most likely a

man-made invention, because of the gender dynamics of the early human's time period, from the Paleolithic and Neolithic. She states: "The first cultural device used by humans was likely not a weapon, but actually a container, a basket"[207] used to carry and store food. This shift in perspective places a greater emphasis on women as inventors and fabricators, as it is possible to assume that they were the ones to weave the basket. This in turn means that women were the ones to craft this first cultural device and tool. Historically, much domestic work has involved everyday caring activities such as taking care of children and housekeeping. Conventional approaches to care[208] have shown how the work of reproduction and maintenance of life has been historically marginalised. Care time, according to British sociologist Barbara Adam, is devalued as unproductive or merely reproductive.[209]

The typology of the basket — or of the bag to carry food in — implies care. It is about containing and thus preserving food and items that are essential to the nurturing of and caring for a community. In this scenario, nurturing and caring, far removed from being unproductive, are about sustaining and allowing a whole group or kin to come together, to live and to continue existing. In her essay, Le Guin uses the carrier bag as a metaphor for storytelling and fiction that eschews a worldview dominated by the figure of the hero. To Le Guin, a story, a fiction, a book, are like containers in that they hold, carry, they preserve and are akin to "a medicine bundle, holding things in particular, powerful relation to one another and to us".[210]

The carrier bag or basket is a typology of object that may be considered out of place in an anthropocentric worldview and in a history marked by wars. Furthermore, it is a device that is likely the expression and invention of a historically marginalised group. Le Guin's metaphor and her emphasis on this particular figure thus represents a proposition that recalibrates existing societal norms and value systems. It questions what is historically acceptable, what is left out, and why. Le Guin's point of view suggests that, instead of looking only at the stories of the weapon and of progress made by the male as a hero, we might have to search for the hidden and almost forgotten stories of the basket, gathering, care, leftovers, community and perseverance, that both contain and highlight the most relevant and urgent questions of our time and potential future.

To me, this proposition urges everyone—designers, craft practitioners, and makers included—to pose, with their practices, questions that can offer guidance and inspire possible acts of response-ability, remediation, and care in the turbulent space-time of the Anthropocene, the phenomenon by which our planet is changing forever due to the actions of the human species: questions about finding ways to live and die well together across species;[211] about rethinking repair[212] and learning to inherit a damaged world; and about those histories that are particularly upsetting and conflict-ridden but that nonetheless belong to us as humans.

There is an urgency for design and craft practitioners to arrive at a greater contextual understanding of our materials, processes, and actions, especially in today's information and internet age, when resources seem unlimited and everything, in the developed world, is just one click away. But resources are indeed limited, and we should be sensitive to past and present inherited histories, searching for and making room for voices, human and nonhuman, that have not always been visible or granted space. By paying closer attention to making and to the stories that are both interconnected and revealed through it, craft practices can inspire a praxis of care, recuperation, and resurgence on a damaged planet. The question is how, and through what steps, can this proposition be activated. These issues are discussed in the present chapter, and further developed in Chapter Four of my thesis. The metaphor of Le Guin's carrier bag—a simple crafted device that may be easily overlooked or unnoticed—is a reminder for me to pay attention to and care for the entangled stories, traces, and possibilities situated in my surroundings and in my practice of making.

## Don't Steal the *Kil*: The Doorstopper

Several of the examples and case studies discussed so far focus on the floor, the ground, or a flat horizontal surface (as in the case of Theaster Gates and his father tarring its surface) as meaningful sites of interaction. They draw attention to this horizontal surface and the practices that are bound to it—practices that are normally disregarded as boring or domestic (the chore of cleaning the floor and the working space, as in the case of the staff at Casco); as alienating (Oyama's floor cleaners); as unworthy (Caillebotte's floor

scrapers); or as unnoticed (Gates's father's work as a professional flat tar roof restorer). In this section, I discuss concepts of invisible labour using the rubric of craft through a metaphorical object — the doorstop — that I have been collecting and remaking to address these subjects further.

In January 2016, I was invited to give a lecture at the Akademie der Bildenen Künste in Munich, Germany. A monumental nineteenth-century Renaissance Revival-style building with a long corridor and many doors, the Akademie is one of the oldest and most significant art institutions in Munich. While I was passing through the corridor, I noticed that in front of almost every door there was a rough, wooden doorstop on the floor. Each doorstop was slightly personalised, with a name or a little sign or drawing. When I arrived at the office of a professor I was meeting for coffee, I couldn't help but ask why her doorstop was marked with her name on it — whether it was a tradition of the academy to personalise each doorstop, or if some student was doing a project in the building. She explained the doorstop story: in order to let students know she is in the building and that she is available for tutoring or a chat, she normally keeps the door open with the doorstop as a signal. The doorstop itself is just a roughly cut wooden wedge that she found discarded in the wood workshop. The reason she wrote her name on it was to try to invest the object with some "authority", because it kept disappearing or getting stolen. Since adding her name to the doorstop, this very modest nonhuman object mostly lives in proximity to the door; it no longer disappears.

Since wondering about the doorstop that day in the professor's office at the Akademie in Munich, I have started to observe this object in everyday situations, and I have been collecting images, videos, and discourse about this particular social object. First of all, how do we define a doorstop? The image that comes to mind is a wedge-like object with an indeterminate angle. It can be made from any material that would hold a door open or prevent a door from opening too widely. Does this object exist mainly in intuitional or domestic spaces — or simply in workshop spaces? If a piece of material functioning as a doorstop keeps disappearing from one particular place, how long will it take before there is a reaction? Will the doorstop be continually replaced, or will it begin to be invested with "authoritative" markings and inscriptions? What will the object's

agency in this context look like? It seems to me that when a human actant, such as the professor at the Akademie in Munich, marks a nonhuman actant, like the doorstop, with their name to prevent it from getting stolen or lost, she is perhaps attempting to regain power over this object. The doorstop inspires me to better understand the power (re)negotiations that happen daily among humans and nonhumans in everyday situations. My experience of crafting doorstops and subsequently observing how these objects disrupt or alter spaces — keeping certain doors open or disappearing from where they should be, thus disturbing our expectations — leads me to consider the possibility of craft itself functioning as a metaphorical object to represent the performative human labour of specific tasks and processes of making and maintaining in our society.

In both "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts" (1992) and "Sociology of a Door-Closer" (1988), Bruno Latour discusses the force and time needed to open and close a door. Latour conceives of objects as lieutenants who have been delegated to perform particular tasks, and both he and Haraway posit the argument that objects are actors with agency in a given space.[213] I think of industrially produced objects that are reclaimed by people, used and interacted with in ways that the original manufacturer never intended. For example, cleaning-spray bottles turned into medical supplies, or painting respirators used for tear gas protection during the Taksim Gezi Park protests against Prime Minister Recep Tayyip Erdoğan's government in Istanbul, in September 2013. The exhibition "Disobedient Objects" at the V&A Museum (2014) showed how household objects have been repurposed during extremely politically charged events. For example, a spray detergent bottle, among many other things, can become a medical tool to bring relief to protesters. This functionality is bestowed by human action — the use redefines the object; the object does not redefine itself via its own agency. But I think of the material properties as agency: the potential use of a material defines itself — for example the plasticity and flexibility of a plastic water bottle, which we will normally discard.

In the summer of 2017 I visited Australia and went to the National Gallery of Victoria in Melbourne to look at the museum's permanent collection. In the third gallery hall, as I was looking at a vitrine filled with impressive decorative objects, I noticed a museum

security guard who was struggling to place a doorstop in order to keep the room's door open. He attempted to do this several times, adjusting the placement of the doorstop, stepping away, then returning when the doorstop would fail to keep the door open. Since the doorstop is not a random object, it cannot be temporarily replaced with a piece of paper or a stick; it is an apparently custom-made object that represents the institution. In fact, I noticed that each door had one black, cast-rubber doorstop intended to hold that institutional door open.

As per Latour's text "The Sociology of a Door-Closer", the door could be equipped with a hydraulic piston that would probably eliminate the menial work of museum staff. Just imagine how many times a day the same action has to be repeated to fix the doorstop under the door, perhaps after a distracted visitor has kicked it out of place. First of all, the maintenance cost will be high. According to the National Gallery of Victoria's annual report from 2014/15, in that year the museum had 2.3 million visitors, so approximately 6400 visitors per day passed through each door of the main gallery space.[214] Observing how these objects could disrupt or alter spaces — keeping certain doors open, or disappearing from where they should be, thus disturbing our expectations — subsequently led me to consider the possibility of craft itself functioning as a doorstop.

Consider the agency of the hydraulic-piston door-closer: Who will be the main actants, and what kind of space needs a door to open and close slowly and automatically? Mostly I would say it is the space of the institution, or public spaces in factories, hospitals, schools, academies, or museums. The actants could be the elderly, children, or workers carrying packages. So maybe it is not too extreme a conclusion to suggest that the (nonhuman) hydraulic-piston door-closer was invented for workers who need to move and transport goods across rooms, or for people whose body and movements necessitate a slow closing motion, or to replace an unreliable (human) door monitor. In Latour's text, this tends to challenge some of the assumptions sociologists often hold about the "social context" of machines.[215]

I find that objects, particularly craft and design objects in the context of everyday activities, are more open to interpretation. They communicate sensually. We engage with and read them through the body and their relationships with other objects, not only visually or intellectually. Today, technological objects and non-human agents are more privileged than humans, because objects are ambient and at the same time evanescent and mutable. We should learn how to pay more attention and practise noticing in regard to things that surround us, which contain hidden multitudes, and their agency is never fully noticed by their existences with humans. Bruno Latour points out that: "objects, images, and ideas included — have their own agency and won't simply sit still under someone else's microscope, on someone else's terms. In fact, what makes them compelling is precisely what animates them, what they want, and how they behave when they are set loose into the world. In other words, objects, images, and ideas have lives to live."[216] And, I would add, these lives are unpredictable, site-specific, and dependent on complex contextual networks and timeframes.

When distributing my work through publications, exhibitions, or other public formats, I am aware and relieved that different stories will be connected to my work — that what I make will leave its current life, moving well beyond my initial intentions or control. To me this is craft's greatest potential: everyday objects will hopefully enter the lives and stories of others. Other stories will be woven into the work I make, beyond my artistic control or authorship. My work will likely outlive me, change, one day perhaps break down or

even be thrown away. Storytelling is intrinsic to this past/present/future history of craft. As art historian Julia Bryan-Wilson writes:

> Craft is a wedge that reveals stark distinctions within ideologies of taste and value. Craft polarizes and collapses theoretical positions about what making means today. Craft is contemporary because it is the pivot between art and commerce, between work and leisure, between the past and the future.[217]

Bryan-Wilson's response resonates with me for several reasons, not least because of her definition of craft as a wedge: is craft, then, a doorstop? Ceramist Jakob Robertsson's *Ceramic wedge* (2004)[218] defines the concept of craft as a wedge in contemporary art/culture.

Craft historian Love Jönsson writes that:

> The wedge, as an object, symbolizes the influences of the small on the big. The force of each individual stroke may remain limited, yet always adds on to the impact of the preceding strokes. The wedge creates cracks that undermine the existing order's claims to totality. The same thing happens when people, coming together, create alternative models of production, distribution, and consumption of goods and culture.[219]

What frictions — among powers, ideologies, histories, value systems — does it reveal? What doors does it keep open and why? What other doors does it let close? Craft speaks to me through the many incarnations that Bryan-Wilson describes — craft as a verb, rather than a noun. The contemporary depends on our understanding of our own temporality in relation to the past, present, and future.

The doorstop as an object resonates with numerous concepts and questions that are essential to my research and work — for example, the floor as both a physical and metaphorical place for investigating hidden behaviours, societal norms, and histories. In particular, the doorstop helps me to understand the concepts of agency and craft as a verb; craft reveals what would otherwise go unnoticed. Craft historian Jorunn Veiteberg explains: "Paradoxically, the cultural historian's attitude is that things are important because we do not see them."[220] She then proceeds to quote anthropologist Daniel Miller, who remarks that:

> It is not that things are tangible stuff that we can stub our toe against. It is not that they are firm, clear foundations that are opposed to the fluffiness of the images of the mind or abstract ideas. They work invisible and unremarked upon, a state they usually achieve by being familiar and taken for granted.[221]

Miller clearly points to the agency of objects — how the more power they exert over us, the more they go unnoticed. I have begun to outline a dilemma that perhaps the doorstop can help me to address: How can objects that are powerful precisely

because they are taken for granted, that are somewhat invisible, contribute to unearthing histories and power structures that are themselves overlooked? What is craft's role in this? My practice is an open-ended investigation through craft that attempts to address this dilemma.

## What is Discarded When Something is Made?

Art theorist Nicolas Bourriaud addresses the notion of waste from a philosophical, art-historical, and sociopolitical standpoint—from aesthetics to politics. Bourriaud starts with a simple proposition: "Waste, according to the dictionary, refers to what is cast off when something is made."[222] He sets out to discuss the mechanisms that produce a divide between product/waste, productive/unproductive, accepted/rejected, and so on. Furthermore, he discusses the "exformal" as: "the site where border negotiations unfold between what is admitted and what is rejected, products and waste. Exformal designates a point of contact, a 'socket' or 'plug' in the process of exclusion and inclusion—a sign that switches between centre and periphery, floating between dissidence and power."[223] The realm that Bourriaud describes as the exformal is a liminal ground that I am interested in exploring through my project: by staying close to the ground, by analysing what lies on surfaces as well as within the layers of the ground where hidden hierarchies become evident, and by cultivating a space for unlearning an object's originality, authenticity, history, sense of place, and material value.

The definitions and implications of waste in aesthetics and politics have essential parallels with concepts of capitalist production and consumption critical to my idea of a dissolving space of craft. My most recent case study pertains to the historic Ateljéföreningen G-Studion hosted in the old factory premises of Gustavsberg's porcelain factory, just outside Stockholm, where many craft artists, designers, and artisans have their ateliers with their own small-scale productions, artistic practices, and work for creative industries. Not only are the artists and designers at risk of losing their practices and jobs; the cultural heritage of the area, historically associated with Gustavsberg's Porslinsmuseum, Konsthall, is also being used for marketing purposes. Even though local streets like Maja Snis Gata and Wilhelm Kåges Gata have been named after the locally active

artists who helped put Gustavsberg on the international map, the future of the neighbourhood is by no means clear. In the case of the historic Ateljéföreningen G-Studion, which is still ongoing, the municipality has postponed the sale of the building to real estate developers. Artists have marched and protested against the dissolution of this important part of Swedish craft culture.[224]

As our society evolves, the delocalisation of craft production and how this impacts the notion of heritage seems to attest to how socioeconomic situations have contributed to the disappearance of certain craft forms and the dissolution of industrial production in a postindustrial society. Many factories are being closed down, downsized, relocated to places where labour costs less, or sold to multinationals. An example of this tendency in Sweden is represented by Rörstrand, one of Europe's oldest porcelain manufacturers that in recent years has passed through different owners' hands, and whose production was relocated by Iittala from Lidköping, Sweden to Sri Lanka and Hungary.[225] Another example is the iron foundry in southern Sweden, Hälleforsnäs Bruk, which was built in the 1600s and has been mostly dedicated to manufacturing industrial parts and ornaments. The foundry was scaled down to just ten employees over the past thirteen years, until spring 2014.[226] What is left of its legacy is a huge quantity of slag — the clumps of industrial waste that remain after the production of iron casting, which over the centuries have been discarded in the surrounding forest. A third example is Kosta Boda. After the factory closed down in southern Sweden, all the valuable designer glass crystal, representative at once of craft history but also of the history of the region and Sweden's artisanal wealth[227] was destroyed. Many of the former glass factory workers and designers were upset at the "destructive way" the crystal treasures were simply destroyed, but the company seemed to believe that the glass had no value.[228] Value, according to Karl Marx, is embodied under capitalism when human labour transforms raw materials into commodities, and those commodities encounter each other in the marketplace.[229] We can recognise this in the mode of factory production during the nineteenth century, when nature began to be seen as increasingly separate from culture.

Examples like those given above lead me to rethink the significance of these leftover materials: particularly the smashed crystal that was thrown away in the case of Kosta Boda, and the bluish slag

that was cast off in the forests surrounding the premises formerly occupied by Hälleforsnäs Bruk. These are charged materials that, while disregarded or overlooked, stand within a complex network of production, labour, consumption, and obsolescence. Referring to Bourriaud, I wonder whether materials such as these are "exformal", and whether, and how, they can be reactivated through craft methodologies — learning by doing, observing and noticing. The examples from Rörstrand, Hälleforsnäs Bruk, and Kosta Boda seem to express that the idea of waste and surplus not only results from the kinds of socioeconomic situations that we see today, but is also a condition of human expenditure compatible with the notion of destruction through violent social and political ideas, thus rationalising the process of discarding things that are undesirable or easy to replace.

Throughout 2017 I both made and collected doorstops from different locations. Some of the collected doorstops I picked up (or actively stole) were from functioning workshop spaces, small-scale manufacturers, and factories, others I collected from the surroundings of abandoned historical factories in Sweden, such as the iron foundry in southern Sweden, Hälleforsnäs Bruk, where I collected the slag (the glass-like byproduct left over after a desired metal has been separated through smelting from its raw ore), or the leftover ceramic shards and cast-offs that can be found in the woods surrounding Gustavsberg, or chunks of ceramic terracotta, left over from the production of tiles, or bricks.

So far I have collected fifty doorstops from different spaces, and for each one I have noted the date, place, and occasion on which I found or stole this object. I have started to analyse the data and to generate a new material semiotics by re-creating a direct 1:1 replica in different material values, ranging from fine silver, jet, marble, styrofoam, and plastic to recast slag. I have then been rearranging them in a new order, for instance, hiding a GPS tracker inside the doorstop that connects to my cell phone and will sound an alarm if the doorstop is moved. I then disseminate these objects back to everyday contexts and allow them to be used, misused, interacted with and misplaced. Some of the newly made doorstops have been put back in the same location where they were originally collected or stolen. (They would typically be missing for a duration of one to two weeks in each place.) Two of the pieces I remade have disappeared,

but most of the pieces, as expected, have registered the markings of different interactions, some gentle, some violent: the imprint caused by the pressure of somebody's foot pushing it hastily under the door, or by the friction between the floor, the door, and the doorstop (especially in the case of the fine-silver doorstop, since the material is very soft).

I am fascinated by the role the doorstop plays amid the power relations and negotiations that occur daily among humans and nonhumans in an institutional setting. It is a very powerful object precisely for its ability to misbehave—for its readiness to disappear or become misplaced. These aspects of unpredictability, site-specificity, and interdependence on context are what interest me: how to activate a craft object's essential everydayness and set it free in the public realm, letting it circulate or even disappear, and allowing an engaged public to include their narratives, signs, and experiences in the work, thus putting craft into action as a verb. I am interested in staying close to the ground, working with the doorstop as an actant and collaborator that enables me to investigate power structures, employing craft thinking to unearth the dust we would rather sweep under the carpet. I see craft as a discipline that is highly elastic—a shape-shifter that can reach into the interstices, uncovering and drawing attention to hidden histories and behaviours that need to be questioned and challenged.

## Summary and Introduction to Chapter Four

In Chapter Three, I looked at the floor with the aim of bringing forth practices, workmanships, materialities, and histories that may

not have always been visible or given space, while at the same time acknowledging more explicit existing hierarchies and value systems. I pointed out how craft can be understood as a method for thinking about, revealing, questioning, and challenging societal norms and the perceived order of things. By making on and from the floor, I explicated the unspoken rules and hidden behaviours that belong to this particular space. The floor as a space — as well as the ground as a layered, three-dimensional spatial concept — seemed to me to be the ideal starting point. In order to connect the dots and develop a theory through my practice and observations, I looked at case studies from the fields of craft and fine art. My aim was to connect to unsung practices, hidden histories, and unnoticed labour. In this context, craft becomes a way to reveal tacit power structures, hierarchies, and value systems. I reference the writings of Haraway, who has considered the floor or ground as a primal site that, in contrast to the logic of "the modern individual" or "the modern man", is full of complexities and significance.

A text by fantasy novelist Ursula Le Guin introduced the notion of a crafted carrying artefact that allows for a different form of community sustenance. This in turn led to my proposal that Le Guin's approach could be seen as a programmatic point of departure for craft practitioners, suggesting a shift of focus from cutting-edge progress to mundane perseverance.

I have discussed the notion of invisible labour using the rubric of craft and a metaphorical object — the doorstop — that I have been collecting and remaking to address these subjects further. By observing how these objects disrupt or alter production spaces — keeping certain doors open, or disappearing from where they should be, thus disturbing our expectations — I have come to consider the possibility of craft itself functioning as a doorstop. The doorstop helps me to understand the concepts of agency and craft as a verb; craft reveals what would otherwise be unnoticed behind the systems of making. In the following chapter, *Response-able for a sustainable future*, I discuss Haraway's suggestion of *Chthulucene* as a more complex, urgent, and inclusive term than Anthropocene; and will refer to her discussion of the principle of *sympoiesis* (making together with) and to the need for "staying with the trouble" and "making kin". I use my own individual practice as a lens for reflecting on collaboration as a counterpoint to Haraway's discourse.

This chapter takes as its starting point one of my foundational research questions: What are the ethical responsibilities of craft given the influence of global capital on production and consumption? To answer this, I will refer to craft as a practice that is based on responsiveness, on the ability of response (response-ability) to histories, traditions, urgent present-day questions, materials, technology, and others — both human and nonhuman — that are bound together and interconnected, in the process and experience of making. From this perspective, and with reference to Haraway's invitation to "stay with the trouble of a damaged world"[230], I suggest both domestic and urban waste materials, and the creative potential of such materials, as powerful figures for recuperation and resurgence in the *Chthulucene*.

166. See Latour 2005; Haraway 1992, 1997.
167. Published in *Floor,* from the series *Elements of Architecture,* which accompanied the exhibition of the same name during the Architecture Biennale in Venice: edited by Rem Koolhaas, AMO, Harvard Graduate School of Design, Venice: Marsilio, 2014, pp. 4–79.
168. Ibid., p. 6.
169. Bruno Latour, *We Have Never Been Modern,* Cambridge, MA: Harvard University Press, 1993, p. 62.
170. I started to think of craft's potential to reveal and unearth in a body of work I made as part of the exhibition "Bucks 'N Barter" (2013), which I co-initiated and organised with my colleagues Katrin Spranger, Beatrice Brovia, and Friederike Daumiller. In the work Liners (2013), made from former colonial banknotes that I had collected, I carefully peeled off, layer by layer, most references to the currency of the colonial ruler, revealing only the exotic imagery of the ruled country (depictions of fruit, local African plants, and scenes of daily life). To describe this work, I wrote: "I have been collecting paper money from former French colonies in Africa. The banknotes were in the currency of the ruling country and yet the finely drawn images showed exotic sceneries of daily life, luscious fruits and nature. I hand erased the original identity of the currency and let it be just — partly blank — paper. Only a handful of details in pastel colours remain visible at the bottom of the carefully fabricated pastry liners. These fragile, delicate liners become containers of empty space, suspended on marble-white macarons. Through a history of ruled countries and rulers, goods and habits have been exchanged becoming ultimately familiar. The exotic scenes printed on the banknotes are a counterpoint to this small pastry, the macaron, quite exotic in appearance and yet ubiquitous in bars and cafes across the countries." Source: http://cargocollective.com/bucksnbarter/NICOLAS-CHENG [Accessed: 2019-07-08].
171. Bruno Latour, *We Have Never Been Modern,* Cambridge, MA: Harvard University Press, 1993, pp. 98–100.
172. Rosalind Krauss, "Sculpture in the Expanded Field", in *The Originality of the Avant-Garde and Other Modernist Myths,* Cambridge, MA: MIT Press, 1985, pp. 276–91.
173. Rosalind Krauss, "Horizontality", in *Formless: A User's Guide,* New York: Zone Books, 1997, pp. 93–103.
174. http://www.musee-orsay.fr/en/collections/works-in-focus/search/commentaire/commentaire_id/les-raboteurs-de-parquet-7073.html [Accessed: 2019-07-08].
175. Rose-Marie Hagen and Rainer Hagen, *What Great Paintings Say,* vol. 2, Cologne: Taschen, 2003, p. 400.
176. Ibid.
177. https://www.oldhouseonline.com/articles/hand-scrape-wood-floors [Accessed: 2019-07-08]. http://flooringguide.hoskinghardwood.com/hardwood-flooring/hand-scraped-hard-wood-flooring/ [Accessed: 2019-07-08].
178. Easterling, in Koolhaas (ed.), *Elements of Architecture,* AMO, Harvard Graduate School of Design, Venice: Marsilio, 2014, pp. 56-57.
179. Ibid.
180. Ibid., pp. 8-9.
181. Yuka Oyama, "Helmet – River" in fellowship thesis, *The Stubborn Life of Objects,* Kunsthøgskolen Oslo, Avdeling Kunst og håndverk, 2017, p. 79.
182. The exhibition "(IM)PRINT", in which Oyama's video *Helmet – River* was shown, was co-curated by myself together with Hanna Hedman, Kajsa Lindberg, and Beatrice Brovia, at easy!upstream Gallery in Munich, from 2016-02-25 to 2016-02-28.
183. See website, http://www.cohenvanbalen.com/work/75-watt [Accessed: 2019-07-08].
184. For a full exhibition review see: https://artjewelryforum.org/money-number-matter [Accessed: 2019-07-08].
185. Yuka Oyama, PhD thesis, "The Stubborn Life of Objects", Kunsthøgskolen Oslo, Avdeling Kunst og håndverk, 2017.
186. Yves Klein archives, available at http://www.yveskleinarchives.org/documents/bio_us.html [Accessed: 2019-07-08].
187. Easterling, in Koolhaas (ed.), *Elements of Architecture,* AMO, Harvard Graduate School of Design, Venice: Marsilio, 2014, p. 79.
188. See Judy Attfield, *The Material Culture of Everyday Life,* New York: Berg, 2000, pp. 250–251. F. W. Taylor was a prominent figure in the theory of scientific management of workflows. His method eventually evolved into what today is also known as Taylorism, a theory system that was adopted and implemented by, among other entities, the Ford Motor Company, successfully leading to the production of the famous Model T in 1908. Scientific management's objective was to optimize labour productivity and economic efficiency, with close to no waste. This was attempted by applying science to the engineering of processes and management. In 1913 Vladimir Lenin criticized scientific management in these terms: "The most widely discussed topic today in Europe, and to some extent in Russia, is the 'system' of the American engineer, Frederick Taylor [...] [it is a] scientific system of sweating." This particular phrase — "a scientific system of sweating", in the sense of overworking the factory labourers — is eerily familiar today, when we think of and discuss the dehumanizing conditions of sweatshops across the globe.
189. Ibid.
190. For an example of how such questions have been recently discussed in Sweden, see current PhD candidate in Craft Frida Hållander's thesis, source: https://gupea.ub.gu.se/handle/2077/58486 [Accessed: 2019-07-08]. See also Mika Rottenberg's artistic practice, raising questions of women's repetitive work and labour, source: Linda Williams et al., *Mika Rottenberg,* New York: Gregory R. Miller & Co, 2011; and Julia Bryan-Wilson, *Fray,* Chicago: University of Chicago Press, 2017.
191. Transcript of a short clip from a BBC interview with Theaster Gates, published on 2017-05-08: http://www.bbc.co.uk/programmes/p0521w39 For the whole interview, held in connection with Gates's exhibition "Tarry Skies and Palms For Now", at the White Cube Gallery in Hong Kong, refer to: http://www.bbc.co.uk/programmes/p051pnkc [Accessed: 2019-07-08].
192. The phrase "social sculpture" is in reference to Joseph Beuys, the first to formulate and use it starting from the 1960s. I think it aptly applies to the practice of Theaster Gates. In a statement dated 1973, first published in English in Caroline Tisdall's *Art into Society, Society into Art* (London: ICA, 1974, p. 48), Joseph Beuys wrote: "Only on condition of a radical widening of definitions

will it be possible for art and activities related to art [to] provide evidence that art is now the only evolutionary-revolutionary power. Only art is capable of dismantling the repressive effects of a senile social system that continues to totter along the death line: to dismantle in order to build 'A Social Organism as a Work of Art' [...] Every Human Being is an Artist who — from his state of freedom — the position of freedom that he experiences at first-hand — learns to determine the other positions of the Total Art Work of the Future Social Order."

193. It is worth considering the emblematic example of the Rebuild Foundation, "a platform for art, cultural development, and neighborhood transformation" that Theaster Gates has been running in the Greater Grand Crossing neighbourhood of Chicago. The foundation's website states: "Our mission is to make art matter more by demonstrating the impact of innovative, ambitious, and entrepreneurial arts and cultural initiatives." https://rebuild-foundation.org/ [Accessed: 2019-07-08].
194. Ibid.
195. Theaster Gates interviewed by Hannah Ellis Petersen, published 2016-07-14: https://www.theguardian.com/artanddesign/2016/jul/14/theaster-gates-nuts-and-bolts-fondazione-prada-milan [Accessed: 2019-07-08].
196. See interview "Tarry Skies and Psalms for Now": http://www.scmp.com/magazines/post-magazine/long-reads/article/2081486/theaster-gates-artist-whos-doing-it-himself-or-he [Accessed: 2019-07-08]. See also full press release for the exhibition at White Cube, Hong Kong, website: http://whitecube.com/exhibitions/theaster_gates_hong_kong_2017/ [Accessed: 2019-07-08].
197. See also the manifesto text: https://www.arnolfini.org.uk/blog/manifesto-for-maintenance-art-1969 and http://www.feldmangallery.com/media/pdfs/Ukeles_MANIFESTO.pdf [Accessed: 2019-07-08].
198. Hafthor Yngvason, (ed.), *Conservation and Maintenance of Contemporary Public Art,* London: Archetype, 2002, p. 9.
199. Casco – Office for Art, Design and Theory is an "open and public" space, based in Utrecht, the Netherlands, with a focus on artistic research and experiments, and a collaborative, cross-disciplinary approach. According to Casco's website: "The aim of our work is to contribute to forming non-capitalist cultures and possibilities for life for which we believe art could play an essential role, not as an insular avant-garde but in alignment with other initiatives and social movements. Instead of accumulation, alienation, apathy, and competition, a culture that we envision is comprised of sharing, caring, and living and working together. In this light, we see our organization and space as a micro society that might reflect such vision." http://casco.art/mission [Accessed: 2019-07-08].
200. See Casco Case Study #2: Site for Unlearning (Art Organization), available at: http://casco.art/casco-case-study-2-site-for-unlearning-art-organization-0 [Accessed: 2019-07-08].
201. I use "unlearning" with reference to postcolonial critic Gayatri Chakravorty Spivak, who spoke of "unlearning one's privilege" in order to be able to reconsider, and collectively reflect on, ingrained, unconscious habits. See also: an interview with Gayatri Chakravorty Spivak in Sara Danius, Stefan Jonsson and Gayatri Chakravorty Spivak, *Boundary 2,* vol. 20, no. 2 (Summer, 1993), Duke University Press, pp. 24–50.
202. See http://casco.art/casco-case-study-2-site-for-unlearning-art-organization-0 [Accessed: 2019-07-08].
203. For a detailed discussion about how Casco defines itself as a "commoning art organization", refer to: http://casco.art/wtm-forum-ii-commoning-art-organization [Accessed: 2019-07-08].
204. See http://casco.art/wtm-forum-ii-commoning-art-organization [Accessed: 2019-07-08].
205. See Casco Case Study #2: Site for Unlearning (Art Organization), available at: http://casco.art/casco-case-study-2-site-for-unlearning-art-organization-0 [Accessed: 2019-07-08].
206. The essay, written in 1986, was first published in the book *Dancing at the Edge of the World,* Ursula K. Le Guin, New York: Grove Press, 1989.
207. Ursula K. Le Guin, "The Carrier Bag Theory of Fiction", in *The Ecocriticism Reader: Landmarks in Literacy Ecology,* Cheryll Glotfelty and Harold Fromm (eds.), Athens, Georgia: University of Georgia Press, 1996, p. 150.
208. See Joan Tronto, *Moral Boundaries: A Political Argument for an Ethic of Care,* Routledge, New York, 1993; Annemarie Mol, *The Logic of Care: Health and the Problem of Patient Choice,* London: Routledge. 2008; Maria Puig de la Bellacasa, "Matters of Care in Technoscience: Assembling neglected things", *Social Studies of Science,* 41(1), pp. 85–106, 2011 and *Matters of Care: Speculative Ethics in More Than Human Worlds,* Minneapolis: University of Minnesota Press, 2017.
209. Barbara Adam, *Timescape of Modernity: The Environment and Invisible Hazards,* New York: Routledge, 1998, p. 127.
210. Ibid., p. 153.
211. See Haraway 2016.
212. See Jackson 2014; Sennett 2012.
213. See Donna Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature,* London: Free Association Books. Haraway, 1991, p. 198.
214. Source: NGV Annual Report 2014/15, https://www.ngv.vic.gov.au/wp-content/uploads/2015/10/NGV-2014-15-Annual-Report.pdf [Accessed: 2019-07-08].
215. Jim Johnson (Bruno Latour), "Mixing Humans and Non-Humans Together: The Sociology of a Door-Closer", in *Social Problems* 35:3, 1988, pp. 298–310.
216. Bruno Latour quoted in Anthony Huberman, "Take Care", in Mai Abu ElDahab, Binna Choi, and Emily Pethick (eds.), *Circular Facts,* Berlin: Sternberg, 2011, p. 11. Further reading: Bruno Latour, "From Realpolitik to Dingpolitik or How to Make Things Public," in *Making Things Public: Atmospheres of Democracy,* Bruno Latour and Peter Weibel (eds.), Cambridge, MA: MIT press, 2005: pp. 14–41.
217. Julia Bryan-Wilson, "Eleven Propositions in Response to the Question: What Is Contemporary about Craft?" for a panel at the 2012 College Art Association conference, co-chaired by Namita Gupta Wiggers and Elizabeth Agro, *The Journal of Modern Craft* 6.1, 2013, p. 10.
218. Source: http://www.jakobrobertsson.se/start.html [Accessed: 2019-07-08].
219. Love Jönsson, "Waiting for a place, or seeking out and seizing one?" in *Place(s) – Papers and Exhibitions,* Gmunden, Austria: Think Tank, 2006, pp. 34–35.

220. Jorunn Veiteberg, *Thing Tang Trash: Upcycling in Contemporary Ceramics,* Bergen: National Academy of the Arts and Art Museums, 2011, p. 25.
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223. Ibid., p. 16.
224. See Ateljéföreningen G-Studion: http://www.gstudion.se [Accessed: 2019-07-08]
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226. See https://www.diva-portal.org/smash/get/diva2:1234520/FULLTEXT01.pdf, p. 69. [Accessed: 2019-07-08].
227. See Anne Sewell's article: "Designer Swedish crystal smashed and wasted as factory closes": http://www.digitaljournal.com/article/360779 [Accessed: 2019-07-08].
228. Ibid.
229. Karl Marx, Ernest Mandel (introduction), Ben Fowkes, trans., *Capital Volume I: A Critique of Political Economy,* London: Penguin Classics, 2004, p. 212.
230. See Haraway, *Staying with the Trouble,* 2016.

# Chapter Four
# Response-able for a Sustainable Future

## Bound to the Ground — From Anthropocene to Chthulucene

Throughout this section, I will refer to Haraway's term "the Chthulucene"[231] as a more complex, urgent, and inclusive term than the Anthropocene. Haraway posits that since the word Anthropocene is already well entrenched in environmental and political discourse, it will continue to be used, albeit with some rethinking of what it should entail ontologically: "Despite its problems, the term Anthropocene was and is embraced because it collects up many matters of fact, concern, and care."[232] I will also refer to her discussion of the principle of *sympoiesis* (making together with) and the need to "stay with the trouble" using my individual and collaborative practice as a means of reflection on Haraway's discourse. Haraway states that "making and recognizing kin is perhaps the hardest and most urgent" challenge humans face today, although in the deepest sense "all earthlings are kin".[233] How and why should critical questions raised by Haraway, Tsing and Latour, among other thinkers, be relevant from the perspective of craft, particularly in terms of the medium of jewellery? Does the jewellery tradition of the heirloom (passing on ornamentation to family members) offer potential as a way of "making kin" with the other? And in this case, can craft cultivate response-ability not only within human but also nonhuman agents?

Ecologist Eugene Stoermer and Nobel laureate atmospheric chemist Paul Crutzen coined the term "Anthropocene" in 2000, and

were the first to use it in the context of geology, referring to the influence of human behaviour on the earth and how it has irreversibly affected, over time, our planet's atmosphere, lithosphere, and hydrosphere.[234] The term has gained momentum and is today widely and informally used by scholars, practitioners, journalists, and broadcasters — and across fields of knowledge, from the arts and sciences to the humanities, politics, and more — to identify a proposed new geological epoch in Earth's history, subsequent to the Holocene. While it is a term that has become convenient to use, because of its popularity and for the cross-disciplinary discourse it appeals to, (I refer to it in my artistic practice as well) I nonetheless feel compelled to adopt Haraway's term instead: the Chthulucene. In her 2016 book *Staying with the Trouble: Making Kin in the Chthulucene*, Haraway discusses in depth her issues with, and criticism of, the term Anthropocene, and how Chthulucene might be better suited to an epoch of resurgence — a time of learning how "to stay with the trouble of living and dying in response-ability on a damaged earth"[235] that has not yet been murdered. Her criticism has in part to do with the very root of the word Anthropocene: *anthropos*. Haraway posits that "a number of experts think of *anthropos* as the 'one who looks up from the earth,' the one who is earth-bound, of the earth, but looking up, fleeing the elemental and abyssal forces, 'astralized.'"[236]

There is an echo of Bruno Latour[237] and his "modern individual" or "modern man", too preoccupied with all that is above and beyond, with the vertical, the ideal, and the abstract, and always attempting to evade all that is on and of the ground, of the mud. But if we want to change the story, and to learn how to live on a planet that is irreversibly disrupted by the effects of industrial capitalism — what we commonly refer to as the Anthropocene — then we have to become *terran*, become *humus*. Haraway posits that Latour "passionately understands the need to change the story, to learn somehow to narrate — to think — outside the prick tale of Humans in History, when the knowledge of how to murder each other — and along with each other, uncountable multitudes of the living earth — is not scarce"[238]. Latour argues that, especially now, in this catastrophic time of the Anthropocene, when what "used to be called nature has erupted into ordinary human affairs, and vice versa, in such a way and with such permanence as to change fundamentally means and prospects for going on, including going on at all",[239] it is absolutely

urgent to tell "Gaïa stories" or "geostories".[240] Latour argues that the fundamentals of geopolitics have been blasted open, so that in this time of crisis, we can no longer rely on "Providence, History, Science, Progress, or any other god trick outside the common fray to resolve the troubles. A common liveable world must be composed bit by bit, or not at all."[241] To speak of "geostories" implies that "all the former props and passive agents have become active without being part of a giant plot written by some overseeing entity".[242] Geostories or Gaïa stories are told by the earth-bound in the Anthropocene, not by humans in the Holocene,[243] the earth-bound being those that "eschew the dubious pleasures of transcendent plots of modernity and the purifying division of nature and society".[244]

In this sense, both Latour and Haraway seem to rest their inquiring gaze and attention firmly on the possibilities of the ground, of the floor, of terra,[245] of all that is of the humus, of the mud: earth-bound. Haraway suggests that: "*human* is a better figure for our species, if we want a species word, because of its tie to humus, compost. [...] It's not post-human but com-post. [...] Homo needs to re-root in *humus*, not bliss out into an apocalyptic *anthropos*. Compost provides the figures for making multispecies public cultures, sciences, and politics now."[246] Haraway is not interested in myths that have a human hero — usually the *anthropos* — or a god at the centre of history, saving the world. She is not here for narratives of hope nor is she giving in to doomsday rhetoric, as if everything was already lost. She is interested in storytelling and fact telling, in the stories that belong to the earth-bound, and in what she refers to as SF.[247] According to Haraway, SF is essential to the Chthulucene: "I work with and in SF as material-semiotic composting, as theory in the mud, as muddle."[248] In order to stay with the trouble, and working in SF, tentacular thinking is needed: sensible, sometimes whimsical connections can and should be made across earth-bound multispecies collaborators. Haraway uses the word "tentacular" because of its etymology, and how it is connected to both the meanings "to feel" and "to try". From Latin *tentaculum* (tentacle) meaning "feeler", and *tentare* meaning "to feel" and "to try".[249] I find both actions (to feel, to try) as used by Haraway in the notion of "tentacular thinking" to be particularly relevant, and rooted in craft practices as well. Can craft, particularly in its process, be intended as tentacular thinking? To quote Tsing, this is a "skill for living in ruins".[250] Haraway proposes

the Chthulucene as an "elsewhere and elsewhen that was, still is and might yet be".[251] This space-time is open and full of possibilities for multispecies resurgence on terra: not in a distant future, but in a thick present. The term Chthulucene encompasses all of this — it comes from the Greek words *khton*, of the earth, and *kainos*, now. It stands as a "fierce reply to the dictates of both the Antropos and Capital".[252]

Keller Easterling writes: "The crust of the earth is thick with layer after layer of floors. Each one, suppressing the one before with a tabula rasa and a new datum, hopes to wrest territory from the other by establishing an authentic historical ground."[253] But with discussions as urgent and complex as those brought about by the Anthropocene, what will the layers of our own time tell future geologists? As it turns out, quite important signs are already clearly readable. In 2013, plastiglomerate[254] — a rock-plastic hybrid, which is the result of a synthesis of both natural and manufactured materials — was officially recorded by the Geological Society of America. This means that, in future years, plastic will figure as a fossil,[255] thus relaying the disruptive story of human impact on earth. In the specific case of plastiglomerate, we can start to grasp the extent of humankind's effect on the lithosphere. [256]

As Haraway puts it, referring to the Anthropocene and whether it is a precise term:

> There's a need for a word to highlight the urgency of human impact on this planet, such that the effects of our species are literally written into the rocks. In the evidence of the

> current mass extinction 'event,' any geologist of the future will find the synthetic chemistry of DuPont in the composition of the rocks, will find in the hydrosphere the synthetic chemistry of multinational pharmaceutical and petrochemical corporations. The hydrosphere, lithosphere, atmosphere, everythingsphere, the multiple worldings of the earth will show the effect of the activities of industrial human beings.[257]

At one time, the only waste material *homo sapiens* left behind amid the various geological layers were stones carved into tools, weapons, or adornments, bones, pieces of pottery, eventually metal fashioned for different purposes, and sometimes evidence of perishable materials such as wood and textiles, depending on the climate conditions that helped to preserve them. But in the future, if we were to dig in the hot points of our civilisations, as designer Marjanne van Helvert points out in the introduction of her book *The Responsible Object*, we would find "countless dumpsites of things we threw away: plastic and metal objects, still-smoldering heaps of discarded electronics, synthetic textiles, and other things that do not decompose within a foreseeable passage of time [...] the leftovers of an age of rampant, imperishable, man-made objects".[258] As Kate Franklin and Caroline Till also point out in their book *Radical Matter*: "We need a better, smarter, more cyclical approach, in contrast to our current linear 'take-make-discard' relationship with materials—and a new future seems to be within our reach."[259] We certainly need to implement alternative production systems and to adjust our consumption patterns to the environment.

## Crafting as a Way of Connecting and Playing String Figures

Haraway is one of the critical thinkers of our time. She frequently relies on craft practices, for instance string-figure games and cat's cradle traditions from across the world, Navajo weaving,[260] and art projects with a strong craft focus. An example of the latter is the *Crochet Coral Reef* project (2005–ongoing) created by Margaret Wertheim and Christine Wertheim of the Institute for Figuring,[261] a case study that responds to the environmental crisis of global warming and the escalating problem of oceanic plastic trash. I think it must not be by chance that craft offers such poignant models "for

figuring", "for worlding", and for *sympoiesis*[262]: craft is a practice that is based on responsiveness, on the ability of response (response-ability) to histories, to traditions, to urgent questions, to materials, to technology, to others — both human and nonhuman — that are interconnected, bound together, and entangled in the process and experience of making. Through my practice, I have become more and more conscious of craft's essential role in worlding,[263] in story-making and storytelling on a damaged planet such as ours, affected by the activities of a "fossil-fuel-burning humanity"[264] such that we speak of the Anthropocene.

Haraway stresses the importance of "staying with the trouble"[265] of a damaged planet that is not yet murdered, and how the only way to do so is through "generative joy, terror, and collective thinking".[266] She points to the necessity of pulling strings and following their leads to find tangles and patterns crucial to staying with the trouble in real and particular places and times. She speaks of "patchworking" together, of making *oddkin*[267] — in all of this, the goal is not to fix the problem or restore anything, for there is no way to go back to any ideal "before". A "game-over" attitude, waiting for the end of the world, is no solution either. What is possible, though, is to become together, to make together, to engage each other in "unexpected collaborations and combinations"[268] for a resurgent world. According to Haraway: "*Sympoiesis* is a simple word; it means 'making-with.' Nothing makes itself; nothing is really autopoietic or self-organizing. […] *Sympoiesis* is a word proper to complex, dynamic, responsive, situated, historical systems. It is a word for worlding with, in company. *Sympoiesis* enfolds *autopoiesis* and generatively unfurls and extends it."[269]

When we are alone, confined to our own expertise or limited experience of the world, we know too much or too little, and that is when, according to Haraway, we are more likely to be overwhelmed by hope or despair — attitudes that cannot teach us how to be response-able. That is when "playing games of string figures"[270] becomes essential:

> Playing games of string figures is about giving and receiving patterns, dropping threads and failing but sometimes finding something that works, something consequential and maybe even beautiful, that wasn't there before, of relaying

> connections that matter, of telling stories in hand upon hand, digit upon digit, attachment site upon attachment site, to craft conditions for finite flourishing on terra, on earth. String figures require holding still in order to receive and pass on. String figures can be played by many, on all sorts of limbs, as long as the rhythm of accepting and giving is sustained. Scholarship and politics are like that too — passing on in twists and skeins that require passion and action, holding still and moving, anchoring and launching.[271]

For me, making and crafting are about that too: string-figuring-together worlds, histories, and memories through complex interplays of material, gesture, and interaction. Reading Haraway, it is evident that she plays "string figures" on many levels, across time and places: her writing style, how she intends to scholarship, is a living example of this, as she ties together disparate thinkers and practitioners past and present, across disciplines and ways of knowing. People, animals, critters from bacteria to spiders, dead and alive, all unexpectedly come together and contribute to a multispecies conversation: pigeons, dogs, students, professors, Navajo weavers, an Inuk throat singer, artists, mathematicians, crochet enthusiasts, and more, all (be)coming together to give and receive patterns, enabling each other to respond in times of great trouble.

I find striking similarities to how I intend craft as a practice and "thinking technology".[272] It is not an autonomous, *autopoietic*, self-reliant process. Rather it is rather the opposite, an interdependent process of following whimsical connections and seeing what happens — what unexpected encounters await. According to Haraway: "Technologies re-arrange the world for purposes, but go beyond function and purpose to something open, something not yet."[273] She discusses the notion of "thinking technology" (ethnographic practices, play) and points out how: "almost any serious knowledge project is a thinking technology insofar as it re-does its participants. It reaches into you and you aren't the same afterwards."[274] Thinking about my practice, particularly my experience of collaboration as represented by *Conversation Piece* (2011–ongoing) but also collaborations with many others, and using Haraway's reflections as an important point of reference, I have framed the following questions:

- If making (especially making and thinking together) and craft can be seen as an artistic practice of pulling the threads of what is accepted — of what is familiar, domestic, seemingly recognisable and yet troublesome — and seeing where the threads may lead, what stories, material stories, may be entangled and resurface?

- How can the craft/jewellery medium, through the making and thinking processes that are at its base, not only be employed to problematise and illustrate the origins of material, the way it is sourced as well as the complex histories behind the artefacts that carry those materialities, but also become an essential artistic practice in telling these stories?

In the next sections I will recount the story of *Gold Rush* (2016–18), a work that addresses issues of responsibility in both consumption and production and a part of my collaborative practice called *Conversation Piece*,[275] an ongoing project in which I pull some very entangled threads while keeping the above questions firmly in mind. The fact that the project is a long-term collaboration is highly relevant, as it adds a layer of complexity and allows me to reflect on what Haraway calls *sympoiesis*; making-together-with and becoming-together has been part of this project from the beginning. Working with my collaborator, my partner in practice, we constantly look for and find ways to make one another more able to respond, to communicate throughout the process, as we follow the threads along very complex paths and entanglements.

## Domestic and Urban Mining — *Gold Rush*

Haraway eloquently states:

> We live in the third great age of carbon, in which we are witnessing the extraction of the last possible calorie of carbon out of deep earth by the most destructive technologies imaginable, of which fracking is only the tip of the (melting) iceberg. Watch what's going on in the Arctic as the ice sea melts and the nations line up their war and mining ships for the extraction of the last calorie of carbon-based fuels from under the northern oceans.[276]

As a species, we are going to extreme lengths to procure the last bits of fuel and largely inaccessible veins of metal ore that will be indispensable to sustaining our outrageous production and consumption needs. Savage mining keeps expanding to sustain the production of consumer electronics in particular — all of which, through land and water grabs, results in massive losses of habitat, or what scholar Saskia Sassen refers to as "the creation of violence"[277] as entire populations are expelled en masse from their lands.[278]

The not-too-distant-future frontier of extraction, especially of rare earths and metals such as platinum, seems to be that of travelling through space to mine asteroids,[279] as speculated by the commercial American start-up company Planetary Resources. So space, too, is up for grabs. This scenario obviously does not align with Haraway's suggestion that we learn to "inherit without denial and stay with the trouble of a damaged world".[280] Travelling to space, with all the effort and resources that would entail, in order to exploit and pollute yet another space-time, does not really resonate with "crafting safe enough ways to tangle with each other in conflict and collaboration".[281]

Following Haraway's invitation to think-, to make-, and to become-together-with, I am left contemplating what mining could be in this thick, contingent, conflict-ridden present of ours — and may well become in a not-so-distant, not-so-abstract future. *Gold Rush* (2016–18)[282] is a project that I have been developing as a chapter in *Conversation Piece*, my ongoing collaboration with jeweller and artist Beatrice Brovia. The project reflects on the reality that rare metals such as gold and other conflict minerals (e.g., coltan and wolframite) are crucial to the functioning of consumer electronics, particularly portable communication technologies such as smartphones, that people rely on daily. Technological obsolescence — the

embedded "expiry date" in electronic devices—poses additional urgent questions about who and at what costs waste processing, overconsumption, and environmental safety are carried out.

By looking at the potential of electronic waste (e-waste) as a raw material, *Gold Rush* (2016–18) represents a critical reflection that not only posits ways of intending craft (and collaboration) as a "thinking technology" and as a *sympoietic* process, but also allows me to stay close to the trouble, as I dig into the mud—literally and figuratively—looking for connections and entangled scenarios for contemporary jewellery and craft that challenge the status quo, spark a conversation, and raise urgent questions about the complex relationships among objects, materials (how these are sourced and by whom), resources, and people. Thematically, *Gold Rush* (2016–18) developed from an earlier project, *Kino* (2014).[283] One of the pieces in that project, a brooch, reflected on how screens, especially those of smartphones, represent our main interface for exchange and communication with the world, as well as entertainment and information. The brooch's backing—made of gold and tantalum—references conflict minerals.[284] These substances are closer to us than we may think. We carry them in our pockets, keep them close to our bodies: they are the functional foundation of our mobile phones and other electronic devices. The brooch, at once reflective and transparent, subtly points to this reality. What are our responsibilities as passive consumers? We can see through the object, but it also shows our reflection, implicating us in a material system based on demand, extraction, supply, and consumption, and whose exploitative mechanisms are very hard to control, let alone escape. By revealing these conflict materials, usually hidden in electronic devices, in a piece of jewellery that visibly circulates on and though our body, we are confronted with the global patterns of material flows and their socioeconomic impact.

According to social psychology scholar Blanca Callén, "if obsolescence is based on logics of accumulation and subtle mechanisms of administrating desires, the response to e-waste might also have to work on an emotional level and not only in a rational conscious call for responsibility".[285] Engaging on an emotional level, through both the poetics and the aesthetics of a crafted jewellery piece or installation, is an important aspect in my work in order to allow for becoming aware and response-able. In the case of *Gold*

*Rush* (2016–18), the intimacy and body-related scale of jewellery are relevant qualities to engage a potential viewer or wearer of the work at an emotional level. From there it is possible to connect more intimately with — and thus care about — the larger, more complex issues that the pieces in the series *Gold Rush* (2016–18) address. Jewellery as an object that is meant to be worn on the body, that we carry with us, and that we can recognise ourselves in, becomes a powerful medium that allows for empathy and becoming aware of how we, too, are intrinsic, interconnected parts of a complex system of extraction, supply, and consumption, and how we may become more response-able by acknowledging this to begin with.

*Gold Rush* (2016–18) focuses on the role of gold in the production of consumer electronics and telecommunications as well as space exploration. Without letting go of its ambiguous connotations and loaded history as a material, we were fascinated by gold's "domesticity"— by how much we unwittingly rely on this material, at once controversial and desirable, in our daily lives. For this body of work, we looked at domestic and industrial electronic waste as a source from which we might "mine" gold and other materials. Our desire for and consumption of the latest electronic goods, combined with the producers' own interest in pumping out consumer goods and electronics with an embedded obsolescence, results in huge amounts of waste. Gold, along with other minerals, is part of the core functionality of these goods; gold is hidden in the secret workings and mechanisms of our appliances and woven into our daily interactions with them. According to the United States Environmental Protection Agency, in every discarded mobile phone there is an abundance of precious metal. By recycling one million cell phones it is possible to recover more than 9000 kg (20,000 lbs) of copper, 9 kg (20 lbs) of palladium, 250 kg (550 lbs) of silver, and 23 kg (50 lbs) of gold.[286]

The thinking behind the initial project, *Kino*, was supported by the awareness that it is impossible, despite the rhetoric of global companies,[287] to claim that a phone — or any electronic apparatus for that matter — is in fact "conflict free". If we look into mining conditions, from the Republic of the Congo all the way to China, all it takes is for someone to smuggle a handful of coltan or tantalum,[288] for example, and to sell it on the market, to affect the credibility of a supposedly conflict-free product. Despite international laws and governmental scrutiny, and progressively better-informed consumers demanding transparency when it comes to their products, it still is a troublesome situation — one that is impossible to escape or blissfully ignore any longer. So as makers and consumers we must ask: As integral parts of this system of extraction and consumption, where do we stand and what we can do about it?

As makers, in the moment we lay claim to a material, it is hard to ignore its origin — where it was sourced from and, above all, at whose expense. This is especially true for minerals that have been traditionally used for jewellery, especially (blood) diamonds and gold. But this is also true of the everyday materials and consumer goods that we carry with us and interact with constantly, that are so ingrained in our daily lives that somehow they disappear from our conscious radar. From blue jeans to mobile phones to the food we consume, everything comes to us through a complex journey, bearing a heavy heritage and troublesome history. We should be following the complex dynamics of material flow[289] rather than seeking to mark it in its place. The latter would require us to place ourselves "within" the material world — instead of "looking" at the complexity of the flow from above — as a means of finding creative solutions. Similarly, Bruno Latour proposes a methodological exercise in which, through reverse engineering, the ethnography of technological objects can be adapted to art methodologies. He states:

> How far back in time, away in space, should we retrace our steps to follow all those silent entities that contribute peacefully to your reading this chapter at your desk? Return each of these entities to step one; to imagine the time when each was disinterested and going its own way, without being bent, enrolled, enlisted, mobilized, folded in any of the others' plots. From which forest should we take our wood? In which quarry should we let the stones quietly rest?[290]

Here we recall the concept of Latour's "black-boxing".[291] By examining the assemblies inside, we are better able to understand the complex channels and resources through which raw materials are transformed into mass-produced objects. An excellent example of how to unpack a black box, and by extension to expose the mechanics of its distribution to the world under the complex global culture of production, is that of *The Toaster Project*[292] by British designer Thomas Thwaites. The project is an attempt to investigate a material object itself. Thwaites tries to replicate the manufacturing processes of a mass-produced everyday object — a toaster — on an artisanal scale, from raw material to final product.

Throughout the project, Thwaites examines how mass-produced objects are shaped in relation to elements like postindustrial capitalism, sustainability, and DIY material exploration. By exposing global material flows, he provides a parable of our interconnected global economy. Taking a mass-produced object as a starting point, he raises questions about the extent of our individual power today in the absence of vast networks of knowledge, expertise, technological systems, and labour. Thwaites's basic, hands-on attitude functions as a connector for exploring social and global production networks. *The Toaster Project* can be seen as an attempt to undermine the opacity of the black box. It offers a methodology for knowing the inner complexity of everyday mass-manufactured objects and the otherwise invisible supply chains of the globalised economy that make their low-cost production possible. Focusing on the agency surrounding one particular mass-produced object, the toaster, he employs a hands-on attitude and artistic approach to unpack notions of mobility, networking, and DIY material exploration. As a means of better understanding the complex dynamics of material flow, Thwaites's project can be thought of as a social and even economic connector within an urban area, but also within a larger territory.

Is it important that we as makers raise consumer awareness of the ethical concerns of the materials we work with in our practices? Can we propose more sustainable scenarios for material resources, changing their appropriation, (mal)distribution, and long-term impact upon producers as well as consumers in the global arena? Haraway quotes Virginia Woolf: *think we must*,[293] and the nature of this thinking should be tentacular,[294] prompting sense-able and response-able interactions. In *Gold Rush* (2016–18)[295]

we set out to recover gold and other precious metals from discarded electronics — e-waste[296] — and also use discarded CPU boards and electronic screens to make jewellery and raise questions about consumer patterns and power, especially the complex, controversial material histories permeating gold and other minerals that are essential to the functioning of our mobile phones and other consumer electronics. *Gold Rush* (2016–18) focused on gold specifically, starting with its function and use in today's industrial production of consumer electronics, as well as its applications for space exploration.[297]

Gold-plated Mylar is one of many materials used by NASA for space exploration. In this context, gold is used for its physical properties, as a shield to protect delicate apparatuses from solar radiation and heat in space, or the astronaut's retina when applied to a helmet's visor. Just as in the case of most domestic electronics and technological devices used for communication, surveillance, and generally to make our daily life and interactions seem "easier", gold is not used to evoke symbolic or perceived material values or mystical associations, but precisely because of its chemical and physical qualities and functions. Using fragments of this low-tech yet highly effective material that was specifically developed for NASA, a round button brooch was crafted: a reference to the protective properties of amulets in the history of jewellery and humankind. It is also an invitation to consider the many connotations that gold can conjure: adornment, currency, wealth, beauty, value, and a material essential to the functionality of much modern technology.

In this project, the aim was to show how mined gold and other precious materials from domestic and industrial electronic waste resources are interconnected with our daily interactions, and to render them visible on the body through jewellery pieces meant to adorn,

in order to discuss the gold of our time and its cultural meaning and power. The making process has relied on multiple types of collaborations — first and foremost my ongoing collaboration with Beatrice Brovia, which is the foundation of *Conversation Piece*, and through which we challenge each other "to make together with as well as against one another".[298] We constantly "question each other in the process, through dialogue, disagreement, and making. There's always an element of friction in our collaboration, which is, we believe, essential — the main reason, perhaps, why we work together. In this way, we refine our thoughts, the process, and the eventual outcome, both working against and with one another."[299] Then, as the threads were pulled and the research evolved, many other collaborators were eventually entangled: acquaintances and smaller-scale institutions from which we gathered electronic waste to process in the studio; local metal smelters in Sweden and Stockholm; and cutting-edge refiners of industrial electronic waste based in Taiwan, who have been working in an environmentally sustainable way with this type of process, reclaiming precious metals from e-waste materials, since the early 1990s. Much of this e-waste once came directly from big electronics manufacturing companies and producers in Taiwan.

Nowadays, China is the largest producer of consumer electronics and electrical components. It is also one of the countries tasked with disposing of the largest amount of e-waste produced globally each year (of which it is the largest importer), typically under exploitative conditions that are hazardous to humans and the environment. The conglomerate of villages known as Guiyu is the largest electronic waste site in the world. Here, most of the e-waste imported to China (amounting to seventy percent of that produced globally) is processed by unskilled manual labour, working with no proper equipment or protection.[300] The result is an irreversibly contaminated toxic landscape with deadly hazards for its people and animal species. In an effort to deal with its fast-growing domestic and industrial waste problem, since April 19, 2018, the Chinese government has blocked all imports of thirty-two types of foreign trash, including e-waste and plastic.[301] What will happen to the world's recycling? And what are the alternatives? The import ban highlights the need for countries to start facing up to their own waste from disposable goods, and to take responsibility for the environmental impact. Meanwhile, can we come up with responsible

ways of dealing with waste materials? The World Bank reports that the amount of solid waste we generate on earth will double by the year 2025.[302] If current trends of making and discarding continue, we are likely to go from 3.5 million tonnes to 7 million tonnes per day by that point. Today, some designers and makers are already seeking alternative materials for their making.[303]

For the *Gold Rush* (2016–18) project, even though we are collaborating with specialised smelters and refiners of e-waste in Taiwan, a large part of the project relies on domestic and urban mining: we collect e-waste from friends and acquaintances. The question is whether these alternative processes hold possibilities for the future of mining.[304] Normally, the industrial refining process of extracting gold and other metals from e-waste generates large amounts of industrial waste from CPU boards, computer chips, and other electronic components. The Taiwanese company we work with has set up an in-house workshop with a team of craftsmen and designers who work together to come up with alternative ways to apply the leftover byproducts of the e-waste refining process. One of their latest projects has been developing materials for use in buildings and public spaces. For example, discarded electronic screens from computers and smartphones are transformed into large-scale architectural panel systems that can be used for ceilings or building façades. Their intention is to further develop it as a potentially sustainable architectural material.

Working with these e-waste materials, we were surprised by the many similarities we discovered between jewellery and electronics, both in their materiality and aesthetics, and in the way they function when activated by the body. One such piece, the *Nu Jade* bracelet, created from discarded CPU boards, mimics the traditional Chinese jade bracelet. It raises questions about whose hands are most likely behind e-waste handling, processing, and disposal in the region. The bracelet emulates the shape, appearance, and proportions of traditional jade ornaments worn by many Chinese women to ward off evil. But the amuletic function associated with this piece of jewellery — and with jade, a stone revered by the Chinese for thousands of years — is here distorted. On closer inspection, the stony material is rendered out of compressed, recomposed shreds of discarded CPU boards. The colour of jade and this type of e-waste is strikingly similar; but while one is mined from the depths of the earth for its beauty

and mystical value, the other is typically discarded and dumped in landfills. Can this material, used for CPU boards, be seen as a new jade, on which the value systems of our contemporaneity are based? Will it eventually become a hybrid rock—a fossil of our world—in a hypothetical future, when archaeologists will dig it up from the depths of the earth?

Gold mining is a process that, as we know, is obscenely exploitative of people, resources, and the environment; but working on *Gold Rush* (2016–18) we also came to realise that extracting this metal from mountains of potentially hazardous e-waste does not render it, or the stories that it carries, or our relationship to it, any less controversial. Throughout this body of work we intended to look closely at the relationship between jewellery and electronics, and to explore the boundary between adornment and portable technology. What are the similarities? What do these typologies of objects reveal about our bodies and identities, about our desire for interconnectedness and communication? How are we controlled by such things? In terms of design, we decided that somewhat reductive forms evoking jewellery archetypes and familiar shapes (the bead, the button, the pendant on a string) were the only way to go, especially given the complex, not-at-all-carefree narratives imbued in the pieces and the amount of research—material, technological, and theoretical—necessary for the development of the work. In this sense, it also became important that the pieces should be clearly wearable, easy to understand and recognisable as jewellery.

Just as portable electronics "disappear" in our daily use of them and thus quietly exert their power over us, we thought that the jewellery would become all the more powerful and speak the loudest when its formal language was pared down. Projects like *Gold Rush* (2016–18) represent a way of looking for potential materials in a sustainable future, certainly, but for me the greater urgency is in the present. It is an invitation to think together with others, to follow threads and to not bail out once you find out that they lead you to uncomfortable, unsettling circumstances, such as the fact that we are all in this very likely radioactive mud together.

Collaboration has played an important role throughout my practice: it has shaped my understanding of the potential of craft and its role in society. In this section I discuss my approach to collaboration in craft and the types of challenges and critical issues that come up. I will use my experience with *Conversation Piece* as a foundation for looking at the role of "conversation" and "dialogue" when applying "thinking technology" to making/craft-based practices. Tsing once wrote about how cultures are continually co-produced by the interaction that she calls "friction". She points out: "Collaboration is not a simple sharing of information. There is no reason to assume that collaborators share common goals".[305] She reminds us that collaborations are about the awkward, unequal, unstable, and creative qualities of interconnection across difference.[306]

For me, collaboration is a matter of disturbance but also of elasticity, of being open to contamination. It is the act of moving on from the ideals of self-reliance, independence, and, to some extent, autarchy implied in the single-author vision, to a sense of interdependency. One must welcome disturbance — that fastidious sense of being unsettled one experiences when something does not quite make sense or does not add up. Something that keeps you on edge at all times. Disturbance, friction, can even be a form of resistance; it is very present in the creative process, from the moment you lay out your artistic research questions — as yet unsure where they may lead you — to the point of trying out possibilities, materialising ideas, working with and against materials and techniques, or even misunderstanding or trying to make sense of something that in reality perhaps does not fit at all. In my collaboration process, resistance, friction, and disturbance are part of what we can offer each other; we question and challenge each other throughout the process, and

in the making, so that it is never a self-serving, smooth journey, but always an unexpected, even bumpy, ride. We must make sure that we keep asking questions, checking on what we are doing and why. We must enable each other to respond, in both communication and miscommunication.

In my experience, through *Conversation Piece* (2011-ongoing) I have come to understand collaboration as a dialogue that emerges from specific questions that we share with each other, which may arise from our respective fields of expertise or in connection with larger political, social, and economic phenomena. The result is uncontrollable, beyond the command of one single author or maker. At the modest scale of a "duo" there is already a radical shift in perspective, from "me/myself/I" to "us/ourselves/we". There is a social dimension that becomes immediately visible and more urgent when we work in dialogue with (and at the same time against) each other, challenging and questioning whether our research and work should be started at all, what context it inhabits, and why. This shift is essential to what I see as the "post-studio"[307] condition, which continually changes in response to new situations. It opens us up, transforming the dynamics of thinking and making.

## *Filament of Surplus*

My project *Filament of Surplus* (2017) further develops the notion of digital repair while consolidating the issues of conflict and waste that I have touched upon in previous projects, both individual and collaborative. It raises questions such as:

- How do we revitalise the inherent qualities in an artefact when its value is perceived as lost or altered?

- What factors are at play—cultural, social, emotional, functional, practical—when we decide to discard something?

The rethinking of repair in relation to mending cultures[308] and response-ability are the two main narratives in this work. Everyday objects that become damaged beyond their function or value tend to eventually become landfill waste. If we look closely at the byproducts of both our industrial production and our domestic activities,

we are confronted with a wide array of leftovers, or "waste", material: marble countertop remnants; dust from the quarrying and working of stones; sawdust from the restless activities of sawmills; eggshells from industrial bakeries and private households; milk products that are the result of overproduction; fibres left over from the textile industry; paper products, which abound in all spheres of human activity; and in particular e-waste, with its complex environmental narratives. The vision of upcycling everyday waste material for use in digital fabrication methods that themselves can repair artefacts or objects that are damaged beyond repair (and that would thus eventually become waste as well) represents a two-fold change of perspective on the concept of waste: from waste material to building material; and from objects beyond repair, ready to be discarded, to meaningfully repaired objects with a restored functional, emotional, cultural, and perhaps even monetary value.

This experimental project aimed to test a future materiality from a social and political point of view. For example, what if invalid banknotes, colonial banknotes, worn out or defaced banknotes could

become a new filament/currency for digital fabrication? What histories and narratives would materialise? And how would they probe possible futures or suggest alternatives to the status quo? The filaments are a composite of both industrial and domestic waste materials. They can be used in 3-D digital fabrication. They can be used for restoration — to repair or print a missing component — or simply left in their unused state, retaining their potential while functioning as an effective form of future "currency". When unused, displayed in a vitrine for example, they can show their potential in a speculative way. Using waste materials to repair what is damaged, these filaments open up new possibilities for restoration. All waste materials used for the filaments are recuperated from the landfill, from the floor or the ground. The technology that they would be used with, a 3-D printer, employs an additive type of manufacturing process: the 3-D printer builds layer upon layer upon layer using a material that would be otherwise discarded.

Beside the filaments, there is also a booklet, called Domestic Mining, that functions as both a manual or handbook for the material research and a document tracing the research journey across continents. The publication maps the physical tests in which both industrial and domestic wastes from different sources and contexts were used to produce filaments for 3-D printing in collaboration with, among others, the Netherlands-based filament company Helian Polymers. It also focuses, in collaboration with Kremer Pigmente[309] in Germany, on the use of raw materials (including domestic and electronic waste) in the making of modern pigments for the art and conservation field. In terms of the industrial electronic waste mate-

rial, this was made possible thanks to the expertise provided by the electronic waste recycling company SDT Inc. in Taiwan, who since the early 1990s has been a forerunner in researching and developing sustainable approaches to processing electronic waste. Together with a network of consultants and facilities, we investigated various possibilities and produced several tests and recipes: using dust from eggshells (a byproduct of the food industry) and powdered materials left over from large- and small-scale production and domestic consumption (pecan shells, granite, marble, porcelain, different types of stone, glass, cork, etc.). The project also investigated the potential of various materials from electronic waste, particularly silver, copper, aluminium, and small quantities of gold, as well as plastic from CPU boards, glass, and more.

## Waste Matter

In Chapter Three: *Maintaining and Caring—Making the Invisible Visible*, I discussed how I use craft to reveal power structures, hidden hierarchies, and value systems. I employ craft as a way of unearthing the dust that we would rather sweep under the carpet—to understand where we are. Craft allows me to notice and understand responsibilities, my own as a maker above all. Once I notice and become aware of the ways things and beings are interdependent, I become more able to respond. Through response-ability, new ways of making and living together with others, both human and non-human, become evident and thus possible to activate.

Tsing discusses the techniques of observing an entangled world in terms of the "arts of noticing".[310] With reference to Tsing, I call, through my practice, for a *craft of noticing*. This proposition is activated in particular in *Craft Remediation* (2018–19), the last project that I will discuss in this chapter. The craft of noticing is a proposition that has resonated throughout my making, as I have investigated the horizontal, the floor, and the ground, as well as materials that could be considered waste, left over in a postindustrial landscape. In the timescape of the Anthropocene, with the awareness of the near irreversibility of human-caused phenomena such as climate change, pollution, and overconsumption, I understand Tsing's invitation to notice as necessary in order to listen to a world in a state of ruination. Noticing and care are to be practised not only

in human encounters; they should also be extended to nonhumans from the natural environment, to all species, including many that are threatened with extinction.

I look at craft, a discipline that is very elastic, a shape-shifter that can reach into the interstices, as a method that allows me to notice and to look through the dirt and mud — at what we would rather discard — and figure out what needs to be done. Discussing the ethics of waste, anthropologist and social theorist Mary Douglas, in her classic text *Purity and Danger* (1966), defines waste as matter out of place — something caught in a social, personal, and cultural system. Waste, or "dirt", according to Douglas, "is the by-product of a systematic ordering and classification of matter, in so far as ordering involves rejecting inappropriate elements".[311] The matter out of place, what is included or excluded, depends on cultural values and systems of classification.

Zoe Laughlin, director of the London-based Institute of Making and of the Materials Library project, discusses how disgust is highly subjective, and shares the example of copper, a material few would be disgusted by, unless we took into account the way it is mined:

> When you buy copper, they don't tell you the story of the hundreds of people who died to bring it to you — copper mining is incredibly destructive. That could well be considered disgusting, though it doesn't elicit the same response as a product made out of poo. One solution is simply not to tell people.[312]

Looking for and working with what may be considered "matter out of place" (particularly refuse such as e-waste, but also industrial leftovers and discarded objects that would typically find their way to landfill) is for me motivated by the need to understand and challenge societal norms and existing value systems: what is included or excluded, what becomes familiar or acceptable, and what is left out, and why. In such cases, waste matter reinforces the concept of "otherness" in the system of social and economic exchange.

Between 2012 and 2014, scholar Blanca Callén explored different practices of care in relation to e-waste. In her research, she has conducted fieldwork through direct observation and informal

interviews with different waste pickers in Barcelona. She paid particular attention to a group of migrant waste pickers and a local seller who used to strike deals with scrap traders in the warehouses of Barcelona. While carrying out fieldwork with a waste picker named Marcel, Callén learned how the workers assess the value of their e-waste finds. Callén explains from her field notes:

> In most of the cases, it requires them both to recognize different kinds of materials at hand—especially metals—and to know if the electronic devices found are still functional. These variables help them to mark the right price in negotiating with others. The magnet, as I learnt, is a key tool in all these processes: if the piece attracts some materials, it is ferrous. If not, you just need to scratch a bit to distinguish brass from aluminium. But the best paid is copper, known by its reddish color. Marcel, the closer informant who has taught me the trade and with whom I have walked most, tells me that it was also very important to know how to "crack open" the things you have found: "You never know what you can find inside." A wrong blow on the incorrect part can make the opening and access much more difficult in terms of effort and time. The most difficult task is to crack open motors. Whether they come from fridges, washing-machines, or any other small device, the motor is where the biggest quantity of copper can be found. Today he recalled his first day as a waste picker, when he found a motor but he had to sell it as a whole: "At the beginning it was very difficult: as I didn't know what to do to extract the motor. Sometimes, it took me a week."[313]

From Callén's account, it emerges how skill and craftsmanship, acquired through trial and error and by learning from others who have more experience in processing discarded electronics,[314] are at the base of the waste picker's (and the electronics mender's) practice. As they collect, repair, crack open, take apart, sort, and put back into circulation, new possibilities are activated. These actions undermine the planned obsolescence of electrical devices that ultimately leads to e-waste.

From this perspective, the waste picker actively and purposefully looks under society's carpet, crafting new possibilities from

the debris and refuse left behind. Linguist Gillian Pye, referring to Walter Benjamin's description of the waste picker, writes:

Here is a man whose task is to gather the day's rubbish produced in the capital. Everything that the big city has rejected, everything it has lost, everything it has scorned, everything it has broken he catalogues and collects. He consults the archives of debauchery, the capharnaum of waste. He sorts things out and makes an intelligent selection, he collects, as a miser does treasure, rubbish that will be restored as objects of use or pleasure having passed through the jaws of the goddess of industry.[315]

From the late eighteenth century to the early twentieth century, French industry rapidly expanded. Due to a shortage of natural raw materials, possibilities for recycling fabrics into paper, bones into gelatine, and scrap metal into tools were explored. Thus the work of the *chiffonniers* (waste pickers) became invaluable to the industrial economy. In 1883, the French government introduced public waste collection services: all households were instructed to leave their waste outside in bins at specific times, and the *chiffonniers* were given special dispensation to sort through the contents of the garbage during the night.[316]

The waste picker is therefore someone who not only looks at what society leaves behind, but also exists in the shadows of the utilitarian world of the capitalist mode of production and consumption. From this perspective, and with reference to Haraway's invitation to "stay with the trouble of a damaged world", I reflect on the role of the waste picker, together with the refuse he or she collects and the creative potential of such material, as powerful figures for recuperation and resurgence in the Chthulucene. While I propose that the picker should inspire a circular approach to material and resources in the insidious times of the Anthropocene, in order to activate a process of recuperation in the Chthulucene, I am aware of the problematic connotations that the term *picker* (particularly rag picker) has been imbued with historically. I am also aware of the impossibility, as a craftsperson and researcher in a privileged position, to even relate my position to that of a professional waste picker. Yet, there is something we can learn in terms of understanding how the categories of waste and overconsumption can be challenged through resourceful rethinking of materials in postindustrial socieities.

Today, the first associations that come to mind with the term "waste picker" entail grim scenarios populated by the poor and the exploited, often women and children, sifting through refuse in landfills outside urban areas in Brazil, China, Niger and India. There, they search for scrap metals and other recyclable materials to resell. These scenarios are often dominated by violence and by hazardous working and living conditions.[317] Especially today, as in the case of the Chinese government blocking the import of certain kinds of foreign trash, Europe and North America are faced with taking responsibility for their own waste materials. This may shift the system of exchange, and hopefully foster more responsible solutions and a rethinking of our own waste disposal and recycling systems for a more sustainable future.

Loughlin writes of landfills in terms of "incredible places where objects disappear into the ground in the hope of disposing of them, but these sites will become increasingly valuable for materials and a resource in the future".[318] She continues by saying that "making genuinely effective use of waste requires very long-term thinking".[319] In a future, more sustainable scenario, she predicts that designers will have a role akin to that of the farmer, harvesting materials in order to rethink new possibilities that are beneficial for society at large. She also suggests the need for collaboration on a global level in order to come up with sustainable solutions.[320]

The livelihood of the picker points to the irreversibility of an epoch that has been marked by exploitation and by an extractive logic, the consequences of which we all should be taking responsibility for, without denial and without hiding. Response-ability requires action in the present time, not merely words. Projects such as *Gold Rush* (2016–18) and *Filament of Surplus* (2017) confirmed some of the concepts and questions that are central to my practice, particularly those of response-ability and craft's ability as a medium situated in daily life that is interacted with and experienced through the body, to emotionally engage with complex social, political, and environmental issues and uncomfortable histories. I can no longer ignore such complexities and responsibilities in the materials I work with. Deeply entangled in a world that is damaged, the materials demand that we think together.

BARKLUND & Co.
Nobels spränggropar

## *Craft Remediation*

In this section I discuss my most recent work, *Craft Remediation* (2018–19). Thematically, *Craft Remediation* developed from an earlier project, *Gold Rush* (2016–18). In a project like *Gold Rush*, which I discussed earlier in this chapter, the dialogue is still largely among humans: for example, with fellow artist Beatrice Brovia and the material experts whom we collaborated with to develop the project, and the members of the public who have experienced or encountered the work so far. For *Craft Remediation* (2018–19) I have sought out potential, sometimes unexpected, collaborations with nonhumans, particularly plants, as a way to address environmental concerns related to local soil pollution in a postindustrial landscape. This collaboration, as I will discuss, has allowed me to leave my comfort zone and to investigate the possibility of *sympoiesis* (making-together-with), expanding it beyond the realm of human-to-human encounter and communication. This collaboration has challenged my understanding not only of materiality, but also of making itself: What does making mean, and what can it become, when it is dependent on a conversation between a human and a group of plants?

In the projects that I have discussed in this chapter, I have attempted to shift my relationship to materials — to move away from a linear extract-produce-discard model in favour of a more sustainable circular approach[321] using a harvest-care-remediate model whereby alternative materials are derived from postindustrial leftovers and waste. In this shift, and especially in the project *Craft Remediation*, the idea of care is explored not only in human-to-human encounters, but also by extension to nonhumans in the natural environment — to materials and plants. My underlying quest is to better understand my own personal role and response-ability as a maker in an entangled and damaged environment.

Projects such as *Gold Rush* (2016–18), *Craft Remediation* (2018–19), and *Filament of Surplus* (2017) rely on noticing and fieldwork practice as essential methods. They also attempt, in different ways, to activate a praxis of care. *Gold Rush* (2016–18), for example, does so in a dialogue that is still human-to-human, using the wearability of jewellery as a specific quality to generate an empathic response to ethical questions that should no longer be

ignored or silenced — questions that are raised in the context of an extractive economy and by overconsumption (the ubiquitousness of conflict minerals, the planned obsolescence of consumer electronics, exploitative mining practices).

The project *Craft Remediation* (2018–19) is a hands-on permaculture[322] approach to phytoremediation.[323] Together with nonhuman collaborators such as plants, a praxis of care is investigated as a response to the local postindustrial landscape of Vinterviken, not far from where my own studio is located in Stockholm. Domestic mining is explored in the project as a method for extracting pollutants from contaminated soil. Science studies scholar Puig de la Bellacasa describes how permaculture combines a locally rooted practice with an open, global worldview. She states: "Permaculture is extending through practice-sharing, teaching, community building, and social activism, but many envision its effectiveness in the possibility of transforming people's ethos in our everyday relations to the earth, to its in habitants, and its 'resources'."[324]

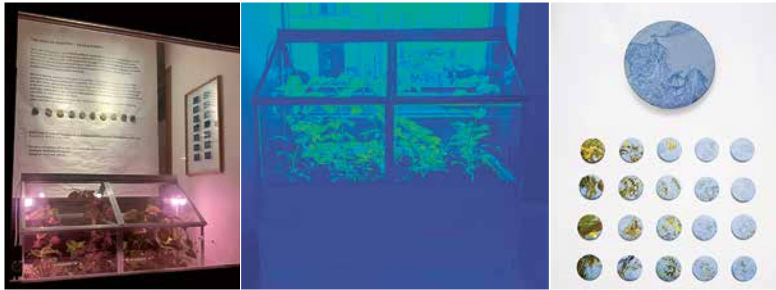
*Craft Remediation* was developed over a period of seven months, between 2018 and 2019. It consists of several phases and activities that were situated in the Stockholm neighbourhoods of Aspudden and Midsommarkransen, and in the postindustrial site of Vinterviken, a bay and woodland area where Alfred Nobel once had a farm and also produced and tested dynamite. This project represented a turning point in my practice. In previous projects, I had travelled near and far, with the aid of funding and thanks to the position of being a PhD candidate within the Swedish system, to conduct my research and to situate my work, often as part of self-initiated residencies at various workshops and laboratories. For *Craft Remediation* (2018–19) I deliberately chose to look at the areas surrounding my studio, mapping and connecting histories as well as local practices, all while noticing and challenging my own ingrained behaviours and value systems in relation to my making and understanding of craft. The scale of the neighbourhood — an area that I had investigated in the earlier project *Terroir* (2015), while at the same time inserting it into a global network of possible production and collaboration — became the main focus.

A first phase of the project consisted of collecting neglected things (silver-plated cutlery and jewellery, toys, tools, old household textiles such as curtains, fishing floats) at the 2 km flea market

in the neighbourhood of Aspudden, Stockholm, that took place on September 9, 2018. While buying specific things, I also collected the objects' stories as related to me by the owners/vendors. Why were they parting ways with these items? How were they used, and what specific narratives and memories connected to Aspudden were attached to these things? This neighbourhood flea market, where people bring their second-hand objects, slightly damaged goods, and moribund household appliances, is itself an example of the reaction against a throwaway culture. There I also purchased several plants (for instance, *Hedera helix*: English ivy, *Ambrosia artemisiifolia*: common ragweed, *Plectranthus scutellarioides*: coleus, *Pilea peperomioides*: pilea, *Hoya carnosa*: porcelain flower, *Chrysanthemum morifolium*: chrysanthemum) sold alongside unwanted household things by several vendors that participated in the flea market. The plants are associated with ideas of transplantation: native plants have been displaced by humans — deliberately or by accident — throughout history. In some cases, this has led to invasive species threatening the ecological balance. It struck me that many people from the neighbourhood were selling plants. They planted small sprouts or seeds from plants they already owned, in this way generating many more plants, which were then carried to the flea market in an array of improvised planters, from temporarily upcycled milk cartons and plastic cups to old ceramic pots, chipped ice-cream glasses, and even plastic carrier bags. This group of plants became central to the project. I would argue that these plants became my main collaborators in the project.

The second phase of the research focused on connecting realities within the neighbourhoods of Aspudden and Vinterviken, particularly the local cultural gallery Barklund & Co.[325] and the ceramicist

Joel Sandelius, who produced a series of pots specifically for the project. In this phase I also investigated the area and history of Vinterviken through interviews, reading existing research about Stockholm's city plans for decontaminating the soil. Furthermore, I collected soil samples and also buried pieces I made in fine silver and other metal alloys in the contaminated land, to analyse how the fine silver would react to the soil composition and eventual contaminants. The presence of lead, for example, would corrode the silver.



During this phase, a "window" presentation was also mounted at Barklund & Co., from October 2018 until the end of February 2019. This took the form of a greenhouse in which the plants I had purchased at the flea market back in September were planted and were in the process of restoring soil from the Vinterviken area. A growing gallery of photosynthetic images, which document the health and well-being of the plants throughout the project, was juxtaposed with the greenhouse. The installation posed questions about whether acts of caring and making together with plants can be activated in a postindustrial landscape. It remained visible, together with a text explaining the process, as a window presentation until the opening of the final exhibition on March 2. Pedestrians passing by along the busy Hägerstensvägen, the main road in Aspudden, where Barklund & Co. is located, could see it from street level. As time went by, the installation of images grew, together with the plants. New details were added inside the greenhouse, such as fine silver and metal objects fashioned to resemble plants—objects that I had crafted, buried, and unearthed again in Vinterviken. A weekly update, with new images and text about the process, was uploaded to Barklund & Co.'s social media presence. This was to further inform but also to engage, the potential public that would visit the final exhibition in the gallery space.

A final phase of the project took the form of an exhibition at Barklund & Co., from March 2 to 23, 2019. The show presented the various phases of the project: my research, as well as physical works that were the result of transformational processes I applied to things originally purchased at the flea market. The plants, now out of the greenhouse and noticeably larger, quietly took over the gallery space. During the exhibition, visitors were invited to share their own stories about Vinterviken and about plants. In exchange, at the end of the exhibition they would receive one of a series of brooches I had made, combining soil and some of the leaves naturally shed by the plants over the previous months or one of the plants, replanted in a pot crafted by ceramicist Joel Sandelius. The intention was that the plants would circulate across the neighbourhood and beyond, continuing to be cared for in the homes of the visitors that had shared their stories. At the same time, they would continue to restore the soil of Vinterviken, which filled the pots they were planted in.

An important proposition of the project was to foster discussion on situated making as a means of further exploring the concept of "craft as connector". One main aim in the project has been to engage the local community, initiating knowledge sharing and collaboration informed by the notion of permaculture and *withinness*, as discussed by Puig de la Bellacasa. *Withinness* is the ability of recognising insiderness — a thinking embedded in communities one cares for, from *within*, not looking *at*. She states that it is an example of a form of thinking with care that she proposes to call *dissenting-within*.[326] She further explains *dissenting-within* as:

> A nonidealized vision of matters of knowledge creation grounded on committed attachments needs to keep alive the feminist multilayered, noninnocent approach to the loving side of caring. Relationality is all there is, but this does not mean a world without conflict or dissension. An ontology grounded in relationality and interdependence needs to acknowledge not only, as I said before, essential heterogeneity, but also that "cuts" create heterogeneity.[327]

During the process, my own perspective on the project shifted, as I began to understand what a praxis of care meant to me, as a maker, on a more personal and local level. As I tended to the plants over a

period of seven months, monitoring their health with the help of special technological devices, responding to their needs and to any signs of distress, harvesting the leaves they shed over time, I started to reconsider my own definition of making and my relationship to materials and resources, particularly vegetation. Caring for plants, seeing them as my collaborators, understanding the act of tending to them as an act of making, a kind of craft practice, led me to notice the hierarchies that I myself, perhaps unconsciously, had put in place when working with nonhuman others. This makes me realise how limited and inadequate my human understanding may be, unless I begin to consider issues such as the consent and the rights of nonhuman others.

Law professor Anna Grear points to the inadequacy of human laws to account for complex ecosystems (rivers, lakes, forests) at "a time of runaway climate change, when the Earth's biosphere is on the brink of collapse".[328] Grear discusses how the very history of human laws, and of human rights, is an exclusionary one based on the mould of the Enlightenment-era human, that is, a property-owning, white male. In order to test the possibility of extending rights to non-human others, and creating compassionate, inclusionary laws, Grear suggests that the human needs to be decentralised from the equation.[329] This is an important consideration, if I am willing to challenge my privileged position towards natural resources, and to expand my understanding of nonhuman others.

In the following sections I will zoom in on aspects of the project, discussing the processes, observations, and reflections that led me to understand making as a praxis of care — a fundamental affective state, an ethical obligation, and a practical labour[330] — ultimately challenging my own value systems and my position.

## Local Matter — Vinterviken

Vinterviken[331] is not far from my studio. It is a neighbourhood I interact with on a daily basis. I often go there to run or hike, and I take long walks around the bay, marvelling at the frozen Lake Mälaren. Throughout the year, I often have lunch or coffee breaks with friends and colleagues, either at the Trädgården[332] (a nonprofit association and community-run garden and café) or at a restaurant housed in an industrial, red brick building that used to belong to

Alfred Nobel. It is a place I am familiar with and that I have a deep affection for. One day, during a walk, I noticed a yellow sign by the small beach, posted by Stockholm City Council. It addressed the history of this particular postindustrial site, and warned passersby like myself about the presence of pollutants such as lead and arsenic in the topsoil. The area of the beach in particular posed possible health risks. Since the ground was exposed and not covered by vegetation, any intake of soil, especially by unsupervised small children, dogs, and other animals, could be hazardous.

The pollution in Vinterviken comes from the previous industrial activity in the area. Alfred Nobel manufactured explosives in the area between 1865 and 1920. Dynamite was first invented and developed on a barge in Lake Mälaren. New premises for factories were subsequently located in Vinterviken. Over the course of sixty years, a number of accidents and explosions occurred, and about fifty people lost their lives.[333] The production of explosives and related activities in the area ended in 1920, after the company was relocated to northern Sweden. These industrial activities contaminated the soil with lead, arsenic, copper, zinc and polycyclic aromatic hydrocarbons (PAHs). In 1970, Stockholm City Council took over the area, and since then no industrial activities have been conducted at Vinterviken.[334] During the 1980s and 1990s, scrapping and dismantling operations were conducted in the area. The main factory, a red brick building built in 1891 and nicknamed *Syran* ("acid" in Swedish), is the last structure still standing from Nobel's time. It has sustained a few transformations over time. What began as an actual factory where sticks of dynamite were produced, a process involving many different chemicals, was eventually converted by Stockholm City Council into an art gallery, Skulpturens Hus, between 1998 and 2008.[335] Today, the building hosts a restaurant/café where weddings and conferences are held.

The Vinterviken factory area has been transformed into a recreational area for locals. There is a sports centre, a café, the restaurant run by a catering and events company housed in Nobel's former dynamite factory, allotment gardens and outdoor seating areas, and hiking paths around idyllic Lake Mälaren. Local residents are aware that there is a concentration of heavy metals and other pollutants in the soil, left over from Alfred Nobel's dynamite production and tests, and that this poses a significant hazard for children and animals, and

is damaging to the ecosystem.[336] As mentioned, warning signs by the beach and other areas advise parents with young children and pet owners to minimise contact with the soil. Teresia Skönström, the previous environmental engineer at Stockholm City Council's land exploitation office, states in an interview: "The water is okay, you can swim from the bridge, but you should preferably not touch the bottom because it contains heavy metals."[337] Who is responsible for cleaning up contaminated land? How does one know that their everyday leisure activities are not occurring in a contaminated site?

During my fieldwork in Vinterviken in the summer of 2018, a new sign by the small beach was installed. As of March 2019, Stockholm City Council has planned a remediation process for the Vinterviken area. At the moment, detailed sampling is taking place in the area. This is necessary to know how to handle the unused land, especially where the soil is most contaminated. For my project, I contacted Johan Olsve, the environmental specialist at Stockholm City Council's land exploitation office. Several emails have been exchanged with Olsve regarding what Stockholm City Council's plan for cleaning up the contaminated soil will be, and what are likely to be the methods adopted for extracting heavy metals and other pollutants from the affected soil in the area. Two of the questions I have asked through our email exchange are: "Is the plan to physically remove all the contaminated soil? If so, how will the contaminated soil be handled and disposed of afterwards?" I received no direct answer to these questions, but instead received a detailed report consisting of three hundred pages of investigatory findings regarding contaminated soil and risk assessments in the Vinterviken area.

As part of my artistic research, I have looked into existing methods for extracting heavy metals from soil that might be applied to the Vinterviken context. One of the reasons I have focused on phytoextraction with plants that hyperaccumulate metals as a method[338] to remove pollutants from contaminated soil is because such bio treatment is not invasive or disruptive. It is the opposite of more conventional methods of contaminated soil remediation, which involve excavations and subsequent disposal in a landfill site or other location. Approximately 340,000 sites are expected to become contaminated land in Europe and will likely require remediation.[339] One of the limitations of phytoremediation is that it is a slow growth method and requires a long-term commitment

to take care of the plants in order to reduce the level of contaminated soil. The remediation time is relatively longer than other anthropogenic soil clean-up processes. In the context of my artistic research, phytoremediation, as a method, is aligned with a praxis of care, with an understanding of circularity and of restoring through small, sustained, mundane, and ongoing acts of care.

## Remediation and Making Process

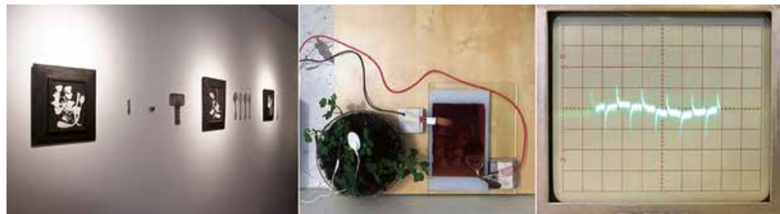
For a period of time I had been mapping the soil in Vinterviken. The information contained in the detailed report I received from the environmental specialist at Stockholm City Council helped me to identify the most contaminated areas in Vinterviken. I also carried out my own investigations: collecting samples and sending them to a soil-testing lab; and also burying in the ground fine silver and other metal alloy pieces that I had made, to be retrieved after a period of time. Certain pollutants and heavy metals such as lead are known to visibly affect silver.

An area surrounding the cliff behind Nobel's former factory was identified by the report to be one of the most contaminated. From this area behind the cliff, I progressively transported a total of 120 kg of soil, carrying it in consumer plastic bags, to the gallery space at Barklund & Co. There, I transferred the content from the bags into the base of a greenhouse. Shortly after, I transplanted the plants that I had purchased at the flea market in Aspudden in the greenhouse. Consumer plastic bags that had been used to carry food and household items were now being used to transport contaminated soil, a postindustrial leftover. Through this process, I started to ask myself: What might a plastic carrier bag, care, and craft all have in common with waste matter?

Throughout October 2018 and up until the end of February 2019, I monitored the well-being of the plants installed in the greenhouse at Barklund & Co. This was done through a device and software that I used to monitor the Normalized Difference Vegetation Index (NDVI),[340] which looks at a plant's photosynthetic activity. Using this technology I could produce images of this particular process: an ever-growing gallery of photosynthetic images that documented the day-to-day health of the plants as a sort of timeline of caring. This was installed in relation to the

greenhouse and the plants within, which were meanwhile in the process of phytoremediating the soil.

The Normalized Difference Vegetation Index (NDVI) is a graphic indicator used to visualise the amounts of infrared and other wavelengths of light reflected from vegetation. Industrial agriculture and NASA have been using this method of near-infrared photography to assess plant health and stress by mounting professional sensors on aeroplanes and satellites. According to NASA: "NDVI is calculated from the visible and near-infrared light reflected by vegetation. Healthy vegetation absorbs most of the visible light that hits it, and reflects a large portion of the near-infrared light. Unhealthy or sparse vegetation reflects more visible light and less near-infrared light."[341] Live green plants absorb visible light (solar radiation) as part of the photosynthesis process. Through photosynthesis, plants transform the energy they receive from the sun into chemical energy: glucose. Plants extract carbon dioxide from the air and use it via photosynthesis to feed themselves. During photosynthesis in green plants, carbon dioxide is converted into sugars and energy-rich organic compounds. If photosynthesis ceased, most organic matter on Earth would disappear.



During the phytoremediation process I had been collecting naturally fallen leaves from the greenhouse. These became another type of harvested "waste material" used for subsequent experimentation in the project. In particular, I developed a "phytotransformation" process using an electroforming technique. This electroforming process is controlled by a frequency meter connected to the plants; the whole making/growing process depends on the plants' well-being and interaction with their atmospheric environment. The outcome of this process is a series of silver "phytobotanical"[342] illustrations, inlayed in reconstructed jet (lignite)—a material historically used in England during the Victorian era for mourning jewellery: a *memento mori* for remembering the dearly departed.

Other works presented at Barklund & Co. materialised the caring process through acts of making. These include a series of machine- and hand-embroidered works based on the photosynthetic image of a fallen leaf from the greenhouse. The series traces the passage of time corresponding to a leaf's life cycle, from photosynthetic activity to death and decay, using that time to fabricate a tactile three-dimensional embroidery. The repetitive gestures of thread embroidery symbolise this slow life cycle, from red (still) to blue (nonlife forms). Following the exhibition, I have developed these motifs further, by electroforming the embroideries in silver, so that they became fragile reliefs, and by adorning consumer plastic bags that I used to carry the contaminated soil from Vinterviken.

## Caring for Waste Matter—Extended to the Community

In Chapter Two I discussed craft as a connector that can constantly open itself up, adapting to local contexts including past and present sites of human production and social interaction. *Craft Remediation* (2018–19) connects several realities in the neighbourhoods of Aspudden and Vinterviken. These include Barklund & Co.; ceramicist Joel Sandelius, who produced a series of pots specifically for the project; and the 2 km flea market, where people (mostly from the neighbourhood) gather to sell unwanted second-hand objects. The intention of the final presentation at Barklund & Co., the

intention was to open up a site for sharing and dialogue, extending a praxis of care. I was interested in the possibility of sharing common struggles and questions, especially in relation to waste matter, but also coming up with new possibilities and responses together with others. This local, nonprofit, and fairly new gallery, run by jewellery maker and exhibition producer Rut-Malin Barklund (who also lives nearby), seemed an apt site for such work.

During the exhibition, visitors were encouraged to write down their personal stories about Vinterviken and/or about plants on a postcard. In exchange, at the finissage of the exhibition, they would receive one of a series of brooches or one of the plants, planted in pots crafted by ceramicist Joel Sandelius. Through this sharing process, the care is passed on and extended to the local community after the exhibition is dismantled. One of the visitors, for instance, shared a story about her new garden: the soil is contaminated with creosote, a material used as a wood preservative for railway ties and telephone poles, and which is linked to cancer in humans. In her new house's garden, wooden railway ties coated with creosote provide fencing for her garden's tree. This was likely made by a previous owner of the house: he or she recovered the ties from the local railway that was later dismantled. Of concern is how much creosote has leaked into the ground from these wooden poles, and how far from the poles the creosote has spread. In Sweden there are 1.2 million power-supply poles made out of wood, most of which are impregnated with creosote.[343] After receiving this story during the exhibition, I have been looking at types of plants that could be

used for phytoremediation in her garden. This example, whereby the public can engage in mundane gestures and discussions about contaminated soil—but also about care—shows how widespread, present, and relatable this issue is. In the specific case of soil contamination, by making room for sharing stories and circulating plants to care for—while they in turn care for the contaminated soil—we make visible a reality that affects us all across species.

From the postindustrial site of Vinterviken to one's own backyard, the issue touches everyone. The project suggests an artistic praxis of care. It shows how we live with industrial waste, and more importantly suggests how we might address it as a connected, interdependent group of individuals, without waiting for the government or other authorities to fix the problem. In this project, soil and leaf samples from the greenhouse have been sent to a specialised laboratory to test the levels of lead (reduced from 2640 mg/kg TS to 1640 mg/kg TS), and how much these levels decreased over time (1000 mg/kg). The laboratory is the same one that Stockholm City Council relied on in order to carry out tests and data reports on the Vinterviken area.[344]

I am aware of the ethical concerns of displaying and sharing contaminated soil with a public audience. Testing the contaminated soil that I collected from Vinterviken in a specialised laboratory was necessary to ensure that the level of toxicity would not affect human health, in the case of both children and adults. Phytoremediation of toxic metals by using plants to clean up contaminated soil is a method that has been widely studied and researched since the mid-1990s, from agriculture to environmental science, especially in New Zealand and Australia.[345] For obvious reasons, I do not aim to contribute to these fields of expertise. I see *Craft Remediation* (2018–19) as an artistic exploration rather than a scientific project. The project's aims were sharing and gaining a deeper understanding of the impact of industrial waste matter in the postindustrial society where I situate my practice; this is investigated through crafted processes and a practice of speculative storytelling in terms of a praxis of care. Through the project, I came to a better understanding of how craft/jewellery as a medium, through these making and thinking processes, can not only be employed to problematise waste matter, but also becomes an essential artistic practice for both sharing stories and initiating

acts of recuperation and repair by circulating the potted plants, as well as brooches and other crafted objects that were the more tangible outcomes of the project.

I refer to this process of sharing local material as a hands-on permaculture approach to phytoremediation. I also connect it with Haraway's diffractive methodology. As a process, it is aligned with my concept of craft as an essentially site-specific producer of knowledge that therefore requires situated methods that can map out and analyse complex, interdependent, often quite entangled manifestations while adopting simultaneous, multiple perspectives. Through situated making, this way of knowing allows for knowledge that does not yet exist.

## Conclusion of Chapter Four

In this chapter I recognised the importance of *sympoiesis* (making together with) as a way to "stay with the trouble" in situations of environmental damage. As Haraway suggests, "making kin"—thinking together with and recognising oneself in another's position—is an urgent necessity. The Chthulucene, proposed by Haraway as an alternative to the Anthropocene, is an epoch of learning how to live and die well together as situated beings in a connected world. It first requires an understanding of ourselves as vulnerable to the world. We might need to shift our perspective in order to see repressed and nearly forgotten stories of the ground, gathering, care, others, community and perseverance—stories that convey timely messages about our damaged planet.

In this chapter I looked towards the ground as a site of interest. It is so familiar it is taken for granted, and yet we, earthbound, expect the ground to function, to be stable, to sustain us and our built environment. By analysing what lies upon and within the layers of the ground, I bring forth practices, workmanships, materialities, and histories that may not always have been visible or given space, while at the same reconsidering more explicit existing hierarchies and value systems. In doing so, I have employed the nonverbal knowledge of craft as a means of locating the neglected, the unnoticed, the dusty, the hidden histories and behaviours—what we would rather discard as waste, sweeping it under society's carpet. And then I have tried to figure out what needs to be done.

In the project *Gold Rush* (2016–18) I looked at the impact of electronic waste from ethical and political perspectives. I looked for ways to rethink the potential of waste material for a more sustainable future, inviting others to do the same, following threads even when they led to uncomfortable, unsettling circumstances. My work *Filament of Surplus* (2017) refines ideas regarding conflict and waste materials, developing a post-consumer material that can be used in digital repair (printing a missing component) or simply left in its unused state as a future currency for circulating the project. The project *Craft Remediation* (2018–19) as a whole is an artistic investigation that, through evolving installations, objects and interactions, starts a dialogue about a possible ecological remediation, having as its starting point an emotional response to the postindustrial landscape we live in today.

In *Craft Remediation* (2018–19) I have discussed how the praxis of care can be understood in a craft context through a hands-on permaculture approach to phytoremediation. I have tried to show how a more cyclical and empathic approach to materials and resources can be activated on a local scale. The idea of caring and harvesting are not only explored in human-to-human encounters, but are also materialised and extended in dialogue with non-humans, particularly plants acquired from the neighbourhood of Aspudden. The investigation started at Vinterviken in Aspudden, a postindustrial site where Alfred Nobel's invention of dynamite led to soil contamination in the area. In response to this specific local history, my project explored, among other ideas, domestic mining as a method for extracting pollutants from contaminated soil.

Through this project I came to understand making as intrinsically connected to caring. Here, making and crafting have been an ongoing process of harvesting, tending to plants, carrying and transferring soil, gently transforming second-hand items that I collected at the flea market, connecting different realities in a local neighbourhood, and opening up space for sharing stories. While there are objects that I made in the process, these were always negotiated in a dialogue with and in response to others — primarily the plants that I tended to for a period of more than seven months. These objects and material explorations were the result of material transformations that I never fully controlled: things and materials collected from the flea market, which came with stories that were not

my own; leaves shed by plants that I harvested and treasured before making them permanent as embroideries and brooches; pots made by ceramicist Joel Sandelius to further carry plants into the homes of the neighbourhood; the electrical charge of the electroforming process controlled by the plants' well-being; the silver coating from a few plated objects (a ring, a set of spoons and cutlery, a box, all bought at the flea market), transformed and transferred to become fine silver *phytobotanical* drawings. I now understand this process as a *sympoietic* interaction between myself, plants, technological devices, objects charged with stories, local community, places, other realities, and collaborators.

On a more modest scale, in my own practice I noticed that in the instances in which I let go of my own control and expectations as a maker and researcher, when I have become less preoccupied with the need of making sense in my process and with my work, and less focused on achieving tangible and legible results, that is when my research started to take a crucial turn. These are instances in which I opened my making and thinking towards collaboration and diffractive methodologies, more specifically towards *sympoiesis* (making together with).

In particular, it is when I entered into a collaboration with plants, and thus took on the challenge to establish a communication that was non-verbal, that did not rely on a purely material-based making process, that I started to understand craft in terms of caring. This was a possibility that was new to me: a way of knowing and understanding that I could never have reached on my own, and that can support me in becoming better able to respond. By making together with and responding to plants, and to multiple others, it becomes possible to build response-able communities, whereby knowledge as well as practices are shared, and an ethos is developed towards our day-to-day use and relationship to resources, as well as towards how we exist in this world.

231. See Donna Haraway, "Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin", in *Environmental Humanities* 6, 2015, pp. 159–165. Haraway's vision is of a harmonious Chthulucene in which humanity will be devoured by an enormous horror of our own making. As Haraway notes, we are all in this together, humans, ecosystems and all, and the need to come together has never been more important.
232. Haraway, *Staying with the Trouble,* p. 103, chapter 2: "Tentacular Thinking: Anthropocene, Capitalocene, Chthulucene." See also http://www.e-flux.com/journal/75/67125/tentacular-thinking-anthropocene-capitalocene-chthulucene/ [Accessed: 2019-07-08].
233. Ibid.
234. For a more in-depth history of the term and its use, refer to: Will Steffen, Jacques Grinevald, Paul Crutzen, and John McNeill, "The Anthropocene: Conceptual and Historical Perspectives", *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 369, issue 1938, January 2011, pp. 842–67.
235. See Haraway, *Staying with the Trouble,* p. 2, and Karad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning,* p. 396.
236. From the interview, p. 223. "Anthropocene, Capitalocene, Chthulucene: Donna Haraway in Conversation with Martha Kenney", source: https://lasophielle.files.wordpress.com/2017/07/ab1cd-artanthro_haraway_proof.pdf
237. Haraway has great respect for and often cites the work of Bruno Latour. She points to the urgency of re-worlding in order to embrace the other-than-human and to reconceptualise gender roles. She cites the need for new stories and tales that do not revolve exclusively around a male hero (whom she tongue-in-cheek refers to as "prick", calling the hero journey common to most tales and mythologies a "prick history"). See Haraway, *Staying with the Trouble,* p. 40.
238. Ibid.
239. Ibid.
240. Ibid. See also Bruno Latour, The Gifford Lectures, Lecture 3, "The Puzzling Face of a Secular Gaïa".
241. Ibid. For more context regarding the "god trick" in science and politics, see Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective", *Feminist Studies,* 14(3), 1988, p. 582.
242. Haraway, *Staying with the Trouble,* p. 40. The citation is from Bruno Latour's Gifford Lectures: Latour, Bruno, "Facing Gaïa: Six Lectures on the Political Theology of Nature." Gifford Lectures, Edinburgh, February 18–28, 2013.
243. Ibid. See Bruno Latour's Lecture "War and Peace in the age of Ecological Conflicts." War and Peace in an Age of Ecological Conflicts. Lecture for the Peter Wall Institute, Vancouver BC, Canada, 23.9.2013.
244. Ibid.
245. *Terra* is the Latin word for Earth; Haraway uses it often in her writings, alongside Gaïa, to identify our planet Earth.
246. "Anthropocene, Capitalocene, Chthulucene – Donna Haraway in conversation with Martha Kenney", p. 234. Source: https://lasophielle.files.wordpress.com/2017/07/ab1cd-artanthro_haraway_proof.pdf [Accessed: 2019-07-08].
247. See Haraway, *Staying with the Trouble,* p. 31.
248. Ibid.
249. Ibid.
250. See Anna L. Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins,* Princeton, NJ: Princeton University Press, 2015, p. 6.
251. See Haraway, *Staying with the Trouble,* p. 31.
252. Ibid., p. 2.
253. Easterling, in Koolhaas (ed.), *Elements of Architecture,* AMO, Harvard Graduate School of Design, Venice: Marsilio, 2014, p. 56.
254. The term "plastiglomerate" refers most specifically to "an indurated, multi-composite material made hard by agglutination of rock and molten plastic. This material is subdivided into an in-situ type, in which plastic is adhered to rock outcrops, and a clastic type, in which combinations of basalt, coral, shells, and local woody debris are cemented with grains of sand in a plastic matrix." Quotation from Patricia L. Corcoran, Charles J. Moore, and Kelly Jazvac, "An Anthropogenic Marker Horizon in the Future Rock Record", *GSA Today* 24, no. 6 (June 2014). For an in-depth reading about this material and its implications in the context of the Anthropocene, see also: http://www.e-flux.com/journal/78/82878/plastiglomerate/ [Accessed: 2019-07-08].
255. See article: Rachel Nuwer, "Future Fossils: Plastic Stone", *The New York Times,* June 19, 2014, source: https://www.nytimes.com/2014/06/10/science/earth/future-fossils-plastic-stone.html [Accessed: 2019-07-08].
256. The term "lithosphere" refers to an Earth system — "like the atmosphere or the hydrosphere — and it consists of the Earth's rocky crust. It's the outer mineral shell of the planet and also the upper, plastic, heat-filled mantle that immediately underlies that. It provides the structure of the surface of the Earth, but also, through the interaction of the rocky crust and heat, it provides the geophysical forces that drive continental drift, earthquakes, volcanoes, etc., that move minerals around through the crust, re-depositing them in different places." Quotation from Gregory Cushman, "The Fragile Society We've Built from Rocks: A Conversation with Gregory Cushman", interview by Elizabeth Hennessy, at the University of Kansas, on October 4 2017. For more context on the lithosphere, see http://edgeeffects.net/gregory-cushman/ [Accessed: 2019-07-08].
257. "Anthropocene, Capitalocene, Chthulucene – Donna Haraway in conversation with Martha Kenney", p. 233. Source: https://lasophielle.files.wordpress.com/2017/07/ab1cd-artanthro_haraway_proof.pdf [Accessed: 2019-07-08].
258. Marjanne van Helvert (ed.), *The Responsible Object: A History of Design Ideology for the Future,* Amsterdam: Valiz, 2016, p. 12.
259. Kate Franklin and Caroline Till (eds.), *Radical Matter: Rethinking Materials for a Sustainable Future,* London: Thames & Hudson, 2018, p. 9.
260. For Navajo weaving as a model for sympoiesis, see Haraway, *Staying with the Trouble,* pp. 89–98.
261. See Haraway, *Staying with the Trouble,* pp. 76–81.
262. *Sympoiesis* literally means "making together-with"; see in particular Haraway, *Staying with the Trouble,* Chapter 3.
263. In the work of Donna Haraway, "worlding" refers to the cooperative and conflictual ways of "world-making" in which different species, technologies, and forms of knowledge interact.

264. Haraway discusses how "fossil-fuel-burning humanity", rather than the *anthropos,* is responsible for the irreversible changes on Earth. She furthermore suggests how the term Capitalocene may be more precise to refer to the formation of global capital and global state socialisms (financial networks, exchange networks, extraction practices, wealth creation, (mal)distribution of resources) that set such changes in motion: "The mass extinction events are related to the resourcing of the earth for commodities production, the resourcing of everything on the earth, most certainly including people, and everything that lives and crawls and dies and everything that is in the rocks and under the rocks." See "Anthropocene, Capitalocene, Chthulucene – Donna Haraway in conversation with Martha Kenney", source: https://lasophielle.files.wordpress.com/2017/07/ab1cd-artanthro_haraway_proof.pdf [Accessed: 2019-07-08].
265. See Haraway, *Staying with the Trouble,* in particular p. 31.
266. Ibid.
267. With "making oddkin", Haraway refers to the possibility of "becoming with" multiple other critters, human and nonhuman. "Staying with the trouble requires making oddkin; that is, we require each other in unexpected collaborations and combinations, in hot compost piles. We become-with each other or not at all." Haraway, *Staying with the Trouble,* p. 4. By way of example she cites her own experience of becoming-with and learning how to communicate with her dog companion, Cayenne, during training; as well as that of making "oddkin" with pigeons, as in the experience of *colombophiles,* documented in the social project PigeonBlog. For information about PigeonBlog see the project's statement: http://nideffer.net/shaniweb/files/pigeonstatement.pdf [Accessed: 2019-07-08].
268. See Haraway, *Staying with the Trouble,* p. 4.
269. Ibid., p. 58.
270. Ibid., p. 4.
271. Ibid., p. 10.
272. See "There are Always More Things Going on than You Thought! Methodologies as Thinking Technologies," *The Haraway Reader,* New York: Routledge, 2004, pp. 321–342 and "Gane & Haraway – interview with Donna Haraway. When We Have Never Been Human, What Is to Be Done?" p. 154. *Theory, Culture & Society* 23 (7-8), SAGE, London, Thousand Oaks, and New Delhi, 2006, pp. 135–158.
273. Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century" p. 154. Published in: Weiss J., Nolan J., Hunsinger J., Trifonas P. (eds.) *The International Handbook of Virtual Learning Environments,* Springer, Dordrecht, 2006, pp. 117–158.
274. See "Gane & Haraway – interview with Donna Haraway. When We Have Never Been Human, What Is to Be Done?" p. 154. *Theory, Culture & Society* 23 (7-8), SAGE, London, Thousand Oaks, and New Delhi, 2006, pp. 135–158.
275. See http://www.conversationpiece.co [Accessed: 2019-07-08].
276. Anthropocene, Capitalocene, Chthulucene – Donna Haraway in conversation with Martha Kenney", p. 233. Source: https://lasophielle.files.wordpress.com/2017/07/ab1cd-artanthro_haraway_proof.pdf [Accessed: 2019-07-08].
277. For more on the logics of extraction and expulsion, and on how violence is a phenomenon that is created, see Saskia Sassen, *Territory, Authority, Rights – from Medieval to Global Assemblages,* Princeton & Oxford: Princeton University Press, 2006 and also Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy,* Cambridge, MA: Harvard University Press, 2014.
278. A tragic current example of mass expulsion is that of the Rohingya people, forced to flee from Myanmar Military leaders use the excuse of religion as basis for the Rohingya expulsion (religious intolerance against the Muslim faith), but it is actually all motivated by a "land grab", as Chinese investors are stipulating deals with the military elite in order to develop infrastructures and real estate in the territory inhabited by the Rohingya. For more context, see Sassen's article: http://www.huffingtonpost.com/entry/rohingya-land-grab-military_us_59b96400e4b02da0e13e79f4 [Accessed: 2019-07-08]. Donna Haraway also recounts stories of massive land grabs at the expense of native Navajo populations, to secure access to coal mining in the Black Mesa region, which extends between the American states of Colorado, Oklahoma, and New Mexico. See Haraway, *Staying with the Trouble,* pp. 89–97.
279. See sources, including a bill passed by the Obama administration in this regard: http://www.planetaryresources.com/2015/11/president-obama-signs-bill-recognizing-asteroid-resource-property-rights-into-law/or http://www.independent.co.uk/news/science/asteroid-mining-made-legal-after-barack-obama-gives-us-citizens-the-right-to-own-parts-of-celestial-a6750046.html [Accessed: 2019-07-08].
280. Haraway, *Staying with the Trouble,* p. 150.
281. Ibid.
282. A first part of the project was presented in October 2016 at the Stedelijk Museum 's-Hertogenbosch, the Netherlands. A further expanded, fully developed body of work, alongside a site-specific installation, was later presented at Maurer Zilioli Contemporary Arts in Munich, in parallel with Schmuck 2016 and during the international jewellery week that takes place in Munich every year. Originally, the phrase "gold rush" was used to characterize the feverish influx of people to areas where veins of gold had been found. The driving force was the dream of making a find that would make one rich overnight. Today we also use the phrase in a more metaphorical way to describe new, lucrative markets that many people want to invest in. These have often come into being as a result of technical innovations. See Jorunn Veiteberg, introductory text for *Gold Rush* (exhibition catalogue), Munich: Maurer Zilioli Contemporary Arts, 2017.
283. About the project *Kino:* http://www.conversationpiece.co/kino.html [Accessed: 2019-07-08].
284. According to the general definition, "conflict minerals" are natural resources mined in particular areas where conflict occurs and affects the mining and trading of those materials. They are sold in order to support war, fighting, and the activities of local armies and rebel groups; that these minerals, indispensable to many consumer goods, trade on a global scale poses several issues to international manufacturers and consumers alike. Typical conflict minerals are coltan (columbite-tantalite) from which tantalum is derived, cassiterite (tin), gold, wolframite (tungsten), or their

derivatives; or any other mineral or derivative believed to be financing conflict in the Democratic Republic of the Congo or an adjoining country. For more resources on the topic, see the online platform Global Witness. https://www.globalwitness.org/en-gb/campaigns/conflict-minerals/ [Accessed: 2019-07-08].

285. See Blanca Callén's article, PDC2014: Workshop "Love in e-waste", in *Position Paper: Caring e-waste?,* p. 1. Source: https://loveinewaste.wordpress.com [Accessed: 2019-07-08].
286. Ilkyeong Moon, Gyu M. Lee, Jinwoo Park, Dimitris Kiritsis, von Cieminski, Gregor, *Advances in Production Management Systems. Production Management for Data-Driven, Intelligent, Collaborative, and Sustainable Manufacturing: IFIP WG ... in Information and Communication Technology),* publisher: Springer, 2018, p. 5.
287. See, for example, Nokia Conflict Mineral Policy: https://www.nokia.com/sites/default/files/nokia_conflict_minerals_policy_0_0.pdf. See also an article by author George Monbiot, "My search for a smartphone that is not soaked in blood": https://www.theguardian.com/commentisfree/2013/mar/11/search-smartphone-soaked-blood, both articles [Accessed: 2019-07-08].
288. For more context regarding this controversial aspect, see online resource: https://www.sourceintelligence.com/what-are-conflict-minerals/ [Accessed: 2019-07-08].
289. Tim Ingold, "The Textility of Making", *Cambridge Journal of Economics,* 34, 2010, p. 91.
290. Bruno Latour, "On Technical Mediation – Philosophy, Sociology, Genealogy", *Common Knowledge* 3, no. 2, 1994, pp. 36–37.
291. Bruno Latour describes the notion of black-boxing in these terms: "when a machine runs efficiently, when a matter of fact is settled, one needs to focus only on its inputs and outputs and not on its internal complexity. Thus, paradoxically, the more science and technology succeed, the more opaque and obscure they become." See Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies,* Cambridge, MA: Harvard University Press, 1999, p. 304.
292. See Thomas Thwaites, *The Toaster Project: Or a Heroic Attempt to Build a Simple Electric Appliance from Scratch,* Princeton Architectural Press, 2011.
293. Haraway, *Staying with the Trouble,* p. 40.
294. Ibid. In particular see Chapter 2.
295. Originally, the phrase "gold rush" was used to characterize the feverish influx of people to areas where veins of gold had been found. The driving force was the dream of making a find that would make one rich overnight. Today we also use the phrase in a more metaphorical way to describe new, lucrative markets that many people want to invest in. These have often come into being as a result of technical innovations. See Jorunn Veiteberg, introductory text for *Gold Rush* (exhibition catalogue), Munich: Maurer Zilioli Contemporary Arts, 2017.
296. For technical and scientific information regarding the issue of e-waste in the EU: http://ec.europa.eu/environment/waste/weee/index_en.htm [Accessed: 2019-07-08]. For Sweden, see "Recycling and disposal of electronic waste – health hazards and environmental impacts", a paper issued by the Swedish Environmental Protection Agency, report 6417, Bromma, March 2011. For more management of e-waste and electronic products with interviews and archives, see Formafantasma's project "Ore streams", 2019: http://www.orestreams.com/ [Accessed: 2019-07-08].
297. Source https://www.nasa.gov/feature/goddard/2018/nasa-gold-mission-to-image-earth-s-interface-to-space [Accessed: 2019-07-08].
298. Author quoted in Benjamin Lignel, *Collaboration: Je t'aime, moi non plus,* in Peter Deckers (ed.), *Contemporary Jewellery in Context: A Handshake Blueprint,* Stuttgart: Arnoldsche Art Publishers, 2017, p. 79.
299. Ibid.
300. See https://edition.cnn.com/2013/05/30/world/asia/china-electronic-waste-e-waste/index.html [Accessed: 2019-07-08].
301. See the full list of banned materials: https://images.magnetmail.net/images/clients/ISRIID/attach/MEEAnnouncement20182019BannedItems.pdf [Accessed: 2019-07-08].
302. Source: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTURBANDEVELOPMENT/0,,contentMDK:23172887~pagePK:210058~piPK:210062~theSitePK:337178,00.html [Accessed: 2019-07-08].
303. Kate Franklin and Caroline Till (eds.), *Radical Matters: Rethinking Materials for a Sustainable Future,* London: Thames & Hudson, 2018.
304. Ibid., p. 218.
305. Anna L. Tsing, *Friction: An Ethnography of Global Connection,* Princeton, NJ: Princeton University Press, 2004, p. 13.
306. Ibid., p. 4.
307. Jens Hoffmann, (ed.), *The Studio,* London: Whitechapel Gallery, 2012.
308. See Steven J. Jackson, "Rethinking Repair", Gillespie, T., Boczkowski, P. J., Foot, K. A. (eds.). *Media Technologies: Essays on Communication, Materiality and Society,* Cambridge, Massachusetts: MIT Press, 2014 and Richard Sennett, *The Craftsman,* New Haven: Yale University Press, 2008; *Together: The Rituals, Pleasures and Politics of Cooperation,* New Haven: Yale University Press, 2012.
309. See website, http://www.kremer-pigmente.com/en [Accessed: 2019-07-08].
310. See Tsing, *Friction: An Ethnography of Global Connection,* Princeton: Princeton University Press, 2005, p. 37. See also Tsing, *The Mushroom at the End of the World,* Princeton: Princeton University Press, 2015.
311. Mary Douglas, *Purity and Danger: An Analysis of Concepts of Pollution and Taboo* (1966), Abingdon: Routledge, 2002, p. 44.
312. Kate Franklin and Caroline Till (eds.), *Radical Matter: Rethinking Materials for a Sustainable Future,* London: Thames & Hudson, 2018, p. 80.
313. Blanca Callén & Tomás Sánchez Criado, "Vulnerability Tests, Matters of "Care for Matter" in E-waste Practices", *Tecnoscienza* 6, 2016, pp. 17–46.
314. Ibid. p. 31
315. Gillian Pye, *Trash Culture: Objects and Obsolescence in Cultural Perspective,* Oxford, Bern: Peter Lang, 2010, p. 115.
316. Shahid Amin and Marcel van der Linden (eds.), *Peripheral Labour: Studies in the History of Partial Proletarianization*

(International Review of Social History Supplements), Cambridge: Cambridge University Press, 1997, pp. 157–77.

317. One such scenario is addressed in the documentary *Waste Land* (2010) by director Lucy Walker. The documentary follows Brazilian photographer Vik Muniz throughout the making of a series of monumental photographic portraits made from trash, called *Pictures of Garbage.* Muniz's portraits are the culmination of a collaboration and ongoing dialogue with the pickers of recyclable materials (*catadores*) of Jardim Gramacho, an open-air landfill that at the time was one of the largest in Latin America, and is today closed down.
318. Kate Franklin and Caroline Till (eds.), *Radical Matter: Rethinking Materials for a Sustainable Future,* London: Thames & Hudson, 2018, p. 81.
319. Ibid.
320. Ibid.
321. In the projects that I have discussed in this chapter, I have attempted to shift my relationship to materials — to move away from a linear extract-produce-discard model in favour of a more sustainable circular approach using a harvest-care-remediate model whereby alternative materials are derived from postindustrial leftovers and waste. In this shift, and especially in the project Craft Remediation, the idea of care is explored not only in human-to-human encounters, but also by extension to nonhumans in the natural environment — to materials and plants. My underlying quest is to better understand my own personal role and response-ability as a maker in an entangled and damaged environment.
322. See Puig de la Bellacasa, Maria, "Ethical doings in naturecultures", *Ethics, Place and Environment* 13(2), 2010, pp. 151–169.
323. The word "phytoremediation" derives from the Ancient Greek word phyto, meaning plant, and the Latin word *remedium,* meaning restoring balance. Phytoremediation is a biological technique used to restore polluted water and soil environments to their natural state. It involves the use of living plants and their related microorganisms to remove contaminants from the environment or to degrade contaminants to a less toxic form.
324. Puig de la Bellacasa, Maria, "Ethical doings in naturecultures", *Ethics, Place and Environment,* 13(2), 2010, p. 152.
325. Barklund & Co., Aspudden, Stockholm was established in 2016, by jewellery maker and exhibition producer Rut-Malin Barklund. Barklund & Co. and is a project-based exhibition space for the arts of craft. The exhibition space hosts exhibitions, panel talks and lectures, around four times a year. The space also operates as an artistic workshop/workroom, with the aim of fostering interdisciplinary collaborations. For more context regarding this space, see http://www.barklundandcompany.se/ [Accessed: 2019-07-08].
326. Maria Puig de la Bellacasa, *Matters of Care: Speculative Ethics in More Than Human Worlds,* Minneapolis: University of Minnesota Press, 2017, p. 80.
327. Ibid., p. 78.
328. See Anna Grear's essay, https://www.humansandnature.org/it-is-wrongheaded-to-protect-nature-with-human-style-rights [Accessed: 2019-07-08].
329. Ibid.
330. Maria Puig de la Bellacasa, 'Nothing Comes Without Its World': Thinking with Care. *The Sociological Review* 60, 2, 2012, pp. 197–216.
331. Swedish chemist Alfred Nobel's invention of dynamite caused a revolution in armaments and explosive manufacturing. A side effect of such industrial activities in Vinterviken since the 1860s has been severe soil contamination by high levels of lead and arsenic. Vinterviken was ranked by the City of Stockholm as one of the most polluted areas in the city. https://www.dn.se/sthlm/akut-hal-sorisk-men-saneringen-drojer/ [Accessed: 2019-07-08].
332. http://vinterviken.com [Accessed: 2019-07-08].
333. Source: https://web.archive.org/web/20100815030732/http://www.vinterviken-nobel.se/sid2.html [Accessed: 2019-07-08].
334. See https://växer.stockholm/projekt/vinterviken---sanering-av-fororenad-mark/ [Accessed: 2019-07-08].
335. See http://arkiv.mitti.se/2007/04/soderort_a/MIS-A19A20070123SAV1.pdf [Accessed: 2019-07-08].
336. There are many postindustrial sites around Stockholm where, for example, heavy metals have been smelted or used in other industrial processes. The production waste (smelter slag, tailings) has sometimes been left behind to pollute the surface, soil, and groundwater. The heavy metals most frequently encountered in this waste include arsenic, cadmium, chromium, copper, lead, nickel, and zinc, all of which pose risks for human health and the environment. See report, Huvudstudie Vinterviken SAMMANFATTNING MARS 2014 https://växer.stockholm/globalassets/projekt/hagersten-liljeholmen-sdo/aspudden/vinterviken/sammanfattning-huvudstudie-vinterviken [Accessed: 2019-07-08].
337. See https://www.stockholmdirekt.se/nyheter/bada-garna-men-nudda-inte-botten/LdencB!YKJ6PfbstV0PjKR-9wgpu2A/ [Accessed: 2019-07-08].
338. See Robert R. Brooks (Ed.), *Plants that Hyperaccumulate Heavy Metals.* Wallingford, UK: CAB International, 1998 and Reeves R. D., "Tropical Hyperaccumulators of Metals and their Potential for Phytoextraction", *Plant and Soil* 249, 2003, pp. 57–65.
339. See https://www.eea.europa.eu/highlights/soil-contamination-widespread-in-europe [Accessed: 2019-07-08].
340. See https://sentera.com/understanding-ndvi-plant-health/ [Accessed: 2019-07-08].
341. See https://earthobservatory.nasa.gov/features/MeasuringVegetation/measuring_vegetation_2.php [Accessed: 2019-07-08].
342. "Phytobotanical" is a word I coined to refer to these illustrations made as a result of the electroforming process I developed.
343. https://corporate.vattenfall.com/globalassets/corporate/sustainability/reports/corporate_social_responsibility_2008.pdf [Accessed: 2019-07-08].
344. See scan copy of reports – soil and leaf sample analysis for the project *Craft Remediation.* https://www.nicolascheng.com [Accessed: 2019-07-08].
345. See HortResearch www.hortresearch.co.nz and the Soil and Earth Sciences Group of the Institute of Natural Resources at Massey University www.soils-earth.massey.ac.nz and Phytolink Australia Pty www.phytolink.com.au [Accessed: 2019-07-08].

# Conclusion

## Concluding Discussion

My research is concerned with the responsibilities of craft in a world that is interconnected, globalised, and disrupted by human-caused phenomena. Today, because of the undeniable exigency of sustainability, how and where craft is learned, made, discussed, and passed on is being renegotiated. I suggest the focus, when it comes to making, needs to shift from self-reliance to cooperation. I see an urgent need for makers to better understand the context of their materials, in order to bring awareness and attention to the way materials are sourced, manipulated, consumed, and eventually discarded. There is also a need to create more public awareness, especially in today's information and internet age, in order to build communities of response-ability.

The questions central to my research were:

- What is exposed when we reconsider craft as a phenomenon that expands beyond the studio practice and is situated in an entangled sociopolitical and economic environment?

- How are the links between craft knowledge, creativity, and the hand renegotiated in the digital era, in today's postindustrial society?

- How can craft/jewellery practice — its making and thinking processes — not only be employed to problematise

> complex production and consumption issues, but also become an essential artistic practice in a process of recuperation and resurgence for a damaged environment?

All the projects discussed in the thesis, such as *Terroir* (2015), *From Landscape to Timescape* (2016) & *Craft Remediation* (2018–19), as I moved across several production networks to carry out parts of the research, it became clear to me that craft is an open discipline; it resists categorisation. This openness represents a challenge. How do I discuss a phenomenon that is in flux, never fixed? In my experience, every time I tried to pinpoint what craft is, and what it does exactly, I found that no definition I came up with was ever encompassing. As I moved along the nonlinear paths of my research subject, I discussed craft as a connector, craft as a doorstop, craft as a facilitator, craft as a way to reveal, among other propositions. Perhaps a common denominator to all these ad hoc discussions is that craft is a phenomenon that is always relational and responsive. Craft allows me to relate manifold histories, disciplines and ways of making and learning, the digital and the physical, timescapes and landscapes. By being situated in an environment or context beyond my own studio, by being open and vulnerable to others through noticing (a technique of observing an entangled world), I challenge my own privilege as well as social norms, and habits that I have come to internalise and sustain. Such awareness, as makers, is essential to understand our own positions of responsibility in a complex world system. Hence a new understanding of materials, resources and processes, their impact and significance to other people/communities/species and natural environments, emerges. This understanding in turn offers the possibility of rethinking and reconfiguring our practices as makers and craft artists.

In a postindustrial context, where I largely situate my own practice, new possibilities, as well as new challenges and response-abilities, open up for craft and craftspeople. This is to a great extent because of the profound changes created by the digital age in how we communicate and connect with one another, but also in how we make, learn and share knowledge. As I discussed in Chapter Two *Craft as Facilitator: Creative Economy*, and its sections *Do It With Others* and *Craft Dissolving — Craft Becoming*, a paradigm shift is facilitated by new technologies, from the self-reliance

implied in a D.I.Y. model, to the connectivity and collaboration offered by a D.I.W.O. model. When referring to a postindustrial context, this is also because of the ecological disruption resulting from over-consumption, industrial waste and other human-caused irreversible phenomena that have impacted the ecosystem of our planet. These realities require ad hoc, situated ways of knowing, and craft, because of craft's elasticity, may support makers in activating possible responses and remediation processes.

## On the Impossibility of Knowing: Reflection on the Limitations of the Research Approach in Craft

In my research I have made manifold connections and developed methodologies in response to specific contexts and people I have met along the journey. This manifold and rhizomatic approach, following my research across disciplines and multiple threads, has presented some limitations. It is an approach that can easily become too wide in scope, resulting in restlessness and confusion. It cannot be compared to the specificity of research-through-practice that focuses on the development of a specific technique, a material-specific discipline, or a question that is more clearly set within or against a particular craft's tradition.

At the same time, by following my research questions across multiple threads and by rendering myself vulnerable to others and to unexpected contexts, I have eventually arrived at an intimate understanding of my practice, and of its potential. Through field-work practice, going outside the studio, relinquishing the familiarity and therefore the safety that the studio represents to me, I better understand how my practice is entangled in complex world systems. I have begun to foresee new possibilities and to comprehend my responsibilities as a maker in the world.

For much of my research, I have undertaken fieldwork practice in different workshop contexts, institutions, production sites, and self-initiated residencies, both in Sweden and abroad. Through fieldwork practice as a method, I have become aware of my own vulnerability as an artist and human being, and of how my own vulnerability is deeply interconnected with that of many others, human and otherwise. This awareness has led me, with my last project, *Craft Remediation* (2018–19), to return to the scale of the local neigh-

bourhood where my own studio is located. This step was necessary as it allowed me to confront some research limitations, assumptions, and instances of short sightedness in previous projects; it allowed me to confront my own privilege, being a researcher, having had access to funding that made it possible for me to travel near and far.

With my most recent project, the intention has been to take a self-critical turn: to forego travel and focus instead on local matter; not simply to produce new works, thus consuming and adding to those same problems I have been addressing throughout my previous projects, but to reassess my own understanding of materials and of nature not as a resource but as a collaborator to care for and respond to. This self-critical turn consisted of focusing again on the neighbourhood outside my studio, something that I had done before, particularly in the project *Terroir* (2015). This time, I set out to pay more attention and to push myself towards collaborations that were outside my comfort zone, particularly with plants, in this way shifting the focus from a work that is about something to a work that happens and develops through mundane relationships and dialogue: through daily gestures and responses, and small acts of care.

During this last project, *Craft Remediation* (2018–19), I tended to plants over a period of seven months and monitored their well-being as they were in the process of recuperating contaminated soil. In the process, I started to understand my own making in terms of a praxis of care. The notion of care is not new in relation to craft: the skill, precision, and level of detail through which an object is made often depend on a careful and caring process. Something is carefully crafted, through an articulation of techniques, materials and gestures. In the project *Craft Remediation*, however, my making was no longer beholden to a process of material manipulation and transformation—or at least not in the way I was used to. It was not defined by a set of chosen techniques and tools. It was not motivated by a specific goal or expected outcome. In short, my making became a situated process whereby I constantly responded and adapted to my collaborators' (a group of plants) needs, desires, and physical manifestations of distress or comfort. I became better able to respond, and I found ways of communicating that were new to me, making me reconsider my own value systems, including my own tendency to overlook natural resources, especially vegetation, often considering it to be merely material.

Through this research process, I have experienced a change in the way I see things. I have become more aware of and responsive to the agency of others, and have expanded my own understanding of my practice in relation to craft and to the making process: what making can be and what it does, when the result is not necessarily a tangible object, or a neatly finished project, but is rather an open-ended process of communicating with and responding to others. I have realised how limited some of my previous approaches were: Is it enough to comment on something through my artistic work? To point at something? To bring awareness and attention? How big is my audience really, and why should it matter in the field of craft? How can it matter? Making as an experience has changed for me, as I now understand it as a process that does not belong entirely to me. It is a meeting point of separate, interdependent agencies. Moving away from making as a main craft process in my practice, and moving towards an understanding of caring as craft, I have begun to notice the potential to establish long-term attitudes of response-ability with others.

Yet, how can I be sure that what I learn about difference is from others, rather than about others? How can I know that encounters and interactions with others, that long-term attitudes of response-ability, are shared and on as equal terms as possible? These questions were not present at the beginning of my research. They have emerged and gained definition the more I moved along the recursive paths of my research, as I not only encountered others, but also sought to practise care in response to others in my direct surroundings. The project *Craft Remediation* was crucial from this point of view: it has opened up for me an ethical discussion on artistic research, the potential of which I have not fully addressed so far. At the end of this journey, I have become more aware of the ethical question of consent and of the rights of non-human others that are involved, or that I actively engage, in my making and in my artistic research. This represents a possibility for further research inquiry.

In the process of caring for plants and for contaminated soil, I have begun to doubt my ability to ensure that what I define as a praxis of care, and as long-term attitudes of response-ability, is not still exclusively bound to an anthropocentric and human-centric worldview. The responsibility of being situated in a particular context, in relation to and interaction with others, such as plants, comes

with the awareness that understanding and learning from others is a messy, unknowable and always partial process. I cannot be sure, I cannot know, that I and others that I collaborate with or care for are unequivocally in this together. The one who digests and relays the experience, the interpreter, the one that tries to read the signs (e.g. through the device and software Normalized Difference Vegetation Index in *Craft Remediation*) is still ultimately me. This is the main limitation of my artistic research: the impossibility of knowing, the awareness that a certain degree of power and authority will always fall back into my lap—even when I am situated in a collaboration, even when I refrain from making, and propose instead that a praxis of care is craft. At the same time, an understanding of vulnerability through caring and being situated—recognising how vulnerable I am to the world, as well as how the world and its biosphere are vulnerable because of how related and interconnected we, humans and non-humans—is an essential, ethical realisation that can lead to empathy and response-ability.

When entangled in the partial, bumpy process of situated learning and making, ethical questions are not only unavoidable but a necessity: What are my obligations as a craft artist and a researcher? From whose perspective are rights discussed when encountering and relating to non-human others? Who is the beneficiary of my intended actions and attitudes? I will never know what it feels like to be a plant in a pot, restoring the contaminated soil of Vinterviken. What I understand now, though, is that situated-ness, noticing, caring and empathy are attitudes that make me able to stay in an active, practice-based engagement with others, no matter how slippery and confusing this may be, and across unknowable differences. Through these attitudes, I can situate my practice in the world, beginning to understand its ethical ramifications, as well as its aesthetic, relational and sensual qualities.

## Craft Contribution to Present and Future Communities of Practice

Traditionally, craft has been associated with handiwork. Through the making process, histories, ideas, belief systems, motifs and social codes are transformed and embodied into a material object. From a potter's studio to knitting clubs, from basketry to blacksmithing,

from studio craft to souvenir craft industries, an understanding of craft practices and of craft knowledge-building can reveal much about a community. Craft often mediates how, as makers as well as recipients and users of objects, we perceive and interpret the world. Craft can manipulate our physical world, and at the same time, we can easily be shaped by the objects we interact with in our daily routines. Craft is powerful in this sense, because we mediate its manifestations unconsciously. For me, craft is a subject and practice that reveals complex, interconnected histories and behaviours, and that helps me see through what I thought I knew and internalised. It enables me to understand the world, especially in its present, disrupted state.

When I stay within the confines of my own studio, and I pay much less attention beyond myself and my own dedication to making, I limit my possibility of understanding the world — starting from the materials I use, their histories, and the resources I employ. It easily becomes a monologue. Situated learning and making, and a rhizomatic approach whereby I attempt to build relationships, albeit partial, with others as well as long-term attitudes of response-ability, are methods that I have researched as a way to challenge this monologue and a one-sided worldview. Through these methods, I am enabled to open myself to others, understanding vulnerability in a time of enormous ecological disruption, where I cannot, even as a craft artist, take anything for granted any longer. From a more nomadic attitude, to finally staying put within my immediate surroundings, I attempted to understand making and crafting beyond the studio, as a process and a way of knowing that does not belong exclusively to me. This is an understanding and a discussion that I wish to share with craft communities both within academia and outside: students and studio craft professionals focusing on jewellery in particular.

Making as way of knowing is profoundly entangled with the world. This has always been so for craft, if we think about the ways that craft is rooted in traditions, histories, cosmologies and communities, and is connected to a sense of place and to access to material resources (or lack thereof). Precisely because making as way of knowing is profoundly entangled with the world, it is important to reconsider what this means, for makers and craftspeople, in the face of climate change, tremendous loss of biosphere, and profound

social, political and ecological disruption. The themes of sustainability, the Anthropocene, climate change and the ethical obligations of artists have been updated with recent research findings that are relevant to academic curricula, and critical to debates and practices in the jewellery and design communities. Craft communities of practitioners, students and academics should be encouraged to pay closer attention to these themes; how they inform and impact the development of our subjects — how and where craft disciplines are passed on, learned and practised today.

Some artists have traditionally taken resources or other cultures for granted, appropriating elements and focusing on their own modes of adaptation and creative output, while ignoring the complexity of the material's origin and surrounding discourse. Our worldview today is hopefully more sensitive in terms of artistic intervention and cultural awareness. But it is equally crucial that we propose more sustainable and ethical scenarios for the use and distribution of material resources, particularly in the contexts where contemporary craft and jewellery discourses are being shaped today: academia and the studio or workshop. An initial step is to gain a deeper awareness of these issues, however informed, as makers, we think we already are. Based on my research and experience I find that this is possible through situated making and situated learning, whereby I make — and learn — together with and in response to others. Situated making has allowed me to learn *from* others, rather than *about* others. This is relevant in the context of my practice, where I confront myself with value systems that are often connected with ideas of place, authorship and ownership, and with questions of material origin, resources and histories.

## Suggestion for Further Research

The discussion on nonhuman rights, from an ethical and legislative perspective, and an inquiry into the restorative potential of craft as a praxis of care that is shared by humans and nonhumans alike, are tracks that represent a further development for my research. In particular, how can making become a restorative attitude and praxis, a process of sympoiesis across species and differences? For me to be able to engage with nonhumans, particularly plants and vegetation,

it is necessary to reframe my own rapport with nature, to decentralise the human, to find better ways to empathise with others, to expand my understanding of others, without annexing or trying to assimilate them by attributing to them human traits or behaviours. Drawing from fields as apparently diverse as plant neurobiology, craft and law, in order to sustain a further inquiry into how this sympoietic process could materialise, and what impact it could have on the development of craft disciplines such as jewellery, is where I see my research heading next.

# Svensk sammanfattning

## Forskningskontext

Min konstnärliga verksamhet kretsar kring konsthantverk och utforskning av material; den bygger på smyckekonst men är inte begränsad till enbart det ämnet. Jag strävar efter en öppenhet och en korspollinering mellan discipliner, och en motsvarande öppenhet i min egen praktik med grund i min interdisciplinära bakgrund från inredningsarkitektur, produktdesign, konsthantverk och smyckekonst. Jag är intresserad av att överskrida gränser och att förena olika typer av kunskap, färdigheter och verktyg. Denna attityd har påverkat sättet på vilket jag förstår konsthantverk och har fört mig bort från att arbeta ensam i en traditionell verkstadsbaserad verksamhet mot en förståelse av konsthantverk som en flexibel disciplin vad gäller teser och positioner: ett konsthantverk som alltid befinner sig i *flux*[346] och i en *supplementär*[347] position. Samma egenskaper (formbarhet, anpassningsbarhet, fluiditet) är tillämpliga vid identifieringen av konsthantverkets plats idag – var och hur hantverk lärs, tillverkas, skapas, erfars, diskuteras och vidareförs.

Som del av min forskning har jag sett på hur den postindustriella kontexten[348] påverkar min verksamhet som konsthantverkare och smyckeskonstnär. Jag är också intresserad av hur hantverksbaserade discipliner utövas och sprids idag. Hur diskuteras konsthantverkets ideologi, betydelse och potential i en postindustriell kontext? När jag talar om en postindustriell kontext tar jag hänsyn till särskilda frågor som väcks av den digitala teknikens inverkan på sätten vi skapar, kommunicerar, delar och producerar kunskap. Jag tar även hänsyn till det postindustriella landskapet (t.ex. produktionsanlägg-

ningar och gamla industriområden) i delar av min forskning, som i projekten *Doorstopper* (2017–2018), *Filament of Surplus* (2017–2018), *Gold Rush* (2016–2018) och *Craft Remediation* (2018–2019).

Den andra centrala kontexten för avhandlingen är *antropocen*,[349] som relaterar till hur mänskliga aktiviteter sedan den industriella revolutionens början har påverkat jordens ekosystem och arter i grunden. Detta begrepp kommer jag att behandla mer utförligt i kapitel 4 – *Response-able for a Sustainable Future* – genom att tillämpa vetenskapsteoretikern Donna Haraways användning av *Chthulucene* som ett alternativt, mer inkluderande begrepp än antropocen. Olika människoskapade fenomen – från jord- och vattenföroreningar till skogsskövling och överkonsumtion – kännetecknar tillsammans epoken antropocen. De är resultatet av en gradvis ökande produktion och konsumtion, drivet av teknik, ekonomi och mänskligt begär. I denna kontext har det blivit omöjligt att ta naturtillgångar, material, produktionsmekanismer och miljön i stort för givet. Detta påverkar konsthantverkare och kräver nytänkande – vi måste avlära oss de privilegier[350] och ärvda beteenden som hör till en antropocentrisk världsbild. Teserna och förslagen som diskuteras i avhandlingen kommer från en stark medvetenhet om den inverkan som det postindustriella samhället och den moderna digitala kommunikationstekniken har på hantverksbaserade discipliner, och en känsla av angelägenhet och ansvar (*response-ability*) beträffande de utmaningar som det antropocena tillståndet frambringar.

## Syfte, metod och frågeställningar

I min forskning som konsthantverkare arbetar jag med en rad material, tekniker och traditioner och tillämpar tillverkningsprocesser, metoder och tankesätt som ligger till grund för hantverksbaserade discipliner som smyckekonst och metallsmide, men även dekorativt trompe l'oeil-måleri och broderi. På samma gång har jag utforskat antropologiska metoder för att uppenbara saker som ofta är gömda eller förgivettagna i den materiella produktionen. Jag har arbetat med analyser av fallstudier, journalföring, semistrukturerade intervjuer med centrala utövare och representanter för institutioner, samt deltagande observation. Men det är huvudsakligen genom att arbeta och lära mig faktiska färdigheter i en obekant verkstadskontext som jag kan bli en aktiv deltagare i dialog med andra.

De projekt jag tar upp i avhandlingen bygger på fältarbete inspirerat av antropologen Anna L. Tsing.[351] Centralt för mitt platsbundna lärande och skapande har varit min praktiska erfarenhet i olika kontexter (från verkstäder och produktionsanläggningar till postindustriella landskap), ofta genom självorganiserade vistelser eller studiebesök långt borta från min egen förtroliga verkstad. I situationer som dessa är jag inte bara en åskådare som arbetar med andra; jag förkroppsligar hantverkskunskap i en viss kontext. Jag gör mig mer sårbar om jag engagerar mig i en situation eller kontext som jag inte känner till, och jag är intensivt medveten om min omgivning när jag reagerar på den genom skapande, och tillåter detta skapande att i sin tur påverkas av faktorer bortom min kontroll. I dialog med andra aktörer är min gard nere och jag kan vara öppen för andras viljor och intentioner. Bekvämligheten i min egen verkstad skulle inte tillåta detta. Således har jag börjat förstå att saker och ting – med utgångspunkt i de verktyg och material som jag möter i min konstnärliga verksamhet – inte bara är resurser som står till mitt förfogande eller råvaror som jag kan göra anspråk på. De är intrasslade i varandra som materia och mening, subjekt och objekt – och fortlöpande över tid och rum får de sin mening, materialisering och sina fysiska egenskaper utifrån såväl mänskliga som icke-mänskliga krafter och viljor.

Ett exempel på en sådan undersökning är mitt projekt *The Doorstopper* (2017–2018) som jag diskuterar i kapitel tre: *Maintaining and Caring – Making the Invisible Visible*. I det projektet reflekterar jag kring ett vardagligt föremål, en dörrstopp, som en aktör med agens, kännetecknad av sin förmåga att bete sig illa eller bli felplacerad. Jag började uppmärksamma detta föremål under vistelser och studieresor till produktionsplatser, verkstäder och gamla industriområden samt institutioner som Gallery of Victoria i Melbourne. När jag arbetade med dörrstoppen började jag förstå dess vardagliga relation till andra föremål, platser och aktörer, vilket belyste mekanismer för arbete och produktivitet i institutionella kontexter.

I min forskning tar jag fasta på möjligheterna med ett rhizomatiskt[352] förhållningssätt till konsthantverk för att förstå min verksamhet och för att ta ansvar för den i ett större världssystem där den materiella produktionen och konsumtionen av vardagsföremål äger rum. Min verksamhet är icke-linjär: genom samarbete, platsbundet lärande och görande, förbättrad förmåga att reagera på

möten och specifika situationer, reser jag längs oväntade delar av rhizom där jag lär mig tillsammans med andra. Ett rhizomatiskt förhållningssätt fokuserar på engagemang *inom* världen som ett sätt att ta emot och diffraktera,[353] snarare än att kretsa *kring* världen, och det omfattar olika situationer i vilka material, föremål, människor, historier och deras platser är sammankopplade.

Detta förhållningssätt till kunskap kräver flera olika infallsvinklar. Jag menar att det är nödvändigt för konsthantverkare att omvärdera sina material, processer och handlingar – särskilt i dagens informations- och internetålder, där tillgångar tycks obegränsade och allt befinner sig ett knapptryck bort. Eftersom tillgångarna i själva verket är begränsade måste vi förhålla oss känsligt och lyhört till de historier vi ärver; vi behöver avtäcka dem. Vi måste även skapa utrymme för andra röster, både mänskliga men också de mer-än-mänskliga rösterna som alltför ofta ignoreras i den antropocentriska världsbilden. Uppmärksammande och fältarbete tillåter mig att observera osynliga sammanhang, att förstå andras sårbarhet och i förlängningen också min egen sårbarhet. Detta i sin tur hjälper mig att kunna samverka med andra och att förstå och möjligtvis utmana maktstrukturer för att därigenom kunna röra mig bortom en ohållbar världsbild. I korthet är uppmärksammande och fältarbete oumbärliga metoder om jag vill verka för återhämtning och uppvaknande i den antropocena rum-tiden. De är också nödvändiga för den praktik av omsorg som jag vill behandla i avhandlingens sista projekt, *Craft Remediation* (2018–2019).

Handlingen att *lägga märke till* eller *uppmärksamma* (*noticing*), här menat som en teknik för att observera en hoptrasslad värld, som Tsing diskuterar,[354] är ett viktigt steg mot att lyckas få syn på dolda ansträngningar, det osynliga arbetet i att sköta och vårda som upprätthåller vardagslivet – de förbisedda historierna, varelserna och sakerna som ligger bakom olika produktionssystem. Jag ser Tsings inbjudan att uppmärksamma, särskilt genom mitt fältarbete, som nödvändig för att kunna se och lyssna till en värld som håller på att ödeläggas. Att uppmärksamma är inte bara en kognitiv handling; det handlar även om att kunna relatera till och svara mot andra. Att utöva konsten att uppmärksamma, i en värld som blivit förstörd, är att lägga märke till den oväntade sårbarheten hos enheter, föremål och discipliner, sammanlänkade genom invecklade förhållanden – synliga såväl som osynliga. Tsing framhåller att: för antropologer är utmaningen att

uppmärksamma att det finns andra organismer som spelar nyckelroller i våra liv, och att dessa inte alltid beter sig som tillgångar.[355]

Men vad behöver göras när vi väl börjar uppmärksamma? Motiverade av det trängande behovet av ansvarsfulla handlingar kan konsthantverk inspirera till göranden och händelser präglade av omsorg och uppvaknande i en tid av allvarlig miljöförstörelse. Jag föreslår en *World Wide Workshop*, en världsövergripande verkstad där detta kan hända: en plats för *response-ability* – förmågan att reagera ansvarsfullt. Min bild av en World Wide Workshop är en plats med ständigt skiftande gränser och förbindelser, både ett fysiskt utrymme och en tänjbar verklighet som kan vidgas eller krympa genom nätverk för produktion, utbildning, skapande och utbyte. När jag utvecklar detta koncept hämtar jag inspiration från idén om World Wide Web (förkortat WWW eller helt enkelt ”*the Web*”, nätet), som består av information som färdas genom internets virtuella rymd och som vi når genom datorer, webbsidor och bärbar teknik. Jag vill att den världsövergripande verkstaden ska fungera som ett sammanlänkat utrymme som kan anpassas och omstruktureras ad hoc, ibland rentav återaktiveras. På denna plats rör sig konsthantverkaren som en *internaut*: en person som kan reagera på ständigt föränderliga kontexter och utmaningar, något synnerligen utmärkande för den antropocena tidsåldern.

Mot bakgrund av dessa observationer, förankrade i min forskning som konsthantverkare, behandlar avhandlingen tre huvudfrågor:

- Vad uppenbaras när vi omprövar konsthantverk och ser det som ett fenomen intrasslat i sociopolitiska och ekonomiska skeenden, som något som sträcker sig bortom arbetet i verkstaden?

- Hur omförhandlas banden mellan hantverkskunskap, kreativitet och handens arbete i den digitala eran i dagens postindustriella samhälle?

- Hur kan konsthantverk/smyckekonst – dess görande- och tänkandeprocesser – inte bara användas för att problematisera komplexa produktions- och konsumtionsfrågor, utan även utgöra ett viktigt konstnärligt bidrag i processen att få en förstörd värld att återhämta sig och leva upp igen?

Jag låter dessa frågor vägleda min forskning och undersöker dem genom mina konstnärliga/konkreta projekt, som påverkas av Haraways och Tsings teoretiska ramverk, och genom fallstudier av samtida bildkonstnärer och konsthantverkare.

## Struktur: kapitel, nyckelbegrepp, teman och projekt

I kapitel ett, *Unfamiliar Familiar*, diskuterar jag en röd tråd som löper genom min avhandling: hur den långvariga geopolitiken, som inbegriper frågor som upphovsrätt, kulturell identitet och imitation, skapas och formas i ett system av utbyte, och hur begreppet *annanhet*[356] ofta påträffas som en motsats i en tudelad världsbild, eller med en underordnad konnotation i en maktrelation. Oavsett om det handlar om *den Andre* som exotifieras av en dominant kultur, hantverk som marginaliseras som den Andre under den industriella revolutionen eller naturen som behandlas som den Andre utifrån ett antropocentriskt perspektiv, är annanhet ett laddat begrepp som jag önskar granska för att positionera min forskning och verksamhet i kontexten av ett postindustriellt samhälle och i den antropocena rum-tiden.

Således undersöker jag hur begreppet annanhet har formats i följande kontexter:

- Hantverksformer och traditioner som i en dominant kultur stärker föreställningen om den Andre: Jag undersöker begreppet *kineseri* genom linsen av hantverk i Kina, från sjuttonhundratalet till dagens tillverkning av konsumentprodukter. Syftet är att visa traditionens betydelse för att reproducera ”jaget” genom/med hjälp av den Andres spegelbild. Hur och varför blir något obekant till slut bekant, och hur har konsthantverk använts för att skapa hierarkiska system av värde, smak, stil och behov?

- Uppkomsten av hantverk som den Andre under den industriella revolutionen: Jag tittar på hur hantverk, som ett ideologiskt laddat begrepp, i mitten av artonhundratalet började stå i motsats till fabrikstillverkning, nya tekniska utvecklingar och den industriella produktionens tempo.[357] Syftet är att belysa hur hantverkets miljö ser ut i dagens postindustriella samhälle. Detta är nödvändigt för att förstå

> hur hantverk har förenats, rentav slagits samman, med dagens produktion och digitala teknik i en globaliserad värld. Denna aspekt kommer att diskuteras mer ingående i kapitel två.

Med utgångspunkt i två av mina projekt, *Chinoiseries* (2013) och *From Landscape to Timescape – The Floor* (2017), som båda diskuteras ingående i kapitel två, kommer jag att poängtera hur begreppet annanhet föranleder/skapar ett behov av att ”avlära sig det lärda”.[358] I min verksamhet som konsthantverkare tittar jag till exempel på hur material och artefakter från en region eller kultur assimileras i en annan kultur, så till den grad att de blir välkända och till och med upptas i den nya kulturens identitet (t.ex. mahogny som importerades från Nord- och Sydamerika och användes i brittiska sjuttonhundratalsmöbler som ett sätt att kontrastera och därigenom lyfta fram bordssilvret, med resultatet att mahogny blev en ikon för nationens estetiska identitet).[359] Vad händer när vi börjar uppmärksamma, ifrågasätta och lägga märke till saker, material och beteenden som är förankrade i vardagen?

Hantverk blir en del av våra vardagliga interaktioner: vi förmedlar hantverkets mening genom direktkontakt så att den blir en del av våra egna historier och identiteter, från en arantröja[360] till delftporslin.[361] Föremålen förmedlar i sin tur hur vi uppfattar och tolkar världen, och vilka val och beslut vi gör. Genom dessa direkta kontakter och utbyten blir något obekant slutligen bekant. När vi börjar ifrågasätta och avlära oss det vi känner till kan vi upptäcka hur exempelvis hantverk och dess produktion har använts för att forma vissa idéer om nationer och för att bygga hierarkiska värdesystem (t.ex. låter ”Made in China” helt annorlunda än ”Made in Europe”). En sådan medvetenhet är oumbärlig för att konsthantverkare ska kunna förstå sina ansvarsställningar i ett komplext världssystem. Det är nödvändigt att *uppmärksamma*, i min avhandling avsett som en teknik för att observera en hoptrasslad värld,[362] för att kunna utmana sociala normer, strukturer och vanor som vi har kommit att internalisera och upprätthålla. I min mening gör handlingen att uppmärksamma – platsbundet lärande och görande samt vanan och förmågan att reagera på andra i nya hoptrasslade sammanhang – det möjligt att utmana outtalade regler. Dolda beteenden, historier och verksamheter uppdagas och det osynliga observeras så att nya möjligheter kan vägas in och utvecklas.

Mitt tidigare projekt *Chinoiseries* (2013) tillät mig att utforska båda typerna av ”annanhet” som nämns ovan. I avhandlingen diskuterar jag kortfattat miljön för hantverksbaserade discipliner i dagens Kina, ett land som historiskt har associerats med konsthantverk och idag är en snabbt växande ekonomisk, kulturell och teknologisk supermakt där sådana former av hantverksarv snart kan gå förlorade. Vidare undersöker jag hur begreppet kineseri uppfattades och populariserades i Europa under sjuttonhundratalet som en stil som imiterade (och beundrade) de konstnärliga formerna och traditionerna i Kina och Ostasien – och exotifierade och idealiserade dem på ett sätt som ligger långt från deras ursprungliga kulturer. Kineseri blir särskilt intressant i mitt projekts kontext när vi tar hänsyn till de typer av imitation som driver tillverkningen av konsumentprodukter i dagens Kina. Genom att tänka på kineseri som en transnationell hybrid och undersöka det ömsesidiga utbytet mellan länder, hävdar jag att dessa imitationer och billigt producerade varor (konsumentelektronik, souvenirer, leksaker, kopior av olika slag) är ett nytt slags kineseri med inverterade kulturella och ekonomiska värden.

Vidare konstaterar jag att grundläggande frågor och idéer i min forskning kan spåras tillbaka till *Chinoiseries* (2013). Det var i det projektet som jag började reflektera kring verkstadens beskaffenhet som en plats som kan anpassas, utvidgas och omstruktureras ad hoc, ibland rentav återaktiveras. I den meningen ser jag verkstaden, med utgångspunkt i min egen arbetsplats i Hägersten, Stockholm, som en plats som inte är tydligt definierad, utan införlivad i ett större nätverk av produktion, samverkan och möjligt samarbete – allt främjat av digital teknik och kommunikation.

Efter diskussionen om hur konsthantverk fick rollen som den Andre under den industriella revolutionen (en konnotation som lever kvar än idag), utforskar jag i kapitel två, *Craft as Facilitator: Creative Economy*, konsthantverkets roll och status i dagens socioekonomiska landskap. Jag är mindre intresserad av *vad* i hantverkets arv och idealiserade historia som har gått förlorat i övergången till en postindustriell ekonomi; syftet är snarare att belysa de möjligheter som konsthantverkare får genom modern digital teknik och internet. Sambanden mellan konsthantverk och teknik (t.ex. digital tillverkning och makerrörelsen) visar att hantverk kan vara något som sammanför och som underlättar relationer mellan olika disciplinära gränser, ekonomiska modeller och produktionsrealiteter.

Först diskuterar jag hur hantverksformer har förts vidare och utövats genom historien, och överväger om och hur känslan av en gemensam verksamhet och delade tillgångar, som upprätthölls av skråväsendet, kan tillämpas idag. Med en medvetenhet om och en känsla av brådskande allvar rörande samtida socioekonomiska och miljömässiga utmaningar, menar jag att i den antropocena rum-tiden kan göranden och kunskap från vissa av dessa hantverksformer understödja konsthantverkets hållbarhet. I synnerhet diskuterar jag det dialogiska lärandets förvandling i konsthantverk. Den traditionella verkstaden som ett socialt utrymme[363] där folk mötte varandra ansikte mot ansikte skiljer sig från den dialektiska relation som uppstår genom dagens digitala teknik, där de flesta interaktioner i både arbets- och utbildningsmiljöer sker över skärmar.

Jag diskuterar min studieresa till Institut Supérieur de Peinture Décorative Van der Kelen-Logelain i Bryssel. Denna privata skola, grundad av Alfred Van der Kelen 1892, är specialiserad på trompe l'oeil, en måleriteknik som bland annat kan handla om att skapa naturtrogna imitationer av marmor och träfiber. Syftet med studieresan var att förstå dynamiken på en institution som bygger på traditionella skråmetoder, och att analysera hur förkroppsligad kunskap och hantverkskunnande förs vidare på sådana institutioner idag jämfört med hur det traditionellt har gått till sedan arton-hundratalet.

Sedan jämför jag två pedagogiska fallstudier i Sverige: systemet för slöjdundervisning i Skandinavien som utvecklades av Otto Salomon på 1870-talet samt projektet *Friday Techniques*[364] av Fredrik Ingemansson, en välkänd svensk silversmed och tidigare lärare på CRAFT!/Ädellab på institutionen för smyckekonst och corpus på Konstfack. Båda fallstudierna bidrar, trots ett sekels mellanrum, till att belysa viktiga aspekter av undervisning i konsthantverk – hur tyst kunskap förs vidare i dialogiska och dialektiska situationer, också genom nya möjligheter som digital teknik erbjuder. Konsthantverket har blivit dynamiskt och har börjat röra sig från mer traditionella utbildningsmetoder (t.ex. utveckling av studentens enskilda färdigheter eller den icke-verbaliserade tysta kunskapen) till dagens digitala tekniker och processer som öppnar upp för dialektiska metoder för delning av korsbefruktad kunskap relevant även för andra områden av mänskligt samhälle och beteende.

I min verksamhet ifrågasätter och konfronterar jag vedertagna föreställningar om kunskap och tid: i den meningen är relationen mellan traditionella former av konsthantverk och digital teknik central för många samtida hantverksprojekt. Digitala tillverkningsmetoder, snabb kommunikation och enkel spridning av verktyg och material har brutit ner avståndsbarriärer i den globala kulturen och inrotade föreställningar om kunskap och tid. När värdesystemen som vilar på dessa föreställningar utmanas kan nya möjligheter uppstå.

Jag ser verkstaden som både en fysisk plats och en tänjbar verklighet som kan utvidgas, omstruktureras och aktiveras genom skapandet av nätverk för produktion, utbildning, forskning och utbyten. Konsthantverkaren förkroppsligar den *flyktlinje* som Deleuze och Guattari såg som ett sätt att fly från hierarkiska makter, kontroll och struktur.[365] Detta förslag och påstående innebär att konsthantverkare kan bryta dikotomier genom rhizomatiskt tänkande, för att därigenom kunna sprida idéer som genererar/frambringar mångfald och nya samband. Dessa former av samband, flexibilitet och tvärgående kunskap är oumbärliga för dagens konsthantverk; de tillåter olika typer av expertis (från hantverkare till designer till entreprenör till antropolog) att vara sammanlänkade, och sammantaget utgör de konsthantverkarens identitet. I korthet föreslår jag att vi ska lämna självständigheten och ensamheten som den traditionella individuella konsthantverkspraktiken ofta innebär, för att i stället röra oss mot samarbeten och det tvärdisciplinära.

För att sätta fingret på några av de centrala idéerna i kapitel två använder jag projektet *Terroir* (2015) som exempel. Här utforskar jag global produktion och bakomliggande mekanismer kopplade till hantverk, både fjärran och lokalt, med målet att utveckla och sprida självorganiserade lokala nätverk. Genom görande suddar jag ut gränsen mellan geografisk närhet och avlägsenhet, men även kulturellt avstånd, med avsikten att utveckla nätverk för idéer om plats och kulturellt ägandeskap. Som del av projektet *Terroir* reste jag från min arbetsplats i Stockholm till TextielLab i nederländska Tilburg samt till Lloyd Hotel & Cultural Embassy i Amsterdam. En grundläggande idé i projektet var tanken om att hantverk förenar – allt från det lokala nätverket av ateljéer hemma i Hägersten i Stockholm till det globala nätverket av institutioner och produktionsanläggningar som jag ville samarbeta med. Denna

upplevelse och erfarenhet har fått mig att observera hur ett platsbundet kulturarv i en postindustriell kontext inte bara kan bevaras utan även återupplivas genom skapandet av ett nätverk väl förankrat i urbana och globala strukturer och präglat av samarbete, hantverk och företagsamhet.

I kapitel tre, *Maintaining and Caring – Making the Invisible Visible*, undersöker jag möjligheter att avslöja, belysa det bakomliggande osynliga arbetet inom olika system av göranden, från hushållsgöromål i vardagen såsom städning och underhåll till letandet och införskaffandet av restmaterial och industriavfall från postindustriella platser. Genom flera exempel och fallstudier strävar jag efter att binda samman trådar som uppenbarar förbisedda praktiker, gömda historier och obemärkt arbete. Exemplen visar att golvet, marken eller rentav en platt horisontell yta (som i fallet Theaster Gates och hans far som gratis tjärade tak i Chicago) kan vara en meningsfull plats för interaktion, och de ger mig stöd när jag, inspirerad av Tsing, utvecklar och reflekterar över en viktig metod i min egen verksamhet – den jag kallar ”hantverket att uppmärksamma”.

Efter att ha diskuterat de här fallstudierna återkommer jag till min egen verksamhet. I verket *The Doorstopper* (2017–2018) undersöker jag ett ofta förbisett föremål – dörrstoppen – i förhållande till maktrelationer och förhandlingar som förekommer dagligen bland människor och icke-människor i institutionella miljöer eller på olika produktionsplatser. *Dörrstoppen* är ett kraftfullt föremål just på grund av sin förmåga att kunna bära sig illa åt – att lätt försvinna eller bli felplacerad och därmed störa det förväntade så att människor plötsligt blir uppmärksamma på situationen. När en störning uppstår är det möjligt att lägga märke till och att observera det osynliga och att omförhandla maktrelationer mellan människor och icke-människor. I detta projekt börjar jag med att hänvisa till den sfär som Nicolas Bourriaud kallar den *exformella*[366]: en gränsmark som jag utforskar genom att bokstavligen stanna nära marken. Dörrstoppen, som aktant och samarbetspartner, tillåter mig att undersöka mekanismer för inkludering och exkludering. Jag skapar dörrstoppar av olika slags restmaterial och industriellt avfall, tillverkar några i silver och andra värdefulla material, eller gömmer GPS-spårare inuti som ansluter till min mobiltelefon och som utlöser ett alarm om dörrstoppen flyttas; sedan för jag tillbaka dem till sina vardagliga kontexter och låter dem användas, felanvändas, interageras med och bli felplacerade. När

det är möjligt hämtar jag tillbaka dem och noterar de märken som andra aktörer har lämnat på deras yta, kartlägger deras rörelser i ett givet utrymme och om de har felplacerats försöker jag avgöra hur det skedde och vem som gjorde det.

Genom att observera dessa dörrstoppar i vardagssituationer, i både institutionella och icke-institutionella miljöer, har jag börjat få grepp om hur obemärkta föremål är kraftfulla just för att de tas för givna. De kan hjälpa till att uppdaga historier och maktstrukturer som vanligtvis förbises. Vidare hjälper mig dessa specifika föremål – varav dörrstoppen är ett exempel – att förstå begreppet agens samt idén om hantverk som ett verb: hantverk som avslöjar och uppenbarar det vi hellre skulle vilja sopa under mattan eller det som annars skulle förbli ouppmärksammat. Dörrstoppen som föremål relaterar till flera begrepp och frågor som är väsentliga för min forskning och mitt arbete; golvet och marken blir både fysiska och metaforiska platser där dolda beteenden, samhälleliga normer och praktiker av omsorg kan undersökas. Denna potential diskuteras i avhandlingens sista kapitel.

Fram till denna punkt i avhandlingen har jag arbetat mot en förståelse av hur hantverk både kan vara en förenande faktor och en metod för att uppmärksamma det osynliga och för att problematisera invecklade globala produktionsrelaterade och ekonomiska frågor. I processen har jag noterat att avlärandet av det egna privilegiet är nödvändigt, liksom medvetenheten om

världen som en komplex härva i vilken det inte längre är möjligt att tänka i termer av motsatser eller dikotomier (som människa-ickemänniska, hantverk-industri, objekt-subjekt, natur-kultur). I avhandlingens sista del bygger jag vidare på hantverket att uppmärksamma för att föreslå handlingar av ansvar (*response-ability*)[367] och en praktik av omsorg och återuppvaknande i en tid av kris. Enligt min uppfattning är konsthantverk en verksamhet som bygger på lyhördhet, på förmågan att reagera på historier, traditioner, angelägna frågor, material, teknik och andra människor såväl som ickemänniskor – och där allt detta är förenat, sammanbundet och hoptrasslat i skapandets process och erfarenhet. Genom att ägna närmare uppmärksamhet åt görandet och de historier som både binds samman och uppdagas genom detta att göra, kan konsthantverk – på en förstörd planet – inspirera till handlingar av omsorg, återhämtning och återuppvaknande. Frågan är hur och genom vilka steg detta påstående och förslag kan aktiveras.

I kapitel fyra, *Response-able for a Sustainable Future*, diskuterar jag först Haraways förslag om ”Chthulucene” som ett mer komplext, angeläget och inkluderande begrepp än antropocen för att beskriva den rådande rum-tiden som vi lever i; jag tar också upp hennes övertygande diskussion om principen *sympoiesis* (skapa tillsammans med) och behovet av att ”stanna kvar i problemen på denna förstörda planet” samt att ”skapa släktskap”.[368] Dessa diskussioner har i hög grad påverkat hur jag tänker genom att göra och hur jag förstår konsthantverk – i synnerhet som verb snarare än som substantiv. Även om hennes idéer är kontroversiella inom vissa vetenskapliga diskurser anser jag att Haraway är en tänkare och historieberättare i stånd att på ett livfullt sätt ställa de avgörande sociala och politiska frågorna i vår samtid: hur vi kan leva och dö bra tillsammans med andra arter; vad den fruktansvärda antropocena rum-tiden innebär; hur vi kan lära oss att ärva en förstörd värld med historier som upprör men som vi vare sig vi vill eller inte är del av. Hennes frågor genljuder långt in i konstnärliga och feministiska gemenskaper och hennes tänkande inspirerar min hantverksorienterade diskurs och verksamhet. Haraways teser och sätt att tänka tillhandahåller ett filter att se tillbaka på projekten *Gold Rush* (2016–2018) och *Filament of Surplus* (2017).

Verket *Gold Rush* väcker frågor om elektronikavfall och konfliktmaterial relaterade till det allmänt förekommande inbyggda åldrandet i hemelektronik. Det är en del av samarbetsprojektet *Conversation Piece* och utgör en kritisk fallstudie som inte bara är ett sätt att se på hantverk (och samarbete) som en *tänkande teknologi* och en process präglad av *sympoiesis*; det tillåter mig också att gräva i leran – bokstavligt och bildligt – och leta efter situationer där samtida konsthantverk och smyckekonst kan utmana status quo (till exempel smyckekonst som en synlig glittrande fasad, kontra industriavfall som den andra sidan av en råvaruförbrukande ekonomi), och ställa angelägna frågor som sätter igång samtal om de invecklade och hoptrasslade relationerna mellan föremål, råvaror (hur de utvinns och av vem), tillgångar och människor.

Verket *Filament of Surplus* (2017) är till innehållet besläktat med *Gold Rush* (2016–2018) och tidigare projekt, såväl egna som samarbeten med andra. I det här projektet har jag samarbetat med Specialiserade företag, till exempel tillverkare av filament och pigment, för att skapa särskilda material som kan användas för

3D-utskrifter. De här materialen, trådarna, är hopblandade av både industri- och hushållsavfall, som hämtats från soptippar, och de kan användas för digital tillverkning i samband med restaurering och lagning (t.ex. för att skriva ut en komponent som saknas) eller så kan de oanvända helt enkelt ses som resurser för framtiden. Om de lämnas oanvända, till exempel för beskådan i ett vitrinskåp, ligger de som i väntan på att aktiveras: de pekar mot scenarier som ännu inte utforskats och de utgör både en påminnelse om och en möjlighet till en återupprättelse och ett tillfrisknande.

Från kasserade elektronikprodukter till smycken som släktklenoder, tänkta att föras vidare och skapa social medvetenhet, och från avfall till filament som kan användas för reparation med hjälp av digital teknik, rör jag mig mot det sista projektet i avhandlingen, *Craft Remediation* (2018–2019). Projektet är en tidsbaserad installation på ett lokalt kulturcenter i Stockholm och utforskar ett praktiskt permakulturellt förhållningssätt till fytoremediering.[369] Syftet är att diskutera hur remediering och omsorg kan förstås i en lokal gemenskap och social kontext, och vilken roll konsthantverk kan spela i ett mer cykliskt förhållningssätt till materialitet. Idén att vårda och skörda utforskas inte bara i mänskliga möten utan materialiseras och utvidgas till icke-människor, närmare bestämt växter plockade i Aspudden i Stockholm, samt teknik som används för att mäta fotosyntetisk aktivitet i växter.

Undersökningen började i Vinterviken[370] i Aspudden, en postindustriell plats där Alfred Nobel uppfann dynamiten och därmed revolutionerade vapenindustrin och sprängämnesproduktionen. De industriella aktiviteterna i Vinterviken sedan 1860-talet har lett till föroreningar i området, med höga halter av bly och arsenik i marken. Projektet kretsar kring den historien och det landskapet, och föreslår ett sätt att skörda-ta hand om-återställa material från industrirester och avfall, i samarbete med växter. I detta avslutande projekt i avhandlingen är jag ingen nomad. Jag utgår i mitt görande och min forskning från min verkstads grannskap, och jag involverar invånarna (ett lokalt kulturgalleri, butiker, en krukmakare och grannarna som varje år träffas och säljer och köper saker på ”2km loppis” i Aspudden) genom små handlingar av delande och spridning samt i vardagliga interventioner.

Att arbeta småskaligt i ett grannskap har fått mig att inse möjligheterna med en hantverksbaserad praktik av omsorg, i termer

av daglig ihärdighet och återhämtning. Till exempel fördelade jag krukor med växter till invånarna i området fyllda med förorenad jord från Vinterviken. Jag köpte växterna på ”2km loppis” ett halvår tidigare och tog hand om dem under fem månader. Varje växt äger förmågan att rena den förorenade jord som den växer i. Genom att föra krukorna vidare in i privata hem i området föreslås och skapas en kollektiv praktik av omsorg: invånarna deltar, tillsammans med växterna, i processen att rena små delar av den omfördelade förorenade jorden och därmed ges i mitt närsamhälle möjligheten att bli *response-able*[371] över artgränserna.

Jag nådde även en annan viktig insikt på ett mer personligt plan, särskilt eftersom jag ägnade flera månader åt ofullkomlig, icke-verbal dialog med växterna i *Craft Remediation* (2018–2019): jag kom att förstå görande som starkt kopplat till omsorg, och som en process att lära sig att svara an – att bli *response-able* – vilket sträcker sig bortom materialbaserade och teknologiska processer. Här har hantverksbaserat skapande inneburit en pågående process av att skörda, sköta om växter, bära och förflytta jord, försiktigt förvandla begagnade föremål från ”2km loppis”, föra samman olika verkligheter i ett grannskap och att skapa en plats för att kunna dela historier. Jag skapade visserligen föremål i processen, men de var en följd av materiella transformationer som jag till fullo aldrig kontrollerade. Jag förstår den här processen som en *sympoietisk* interaktion mellan mig själv, växter, tekniska apparater, föremål laddade med historier, lokalsamhället, platser, samt andra verkligheter och medarbetare.

346. Paul Greenhalgh (red.), *The Persistence of Craft: The Applied Arts Today,* London: A & C Black Publishers Ltd., 2002, s. 1.
347. Glenn Adamson, *Thinking Through Craft,* London: Bloomsbury Academic, 2013, s. 9–37. För mer kontext, se Knut Astrup Bull & André Gali (red.), *Documents on Contemporary Crafts – Material Perceptions,* Arnoldsche Art Publishers, nr. 5 2018, s. 93–113.
348. För mer kontext, se Daniel Bell, *The Coming of Post-Industrial Society: A Venture in Social Forecasting,* utgåva utgivande, New York: Basic Books, 1976, s. 126–127; David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change,* Oxford: Blackwell Publishers, 1989, s. 132–133; Richard Sennett, *The Craftsman,* New Haven: Yale University Press, 2008, s. 22 och Saskia Sassen, *Cities in a World Economy (Sociology for a New Century),* Thousand Oaks, CA: SAGE Publications, fjärde upplagan, 2012, s. 127–137.
349. Ordet antropocen kommer från grekiskans *anthrōpos* (människa) och *kainos* (ny). Det myntades år 2000 av nobelpristagaren och atmosfärkemisten Paul Crutzen. Begreppet antropocen har föreslagits som nästa epok (och utmärker den rådande geologiska tidsåldern) och ses som den period då mänskliga aktiviteter är det huvudsakliga inflytandet på klimat och miljö. För mer kontext, se Haraway 2016. I boken *Staying with the Trouble: Making Kin in the Chthulucene* diskuterar Haraway sina problem med och kritik av begreppet antropocen och beskriver varför Chthulucene kan vara bättre lämpat för en epok av återuppvaknande.
350. Tanken "unlearning one's learning and unlearning one's privileges" uttalades först av den feministiska tänkaren Gayatri Chakravorty Spivak. Se särskilt Sara Danius, Stefan Jonsson och Gayatri Chakravorty Spivak, *Boundary 2,* vol. 20, nr. 2 (sommaren 1993), Duke University Press, s. 24–50.
351. Anna L. Tsing är professor i antropologi och har utvecklat flera komplexa argument kring ett narrativt beskrivande av fältarbete. Denna narrativa karaktär är en viktig aspekt i hennes böcker *The Mushroom at the End of the World* (2015) och *Friction* (2005), som är exempel på hur etnografiska redogörelser kan utveckla argument om globaliseringens inverkan. Hennes analys kan vara användbar för att förstå mitt fältarbete, i synnerhet när det kommer till fysiska resor och arbetet med hantverkare på lokal, regional, nationell och rentav transnationell skala. Tsings narrativ om marginalisering och intresse för det marginella kan också överföras till hantverksperspektivet i vår globala kultur.
352. Se Gilles Deleuze och Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia,* Minneapolis: University of Minnesota, 1987, s. 17.
353. Se Rick Dolphijn och Iris van der Tuin, *New Materialism: Interviews & Cartographies,* Ann Arbor: University of Michigan, 2009. http://quod.lib.umich.edu/o/ohp/11515701.0001.001/1:4.3/--new-materialism-interviews-cartographies?rgn=div2;view=fulltext [hämtad 2019-07-08].
354. Anna L. Tsing definierar konsten att uppmärksamma "the arts of noticing" som en teknik för att observera en hoptrasslad värld. Se Tsing, *Friction: An Ethnography of Global Connection,* Princeton: Princeton University Press, 2005, s. 37. Se även Tsing, *The Mushroom and the End of the World,* Princeton: Princeton University Press, 2015.
355. Se Tsing i en "intervju med Maija Lassila", *Suomen Antropologi* 42, nr 1 (vår 2017), s. 28.
356. Kulturkritikern Edward Said beskriver i *Orientalism* (1978) hur representationen av den "andre" historiskt har använts för att forma och profilera den västerländska kulturen. Hans bok utgör ett verktyg för att förstå olika dimensioner av politisk makt som har spelat en roll i historien. Den ursprungliga betydelsen av begreppet "andre" tillämpades på andra människor snarare än "förändrat" material. Med förändrad menar jag alla handlingar genom vilken en individ eller en grupp genom handel, representation och utbyte blir mentalt indelade i två hierarkiska grupper: vi och dem. Vidare läsning: Edward Said, *Orientalism,* New York: Pantheon Books, 1978, s. 1–7. Se även Sara Ahmed, "This other and other others", *Economy and Society,* 31 (4), 2002, s. 558–572 och Sara Ahmed, *Strange Encounters: Embodied Others in Post-Coloniality,* Routledge: London, 2000.
357. Glenn Adamson, *The Invention of Craft,* London: Bloomsbury Academic, 2013, s. 18.
358. Se Spivak, Gayatri Chakravorty, *Boundary 2,* vol. 20, nr. 2 (sommaren 1993), Duke University Press, s. 24–50.
359. Se Jennifer L. Anderson, *Mahogany: The Costs of Luxury in Early America,* Cambridge, MA: Harvard University Press, 2012, s. 18–32.
360. Se Paola Antonelli, *Items: Is Fashion Modern?,* Museum of Modern Art, New York, 2017, s. 42.
361. Se Christiaan Jörg, "Oriental Export Porcelain and Delftware in the Groninger Museum", i *Ceramics Crossed Overseas: Jingdhezhen, Imari and Delft from the collection of the Groninger Museum,* utställningskatalog i samarbete med Groninger Museum, Kyushu Ceramic Museum och Japan Airlines, 1999–2000, s. 10.
362. Uppmärksamma, en metod som jag utvecklar med hänvisning till forskaren Anna L. Tsings begrepp "konsten att uppmärksamma" (Tsing, 2015, s. 37).
363. Se Richard Sennett, *The Craftsman,* New Haven: Yale University Press, 2008, s. 51–61.
364. Se *Friday Techninques,* https://www.youtube.com/channel/UCvJnzCd-9r6NXyMH2MHxTMw [hämtad 2019-07-08].
365. "Flyktlinjer" betecknar en oändligt liten möjlighet till flykt; det är det svårfångade ögonblicket då förändring sker, som den var tvungen att göra, när en tröskel mellan två paradigm överskrids. Konceptet används också för att definiera en "rhizome" för deterritorialisering enligt vilken linjer förändras i naturen och förenas med andra multipliciteter. Gilles Deleuze och Félix Guattari i *A Thousand Plateaus: Capitalism and Schizophrenia.* Minneapolis: University of Minnesota, 1987, s. 17.
366. Nicolas Bourriaud, *The Exform,* New York: Verso, 2016, s. 13–16.
367. Se Haraway, 2016. *Staying with the Trouble,* särskilt s. 31.
368. Donna Haraway, *Staying with the Trouble, Making Kin in the Chthulucene,* Durham and London: Duke University Press, 2016, s. 99.
369. "Fytoremediering" kommer från forngrekiskans *phyto,* växt, och latinets *remedium,* att återställa balansen.

Fytoremediering är en biologisk teknik som används för att återställa förorenade vatten- och jordmiljöer till deras naturliga tillstånd. Man använder levande växter och deras relaterade mikroorganismer för att avlägsna smittämnen från miljön eller bryta ner smittämnen till en mindre giftig form.

370. Vinterviken rankades 2011 av Stockholm Stad som det nionde värst förorenade området i staden. https://www.dn.se/sthlm/vinterviken-kan-sparras-av-efter-larmet-om-farligt-bly/ [hämtad 2019-07-08].
371. Se Haraway, *Staying with the Trouble,* 2016, s. 34.

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Introduction

Page. 10: Cheng, Nicolas. *Terroir*, object/napkin, fine silver, 2015. Photo: Nicolas Cheng, 2015.

Chapter One

Page. 28: Cheng, Nicolas. *Chinoiseries*, fieldwork trip at Panjiayuan Antique Market, Beijing, 2013. Photo: Nicolas Cheng, 2013.

Page. 31 and 33: Cheng, Nicolas. *Chinoiseries*, fieldwork trip at Cloisonné Workshop, Beijing, 2012. Photo: Nicolas Cheng, 2012.

Page. 35: Cheng, Nicolas. *Chinoiseries*, vessels, gold plated cloisonné, anodized stainless steel, industrial enamel, 2013. Photo: Nicolas Cheng, 2013.

Page. 44 and 46: Cheng, Nicolas. *From Landscape to Timescape: The Floor, Shelves and Tray*, silver, plastic, high-density foam, mineral pigment, 2017. Photo: Nicolas Cheng, 2017.

Page. 48: Cheng, Nicolas. *From Landscape to Timescape*, pendant, silver, copper, natural silk, high-density foam, mineral pigment, 2016. Photo: Nicolas Cheng, 2016.

Chapter Two

Page. 68: Cheng, Nicolas. *Terroir*, object/plate, stainless steel, 2015. Photo: Nicolas Cheng, 2015.

Page. 73: Cheng, Nicolas. *Terroir*, at Lloyd Cultural Embassy, Amsterdam, 2015. Photo: Nicolas Cheng, 2015.

Page. 75: Cheng, Nicolas. *Terroir*, object, various materials, 2015. Photo: Nicolas Cheng.

Page. 77: Google Earth images: from my studio in Stockholm – neighborhood – city – global (concept: self-activating network, craft as connector). Image Credit: Google Earth, 2016.

Page. 88: Alj Fält, Samir. *Skärholmen Interiör*, Stockholm: Design Lab S, 2018. Photo: Karin Björkquist.

Page. 97 and 99: Cheng, Nicolas. Fieldwork trip at The Van der Kelen-Logelain Institute, Brussels, 2016. Photo: Nicolas Cheng, 2016.

Page. 103: Ingemansson, Fredrik. *Friday Techniques*, YouTube web-published video project, 2012–15. Image Credit: YouTube. https://www.youtube.com/user/silversmeden1/videos [Accessed: 2019-07-08].

Chapter Three

Page. 114 and 136: Cheng, Nicolas. *The Doorstopper,* object, terracotta, wood, silver, jet (lignite), stone, 2017. Photo: Nicolas Cheng, 2017.

Page. 120: Oyama, Yuka. *Helmet-River*, performance-based painting, 2015, courtesy to Yuka Oyama, 2015. https://yukaoyama.com/helmet-river/ [Accessed: 2019-07-08].

Page. 124: Gates, Theaster. *Roofter*, courtesy to Phaidon Press, 2016.

Gates, Theaster. *Tarred vessel*, cotton, metal, glazed clay, plastic, and tar, courtesy to Studio Theaster Gates. Photo: Ben Westoby and White Cube, 2015. https://hyperallergic.com/214008/theaster-gates-meditates-on-construction-in-a-white-cube/ [Accessed: 2019-07-08].

Page. 133: Cheng, Nicolas. *The Doorstopper,* [still image from video documentation], photo collage, NGV, Melbourne, 2017. Photo: Nicolas Cheng, 2017.

Page. 140: Cheng, Nicolas. *The Doorstopper,* photo documentation & GPS images, 2017–18. Photo: Nicolas Cheng, 2017–18.

Chapter Four

Page. 146 and 163: Conversation Piece. *Nu Jade*, bracelet, shredded plastic & gold recovered from CPU boards, binder material. Photo: chp ...? Jewelry, 2018.

Page. 150: Jazvac, Kelly. *Plastiglomerate*, sample/ready-made collected at Kamilo Beach, Hawai'i, 2012. Photo: Jeff Elstone. http://www.kellyjazvac.com/Stones/Stones.html [Accessed: 2019-07-08].

Page. 155: Conversation Piece. *Kino*, brooch, crystal, gold, optical film, mixed media, 2014. Photo: Nicolas Cheng, 2014.

Page. 157:Conversation Piece. *Gold Rush*, necklace, e-waste metal, crystal, natural silk, 2015. Photo: Nicolas Cheng, 2015.

Page. 160: Conversation Piece. *Gold Rush*, brooch, gold from e-waste, mylar, kapton, 2015. Photo: Nicolas Cheng, 2015.

Page. 166: Cheng, Nicolas. *Filament of Surplus*, e-waste metal, banknote paper, binder material, 2017. Photo: Nicolas Cheng, 2017.

Page. 167: Cheng, Nicolas. *Domestic Mining*, publication, 2017. Photo: Nicolas Cheng, 2017.

Page. 173: Cheng, Nicolas. *Craft Remediation*, photo collage, 2019. Photo: Nicolas Cheng, 2019.

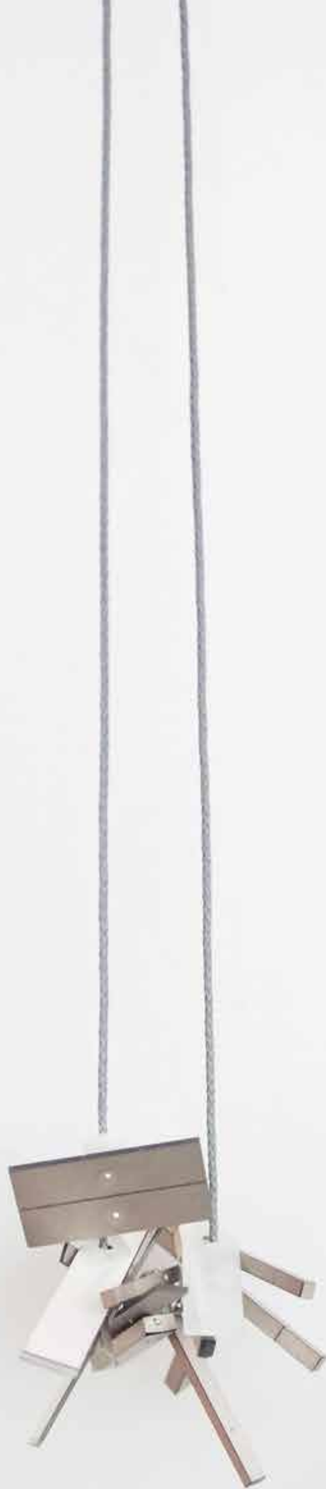
Page. 176: Cheng, Nicolas. *Craft Remediation*, Aspudden 2km Loppis, Stockholm, 2019. Photo: Nicolas Cheng, 2019.

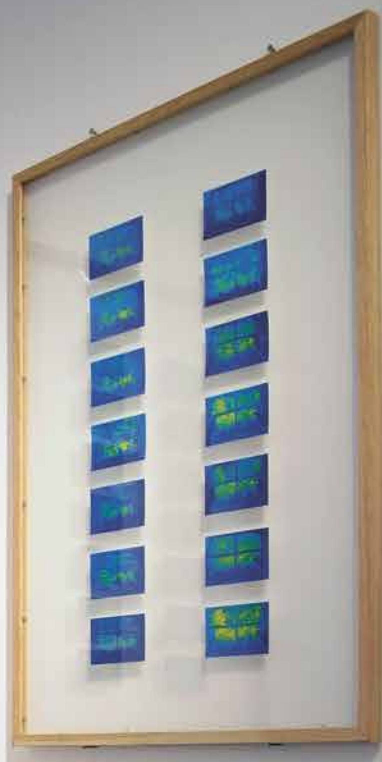
Page. 177: Cheng, Nicolas. *Craft Remediation*, window display – greenhouse installation at Barklund & co., Stockholm, photosynthesis image and brooches, used sand paper, soil, leaf, bio-resin, stainless steel, 55 mm × 55 mm, 2019. Photo: Nicolas Cheng, 2019.

Page. 183:Cheng, Nicolas. *Craft Remediation*, phytobotanical silver relief; making process with plants – electroforming with frequency meter, 2019. Photo: Nicolas Cheng, 2019.
Page. 184: Cheng, Nicolas. *Craft Remediation*, phytobotanical silver relief, plastic bag, embroideries, fine silver, wood frame; 300 mm × 330 mm × 25 mm. Photo: Nicolas Cheng, 2019.
Page. 185: Cheng, Nicolas. *Craft Remediation*, [exhibition at Barklund & co., Stockholm, 02–23 March], 2019. Opening & finissage pictures. Photo: Nicolas Cheng, 2019.

Conclusion
Page. 194: Cheng, Nicolas. Fieldwork trip at The Van der Kelen-Logelain Institute, Brussels, 2016.
Page. 204: Cheng, Nicolas. *From Landscape to Timescape: The Floor, Shelves and Tray*, silver, plastic, high-density foam, mineral pigment, 2017. Photo: Nicolas Cheng, 2017.

Full Spread Images
Page. 228–229: Cheng, Nicolas. *Terroir*, object/plates, stainless steel & wood, 2015. Photo: Nicolas Cheng, 2016.
Page. 230–231: Conversation Piece. *Gold Rush*, pendant, silver & gold from e-waste, crystal, reflective thread, electrical soldering, 2017. Photo: Nicolas Cheng, 2017.
Page. 232–233: Conversation Piece. *Gold Rush*, [exhibition at Everyone Says Hello at Kunstnerforbundet, Oslo, 10 January–24 February], 2019. Photo: Thomas Tveter, Kunstnerforbundet/ Norwegian Crafts, 2019.
Page. 234–235: Conversation Piece, *Nu Jade*, pendant & bracelet, shredded plastic & gold recovered from CPU boards, binder material, reflective thread, 2019. Photo: Nicolas Cheng and chp ...? Jewelry, 2018.
Page. 236–239: Cheng, Nicolas. *Craft Remediation*, [exhibition at Barklund & co., Stockholm, 02–23 March], 2019. Greenhouse installation, photosynthesis images, phytobotanical silver relief, fine silver, jet (lignite), wood frame. Photo: Nicolas Cheng, 2019.
Page. 240–247: Cheng, Nicolas. *World Wide Workshop: The Craft of Noticing*, [exhibition at RIAN Design Museum, Falkenberg, 14 September–13 October], 2019. Photo: Nicolas Cheng, 2019.





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