Suvi Pihkala

TOUCHABLE MATTERS
RECONFIGURING SUSTAINABLE CHANGE THROUGH PARTICIPATORY DESIGN, EDUCATION, AND EVERYDAY ENGAGEMENT FOR NON-VIOLENCE
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TOUCHABLE MATTERS
Reconfiguring sustainable change through participatory design, education, and everyday engagement for non-violence

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Abstract

Sustainability is a catchword for contemporary concerns of environmental and societal vulnerability. Scholars, policymakers, designers, and educators alike find themselves knotted increasingly within fabrics of sustainability, approached as an object of concern in education and technoscientific projects. In relation, scholars drawing from posthuman and new materialist thinking have begun to re-imagine sustainability. Considering human subjectivity as part of the world in its ongoing, reiterative becoming has introduced new possibilities to rethink responsibility in and for sustainable change.

This research is rooted in my engaged practices of participatory design and education on violence, violence prevention, and non-violence, which form the empirical research terrain of this study. This dissertation includes four articles that inquire into the practices in question by exploring possibilities for nurturing non-violence—and by scrutinising responsible participatory practices in design.

This synopsis re-engages with the results presented in the articles mentioned and participates in calls to rethink sustainability. In order to reconsider sustainability in and for practices of sustainable change, I develop theoretical thinking based on response-ability and touch, as discussed by Karen Barad and Donna Haraway. Through a diffractive, affirmative engagement with sustainability in the engaged practices of change-making, I aim to unfold the affordances of feminist (new) materialist renegotiations of ethics and responsibility, in order to inform responsible participatory practices of change-making and, in particular, change towards non-violence.

This research offers insight into the intricate ways sustainability reconfigures in and through practices of change-making in participatory design, education, and everyday engagements for non-violence. I begin by proposing a thinking and practice of response-able engagement. Then, through the idea of touchable matters, I foreground how the co-constituted conditions of ethically sustainable response become reconfigured in the designerly, the researcherly, the pedagogical, and other everyday practices, challenging for a shift to a new mode of entangled response-ability for sustainable change and towards non-violence.

Keywords: Donna Haraway, feminist (new) materialism, Karen Barad, non-violence, participatory design, posthuman ethics, response-ability, sustainability, touch, violence prevention
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Tiivistelmä

Kestävyys on aikaamme läpileikkaava, sosiaalisiin ja ekologisiin epäkohtiin tarttuva haaste, joka yhdistää tutkijoita ja muita toimijoita moninaisina jaetun huolen ja interventioiden kohteina myös koulutuksellisissa ja teknnotieteellisissä projekteissa. Posthumanistinen ja uusmaterialistiinen ajattelu on haastanut ymmärryksiä kestävyydestä asettamalla inhimillisen toimijuuden erottamattomaksi osaksi maailman jatkuvia tulemisen ja tuottumisen prosesseja. Painopiste kestävyyden, muutoksen ja niihin liittyvien vastuullisuuskysymyksien tarkastelussa on siirrytty arkisten käytänteiden moniulotteiseen kietoutuneisuuteen.


Kestävän muutoksen ja väkivallattomuuden mahdollisuudet tuottuvat osallistuvan suunnittelun, koulutuksen ja arjen käytänteissä osallistuvan toimintaa ja vastuullisuutta käsittelevillä tavoilla. Väitöskinelmäni yhteenvetosuhteessa on tarkastellut feministisen (uus)materialistisen ajattelun mahdollisuuksia tuottaa uutta ymmärrystä kestävyydestä osana vastuullisista osallistumista ja sen elämäntavasta. Kestävyys on yksi vastuullisena toimintaohjelmana, joka ottaa vastuullisuudesta keskellä osallistumiseen tai vastuullisuuksien kehittämiseen. Väitöskirjaan sisältyvät osallistumisen, yhteenvetoon, reflektiivisyyteen, väkivallattomuuteen ja vastuullisuuteen liittyvät tulokset.

Asiasanat: Donna Haraway, feministinen (uus)materialismi, Karen Barad, kestävyys, kosketus, osallistuvuus suunnittelun, posthumanistinen etiikka, vastuullisuus, väkivallan ehkäiseminen, väkivallattomuus
To Pinja,
because I love you so very much.
Acknowledgements

As I write this, I wonder how I ended up writing a doctoral dissertation to begin with. How did it come to be that curiosity and fascination pulled me into this process, which has been both long and short at the same time. Regardless of how or why I initially began my journey, here I am now writing these words of acknowledgment and thank you—because I didn’t get to this point alone. I got here with many people, with luck, with curious encounters, with coincidence, and with care.

First and foremost, I got here thanks to the support provided by two of the best supervisors I could have wished for—Docent Vappu Sunnari and Professor Helena Karasti. I know they are the best because they got me to write a PhD dissertation. I have worked with Vappu for over a decade, with this dissertation being only one, our latest, unique collaboration among many others. Vappu has relentlessly read and commented on my, at times, overtly complicated writing, pointing out the ridges and showing me that what I was trying to say matters. For someone like me, a bit of a self-doubter, this has meant a lot. Helena and I started working about eight years back when we collaborated on the Openrisk project, and I could not have known what our collaboration would eventually lead me towards. It was supposed to be, after all, just one new project among many. That project turned, however, into hours and hours of talks, interesting encounters and inciting moments. One by one, our talks inspired curiosity in me and I found myself writing articles “as a hobby.” I couldn’t have found a better guide into the world of research than someone who so wholeheartedly took for granted that I would be good at it. Two equal, wonderfully supportive supervisors—I’ve been so lucky!

Over the past ten years, I have been a part of the Gender Studies team and research group at the University of Oulu. Working with our group has provided me with wonderful opportunities to learn about some of the most valuable research topics imaginable—research about care, belonging, equality; research that has the capacity to disrupt the violence that inhabits everyday living in so many ways. Our research group has been at the frontline of my gibberish—so, my thanks goes out to all of you for trying to grapple with the thoughts that are still in midsentence and the ideas that are not quite there yet. From this research group, I especially want to thank PhD Mervi Heikkinen, for taking me into the Apropos project in 2007, and for allowing me to learn so much from her both through collaboration in projects over the years and through being a co-author in our articles. I also want to thank Docent Tuija Huuki. Figuring out my own path following your footsteps into the
posthuman and new materialist worlds has been a great learning experience, and I’m very proud to have been able to work with you along the way. Finally, a special thanks goes to PhD Anna Reetta Rönkä—my companion for coffee, lunch, and whatever-and-whenever—for sharing this process with its ups, downs, and roadblocks. I think it goes without saying how valuable it has been for me to be able hash things out, to talk about, well, almost anything.

The pages of this thesis are filled with stories that are all tangled up with other stories and other people living those stories. They are told in a way that does not give the entirety of these stories, in order to anonymise the real people behind them. But they are there and, needless to say, I am indebted to all those people, without whose willingness to join the processes they joined, I wouldn’t have these stories to tell. I’ve been touched, I’ve laughed, I’ve learned. There has also been a wide range of people and encounters that have helped me make sense of these stories by making me wonder about them even more, by mixing my palette with odd angles and new terminologies. Such encounters have taken place, among others, with the people I have had the privilege to meet during the Designing Human Technology PhD seminars, organised by Roskilde University. Then there have been all the helpful people who have patiently and carefully read and commented my writings, helping me polish and fine-tune the stories I wanted to tell, making them flow and look good. I’m grateful for their support and expertise during this process.

I have also had a supporting follow-up group for my doctoral training with wonderful experts Professor Emerita Maria Järvelä, Professor Christina Mörtberg, and Docent Tiina Suopajärvi. Then, in the final steps towards completion, Associate Professor Pirjo Elovaara and Docent Katve-Kaisa Kontturi unarguably deserve a special acknowledgement for accepting the task of being the pre-examiners for this doctoral dissertation and for giving me with their thorough comments the encouragement and push to finalise this work.

I decided to do a PhD sometime in the spring of 2013 and not long after that, Pinja, my daughter and the loveliest little person I know, was born. Going back to work and obtaining a two-year funding from the University of Oulu Human Sciences Doctoral Programme, enabled me to fully devote the past two years to research. It has been an amazing time of discovery, imagination, and creativity—an opportunity I have truly valued. Yet, you don’t do a doctoral thesis like this one during office hours only. It swarms in your head while you are drifting off to sleep, while you are on your way to expected and unexpected places ... when you are living your life. Indeed, the time spent on reading, writing, thinking, and engaging was not spent in the office only, but in and as part of my life that is shared with my
family. My companions at home. For me, and for the completion of this work, having a home to come home to, the ordinariness with its ebbs and flows, the tiny things that pull one into the mundane stuff—inevitable. Thank you.

The next part deserves to be said in Finnish, because this is the part where I thank my parents, Tuulikki and Risto. Haluan sanoa kiitos ja vaikka sanon sen lyhyesti, sanon sen täynnä menneitä ja tulevia toiveita ja haaveita, tekemisiä ja parhaansa yrittämisiä. Tästä kirjoittaessani, juuri nyt ja tässä, tänä helmikuina iltana, muistan jälleen kuinka tärkeää on, että on perhe ja juuret – että on ne ihmiset, joiden kyseenalaistamattomaan tukeen voi aina luottaa. Halaus ja kiitos!

Finally, I may not be able to thank everyone, but I may be able to show how ordinary and tiny the things are that also make it to my thank you list. So, here we go. A final thank you for the tiny things that matter. To Pinja, for the time when I was writing this thesis on the kitchen table and I couldn’t play with you. You came and brought your own little wooden toy laptop next to mine and said we could play work together. I switched off my laptop and we played that we were doing work. And as we did, I knew with certainty that that tiny moment, the one that made me slow down and take a pause rather than go on, will be one of the most deserving of an acknowledgement.

Oulu, February 21, 2018

Suvi Pihkala
List of original publications

This thesis is based on the following publications, which are referred throughout the text by their Roman numerals:


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Part I: Re-membered beginning

This “beginning,” like all beginnings, is always already threaded through with anticipation of where it is going but will never simply reach and of a past that has yet to come. It is not merely that the future and the past are not “there” and never sit still, but that the present is not simply here-now.

(Barad, 2010, p. 244)
1 Orientations

Sara Ahmed (2007, p. 151) writes that the starting point for orientation is “the ‘here’ of the body and the ‘where’ of its dwelling.” Over time, we find ourselves, our bodies, and our dwellings to be multiple, without a single beginning or a beginning at all; rather, our points of orientation consist of multiple dwellings and manifold entangled encounters. Therefore, inspired by this point of orientation, I begin the storying of this dissertation with an account of my entangled encounters.

The origins of this research are—then—in my practical everyday encounters. These include encounters in the participatory design process of a social-media-related project aiming to support professionals collaborating on interventions in workplace bullying; encounters with pedagogies of non-violence in the course of working to develop education on violence and violence prevention; and encounters, through these disparate engagements, with stories of violence and abuse and with stories of care and commitment. From these everyday encounters, saturated with practical troubles and commitments—rather than idealised visions—appeared the possibility and invitation to consider sustainability in new light, to consider that, in these encounters of an ordinary kind, responsibilities exist “all the way down” (Barad, 2017; Haraway, 2008).

This study aims to explore these entangled responsibilities in the practices of change-making, and—through that exploration—to participate in efforts to rethink sustainability. Specifically, I aim to explore how sustainability comes to matter in the engaged practices of change-making in participatory design, education, and everyday engagement towards non-violence. I hope, in other words, to convey a story weaved from the manifold efforts of responsible engagement and participatory practices with and for non-violence that traverse the empirical terrains of this research. In those empirical terrains, non-violence as an object of change-making has referred to the challenge of maintaining and nurturing everyday relationships that stand on care, belonging, and equality.

This research originates in two projects. The first project developed an international, academic, multidisciplinary, multiprofessional study programme in 2007 and 2008 on gender and sexual violence,1 coordinated by the Gender Studies

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1 The project in question, APROPOS – Multisectoral and Multidisciplinary Professional Specialization Programme and Network for Violence Prevention, was funded by the European Commission’s Daphne programme over the 2007 and 2008 period.
team and research group\textsuperscript{2} at the University of Oulu. Constructed and piloted during the project, the study programme in question has since then continued to be developed and implemented as part of the Gender Studies curriculum. The second project involved participatory design carried out with, for, and by a group of practitioners aiming to develop new collaborations and a network around workplace bullying and harassment—and to create social media support for such work as part of a larger social-media-related project, as one of its pilot studies.\textsuperscript{3}

When introducing the origins of this dissertation, I use the word “project” intentionally. Projects are everywhere in our professional praxis and even transpire in our personal discourses about our lives. For example, I remember being noted once that I was referring to my pregnancy as a “project.” In academia, it seems sometimes we live by and through projects; yet concerns have emerged over how we manage all those projects and if we even have the time to care about what happens after or beyond them. Introducing this study through the idea of a project may seem rather counter-intuitive, therefore. Do I really think a project serves as a point of orientation for as all-encompassing a conception as sustainability—or sustainable change, for that matter? Well, no, I do not. Nonetheless, beginning this synopsis with the notion of “projects” still makes sense. Employing the idea of a project works as a provocation towards making tensions visible between our immediate concerns—be it in the temporality of today, this event, this project, this study programme, this decade, this moment, or something else—and the challenge entailed in sustainability to reach out to the unknown, to the unfathomable, or perhaps even to that which escapes our sensibilities and sense-of-abilities (see Yusoff, 2013) in the frames of time, space, or matter.

Sustainability is a contested, ambiguous concept. It is an idea of politics, governance, and consumption, and has practical implications, whether operating on systemic levels or in encouraging people to become sustainable consumers and citizens. Sustainability, as a normative idea, asks us to rethink our interrelatedness and interdependency with the world in particular ways (e.g., Braidotti, 2011; Stumpf, Baumgartner, Becker, & Sievers-Glotzbach, 2015). For some, it is an invitation to define and solve problems—wicked as those problems may be—and

\textsuperscript{2} In the University of Oulu, up until 2018, the team and research group was officially called Women’s and Gender Studies.

\textsuperscript{3} This project was conducted in 2010 and 2011, coordinated by the Technical Research Centre in Finland, VTT, with the Finnish Work Environment Fund as its main funder. The Department of Information Processing Sciences of the University of Oulu was a partner in the project and was responsible for the pilot in question, which was carried out in close collaboration with a Finnish trade union study-centre (see Heikkilä et al., 2011, 2012).
to equip us, as future global citizens, with the right toolkit and skills for this task of problem-defining and problem-solving (e.g., Atkisson, 2011; Leach, Scoones, & Stirling, 2010; UNESCO, 2017a; Wiek, Withycombe, & Redman, 2011). For others—by whose thinking I am particularly inspired—sustainability is not about negotiating debts to and interdependencies with a world considered external to us; rather, sustainability stands fundamentally for engagements and encounters that, in various ways, take responsibility and accountability for being of the world (Barad, 2003, 2007; Haraway, 2008); that is, our responsibilities emerge not through our locations and situatedness, but through our utter entangledness with and in the world’s ongoing dynamics.

In this synopsis, I will employ, in particular, the above thinking and idea of an ontological, always-relational, and already-ethical encounter (developed further in Chapter 4). That thinking will function as my companion as I ask, first, “How does sustainability come to matter in the engaged practices of change-making?” I approach this question by focusing on participation, non-violence, and responsible practices in design and education as discussed in the four articles included in this dissertation, drawing from the two empirical research terrains as described below. My second principle question, building upon the first, asks, “What kinds of understanding do these entanglements and engagements with non-violence, participation, and sustainability—animated in the practices of change-making—afford for responsibilities in and for sustainable change?”

To elaborate, this dissertation is rooted firmly in my empirical engagements and in four articles I have written to capture parts of the liveliness of those engagements. The articles included in this work originate in the two aforementioned projects, which for clarity I will refer to as pedagogical and designerly research terrains. From the pedagogical terrain—and in relation to the international, academic e-learning study programme on gender and sexualised violence and on violence prevention—Article I elaborates on feminist pedagogy of

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4 Barad (2007) writes, “We are of the universe—there is no inside, no outside. There is only intra-acting from within and as part of the world in its becoming” (p. 396).

5 Although the notion of designerly is an established concept in design (Cross, 1982, 2001) and participatory design (e.g., DiSalvo, 2009; Eriksen, 2012), my use of the notion—accompanied by the ideas of pedagogical and researcherly—is motivated by a need to allow “breathing room” for design and pedagogy respectively, as well as flexibility in the foci of the terrain. With the use of the term “researcherly,” my aim is to draw out research and design as modes of thinking-engage practice in ordinary entanglements that are not so easily categorised. Furthermore, the use of the term researcherly toys with the emerging propositions that feel research is perhaps too bound with its positivist heritages and suggest the possibilities to speak of inquiry instead or to even further experiment with the bounds of researcherly accounts and encounters of and with the world (Denzin & Lincoln, 2017, p. 11).
non-violence for supporting *caring, empowered selves*, drawing from student writings during the study programme. The article in question was motivated by the aim to examine the possibilities and prerequisites of the e-learning programme in studying about violence and non-violence. Article IV expands the frames of that e-learning as a site for nurturing non-violence. Shifting beyond the confines of the study programme to focus on stories of struggles with violence and efforts towards non-violence in the life of one of the study programme participants, Article IV generates insight into how non-violence is reconfigured in manifold, entangled spaces and times (Barad, 2007). By exploring the conditions of possibility for non-violence, these two articles provide insight onto the challenge of cultivating change towards non-violence.

*Designerly* terrain, in turn, relates to a participatory design pilot study that aimed to develop new collaboration, supported by social media, with, for, and by a group of professionals working against workplace harassment. I include two articles from that study, articles that discuss reflexive sensitivity and responsibility in engaging, participating, and being involved—see Article II—as well as its ethical, political, and creative potentialities for participatory design(ing) beyond and after projects—see Article III.

With the enacted empirical practices and once-made-captures of them as its main materials, this synopsis works in a mode of affirmative engagement (Barad, 2014a, p. 187). Its main task is *diffractive* in nature. This means that I, firstly, present the results of the four articles included in this dissertation and, secondly, explore possibilities to re-engage with those results, in order to incite new modes of “understanding-becoming” (Barad, 2014a, p. 187). Chapters 3 and 5 will discuss, in more detail, how and why I take this approach.

To generate these new patterns of understandings in this synopsis, I will develop my theoretical-conceptual thinking, employing what I will refer to as feminist (new) materialist reanimations of ethics and responsibility. Feminist new materialist bodies of work link my study to wider material and ontological turns that traverse social sciences and feminist thinking, as discussed in an established manner in terms of posthuman(ism) and (new) materialism respectively.6 Within

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6 Here the carefully placed brackets remind one that the “new” in new materialism is as contestable as the “human” or “post” in posthuman, or the “ism” in posthumanism (Ahmed, 2008; Braidotti, 2013; Haraway, 2004, 2016; Irni, 2013b). Considering this contestability pertaining to the terminology, I contend that my work might be best described as wanderings within a posthuman and new materialist landscape, wherein my interest lies in particular in feminist (new) materialist renegotiations of ethics and responsibility.
the scope of this research, I connect to a renegotiated materiality in a world that, I contend, should evoke thinking beyond—or post—human exceptionalism, towards a consequent rethinking of responsibility and ethics (Barad, 2007, 2014b, 2017, Haraway, 2008, 2016). My aim in this synopsis is to explore the affordances of that thinking, so as to offer insight into responsible participatory practices of change-making—towards non-violence in particular—and to elicit new thought and practice towards sustainable change.

While engaging with the results from the pedagogical and designerly terrains detailed above, I have become inspired by the wider frames of post-qualitative (Jackson & Mazzei, 2012, 2017; Koro-Ljungberg & MacLure, 2013; Lather & St. Pierre, 2013; MacLure, 2013b, 2013c; St. Pierre & Jackson, 2014) and diffractive methodologies (Barad, 2007, 2014a; Lenz Taguchi & Palmer, 2013; van der Tuin, 2011), which I will elaborate in Chapter 5. Therefore, when writing this synopsis, I have foregrounded methodological non-linearity, open-endedness, and an understanding of research insights unfolding through intricately entangled webs of reading, writing, thinking, and engaging. In order to explore the potentialities of post-qualitative thinking for writing and compiling this synopsis, I have sought ways to present the results from the articles mentioned on the one hand, and to prolong and re-enact the tensions and frictions the articles sought to articulate and the lines of flight they generated, on the other.7 I seek also to re-engage with the material, embodied, and entangled practices that research entails, in order to embrace the ten-year-long process of engaging in, learning about, and conducting this research. This approach functions in my research as moves and movements through which arguments develop as a reiteration of concepts, theories, thinking, and encounters. It suggests a practice of slowing down and creating pauses in order to wander and wonder, to listen to, sense, and touch what might become incited as a form of affirmative attunement and engagement. On might also understand slowing down as a form of experiment in writing, as a manner of writing that generates lines of flight that allow the wonder to remain.

The above theoretical and methodological approach has affected my choices in writing and compiling this synopsis. I have organised the synopsis in three parts.7 Here I find it important to note that the articles included in this dissertation contribute to the current discussions of two distinct disciplinary communities, Scandinavian Participatory Design and feminist research. The new materialist thinking presented in this work, while having gained popularity in feminist research, is significantly less known in the Scandinavian Participatory Design community. Therefore, the articles themselves and the choices of work with and beyond the articles should be understood as connected to the challenge of navigating in and between the disciplinary communities as described in Chapter 3.
Re-membered beginning is the first part. “Thinking with”\textsuperscript{8} Karen Barad (2007, 2010), whose influence runs across this work, I maintain that beginnings are not to be recounted as static memories stored in an individual mind. Beginnings are not “there” to be recounted but rather already rich with pasts, presents, and futures; re-membered and re-turned (Barad, 2010, 2014a, 2015).\textsuperscript{9} Therefore, as a form of remembering, I situate this work by partnering sustainability with future and change-making, fostering connections with participatory design, education and non-violence. I will engage with these partners in Chapter 2. In Chapter 3, as part of the re-membered beginning, I discuss the trail emerging from the two projects introduced in the beginning of this synopsis, elaborate on the research questions, and offer insights into the interdisciplinary and transdisciplinary choreographies of this study.

The middle part of this work, entitled Reading/writing/thinking/engaging, a term with which you may be familiar from this introduction, focuses on generating and presenting the companions for the later, diffractive reading in Chapter 7 of this synopsis. Firstly, in Chapter 4, pursuing an emerging need to situate sustainability in and as an ethical encounter, I work in particular with Karen Barad’s agential realist account of the world, focusing on the thoughts and ideas of Donna Haraway and Barad as I develop my thinking about ethical encounter and engagement. Secondly, in Chapter 5, I focus on the methods and methodological choices of this research, beginning with the studies underpinning the four articles included in this dissertation, and then moving towards a re-articulation of methods more attuned to the enacted, embodied, and dynamic materiality of this research. Thirdly, in Chapter 6, I introduce each article and the key results they present. The theoretical apparatus (Barad, 2007), methods and methodological approach, and the results of the four articles then form the heart of Re-turnings, the third and final part of this synopsis.

In Re-turnings, I re-engage with the principle results of the articles—namely, results related to participation, non-violence, care, and reflexive engagement—and attune to how those results begin to diffract when weaved with the material-

\textsuperscript{8} See elaboration on the notion of “thinking with” in Subchapters 3.3 and 5.4.

\textsuperscript{9} The term “re-turning” as used here, like “re-membering,” is indebted to Barad’s (2007) spacetime manifold ontology. One should not understand re-turning in the sense of a re-turn to, but rather as a re-turning, or re-turn with; the “multiplicity of processes, such as the kinds earthworms revel in while helping to make compost or otherwise being busy at work and at play: turning the soil over and over – ingesting and excreting it, tunnelling through it, burrowing, all means of aerating the soil, allowing oxygen in, opening it up and breathing new life into it” (Barad, 2014a, p. 168; see also Juelskjær & Schwennesen, 2012, pp. 12–13).
discursive notions of touch and response-ability (see Chapter 4). Through this “weaving together” a new mode of thinking emerges in relation to the engaged practices of sustainable change; specifically, in relation to how sustainability matters in situated practices of change-making. I also “slow down” to wonder about the ways in which wonder paves the way for theorising, and how wonder remains in academic research reports such as dissertations. Finally, there is the question and an anticipation, “And then?”
2 Sustainabilities in change

In my research, sustainabilities are “in the making”; sustainabilities are envisioned imaginaries of something better—of participation, collaboration, and belonging, and of lives free from violence. They are also in the “making” in the sense of responsible, accountable practices of participation, and residing in efforts to foster relationships based on care, belonging, and equality: that is, non-violence. At the same time, sustainability pulls in multiple directions at once as a fixed matter we read about in newspapers and conference titles; as pushing us in our consumer choices; or as a plea for ethical forms of address in the face of intolerable social, political, and ecological presents and futures. Sustainability gestures to the future, to the untimely, to the non-contemporaneous, and to the long-term, tugging at our temporal sensibilities. How, then, I find myself asking, is one to work with something as engrossed as sustainability?

To embrace the multiple potentialities of sustainability for thought and practice, I base my approach to sustainability on locating fruitful points of friction and fraction that might generate differences that matter (Barad, 2007; Haraway, 1997; van der Tuin, 2011). I begin to focus on sustainability by connecting first to the sustainable development paradigm. Second, in relation to that paradigm, I aim to make two closely entangled moves: I build a connection to social sustainability, which introduces the possibility of inquiry into concerns over what—such as non-violence—and how—such as participation and reflexivity—of sustainability. Subsequently, through a central critique against the mainstream sustainability paradigm, I construct a connection to the borderlands of sustainability and in particular to the emerging openings for addressing unsustainability found in the posthuman and new materialist bodies of work. Between these manifold sustainabilities, I pave the way, therefore, to a positioning of my research in relation to social concerns in sustainability and to sustainability as a matter of responsible, accountable relations in the engaged practices of change-making.

Elaborating further on my entry into sustainability in the processes of future and change-making, Subchapter 2.2 discusses how the above sense of urgency, and a need for new modes of address that traverse scholarly work and policies, resonates also in the ordinary practices and processes in design and education as new kinds of challenges and responsibilities. Connecting to the fields of my research—and to participatory design, education, and education against violence in particular—I position my research in relation to a need to rethink responsible
participatory practices in change-making and in practices towards non-violence in particular.

The final subchapter positions my research interest in relation to sustainable change by foregrounding the possibilities for reimagining responsibilities for sustainable change using a feminist (new) materialist reworking of what it means to be not just in this world but an inseparable part of this world and its becoming. I elaborate, moreover, on how these emerging understandings introduce promising possibilities for rethinking violence and non-violence as well as care and responsibilities in connection to them.

2.1 Un/sustainability as a matter of concern

Over the past few decades, scholars and policy makers have become increasingly aware of the problematics of tackling the socio-cultural, economic and environmental challenges occurring in the here-and-now and in the unknown future. Conferences and debates on the current time—often called the Anthropocene\textsuperscript{10}—proliferate as a collective concern for the changes acknowledged to take place, as a sense of accountability and debt to the worlds we inhabit (Haraway, 2016; Malone & Truong, 2017; Neimanis & Walker, 2014; Shotwell, 2016; Tsing, 2015; Tsing, Bubandt, Gan, & Swanson, 2017), and to the futures we are invested in making (Baumer & Silberman, 2011; DiSalvo, Sengers, & Brynjarsdóttir, 2010; Ingold & Gatt, 2013; Otto & Smith, 2013; Sengers, 2011). While this sense of apocalyptic presents and futures thrives in the face of global warming and environmental degradation, a sense of precarity\textsuperscript{11} and vulnerability echoes also more widely as critique against neoliberal rationalism and its effects on global and local realities (Butler & Athanasiou, 2013; Malone & Truong, 2017; 

\textsuperscript{10} The Anthropocene is a buzzword conceptualising how human beings have outrun the geological forces in the shaping of the world (e.g., Haraway, 2016; Moore, 2016). The Anthropocene is, however, an utterly contested concept; some argue that it continues to place human beings on the centre stage of change, at the same time failing to generate change (Haraway, 2016; Kenney 2016). Therefore, alternative articulations such as the Capitalocene have been discussed as more aware of differently distributed accountabilities and uneven affects and effects of the “Age of the Man” (Moore, 2016). Donna Haraway (2016) goes even further proposing the notion of the Chthulucene as more in line with a need to move beyond mere diagnostics.

\textsuperscript{11} I use the word precarity as used in some of the posthumanism inspired sustainability discussions (e.g., Malone & Truong, 2017), and as related to ontological vulnerability (Butler, 2004; Butler & Athanasiou, 2013; Cielemecka & Revelles-Benavente, 2017; Tsing, 2015), rather than as a word connoting a social class situated in conditions of unpredictability and insecurity in the labour markets (see Cielemecka & Revelles-Benavente, 2017, p. 29).
Tsing, 2015), mired with unsafety, instabilities, and “slow violence” (Nixon, 2011). An air of concern is related focally to the unsustainability acknowledged in how we engage with the human and “more-than-human” worlds we inhabit, worlds that are bigger than us humans and our human concerns (Taylor, Blaise, & Giugni, 2012); or perhaps, as Anna Tsing (2015, p. 20) puts it, our time is ripe for sensing this precarity.

This common concern has, consequently, incited different modes of address, of which one of the most prominent—and therefore deserving of focus in its own right—is that of sustainability framed as sustainable development. In a sense, sustainability entered our current vocabulary primarily due to the United Nation’s oft-cited definition of sustainable development in the Brundtland report (World Commission on Environment and Development, 1987), which defines sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (p. 19). In this sense, one may understand sustainability as the end-point towards which sustainable development operates, or that it seeks to ensure. Articulated in the 1980s, the report’s prominent effect was to provide sustainability with an applicable definition. The starting point for sustainable efforts—or development—was afterwards dominated by the aim to meet our needs with respect to intragenerational, intergenerational, and environmental justice, as discussed most recently for example in the “Sustainable Development Goals” (United Nations, 2015). While research and practice concerning sustainable development has evolved through critique and review (e.g., Atkinson, Dietz, Neumayer, & Agarwala, 2014; James, 2017; Lang et al., 2012; Peterson, 2016), it is within the frames of this definition of sustainability that sustainability is perhaps most often understood.

Within the fields of sustainable development, over the years, sustainability has shifted from early environmental foci towards a more integrated mode of approach (Peterson, 2016), as scholars from multiple disciplines have joined efforts to carve out a space for the social and for “other others” of sustainability. This means that

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12 Understanding sustainability as enacted in relation to our contemporaries (e.g., “meeting our needs”; World Commission on Environment and Development, 1987, p. 19), to future generations (i.e. without compromising the possibilities of those who come after us) and as pertaining in particular to nature one may see these three dimensions as intricately intertwined.

13 The premise of sustainable development established in the Brundtland report, or Our common future (World Commission on Environment and Development, 1987) has also paved the way for social sustainability or for what would come to be called the triple bottom line, promoting a model of ecological, economic, and social pillars in sustainable development. For example, one may see cultural sustainability as having emerged from social sustainability, emphasising questions of cultural
alternative voices and perspectives have been brought to widen the scope of sustainability concerns, manifested—for example—in consideration of the roles societies, cultures, and education play in sustainability (Axelsson et al., 2013; Boström, 2012b; Dessein, Soini, Fairclough, & Horlings, 2015; Jones, Selby, & Sterling, 2010; K. Murphy, 2012), or the ones, for example, the socio-technical infrastructures play in sustainability transitions (Avelino, Grin, Pel, & Jhagroe, 2016; Chilvers & Longhurst, 2016; Markard, Raven, & Truffer, 2012). This widened scope has also drawn attention, firstly, to how sustainable development unfolds in the local realities of people and communities, inciting renewed debates on equity and justice (Agyeman, Schlosberg, Craven, & Matthews, 2016; Eizenberg & Jabareen, 2017; Kruger & Agyeman, 2005; Peterson, 2016; Stumpf et al., 2015) and, secondly and more recently, to how sustainable development itself requires values of sustainability to be inscribed in the practices of sustainable development, if sustainable change is to be achieved (Atkisson, 2011; Boström, 2012a; Boström et al., 2015; Leach et al., 2010).

Of the multiple others of sustainability, of particular interest to me are the so-called social dimensions of sustainability. The social dimensions of sustainability, or “social sustainability” has been discussed as missing (Boström, 2012a) or forgotten (Opp, 2017) pillar of sustainability, and a concept in-the-making at best (Weingaertner & Moberg, 2014; Åhman, 2013), or chaos at worst (Vallance, Perkins, & Dixon, 2011). As ones of the most prominent others, these social dimensions have referred to issues such as equity, human wellbeing, social cohesion, and participation, which one may understand as principles or values of socially sustainable communities (Boström, 2012a; Peterson, 2016; Vallance et al., 2011) and as closely intertwined with wider considerations of intergenerational, intragenerational and environmental sustainabilities.

As part of sustainable development, “the social” has enabled the consideration of a variety of concerns, including violence and non-violence. Combatting interpersonal, collective, and structural violence has been on the feminist agenda of research and action for decades (H. Johnson, Ollus, & Nevala, 2008; Kappeler, maintenance and continuity, heritage, and the role of culture and traditions in sustainable change (Dessein et al., 2015; Mörtberg, Stuedahl, & Elovaara, 2010; Vallance et al., 2011).

One should note that over the years multiple definitions have been suggested and categorisations crafted to address overlaps or interrelations among social, environmental, and economic sustainabilities (Boyer, Peterson, Arora, & Caldwell, 2016; James, 2017; Peterson, 2016) and in relation to what all social sustainability might encompass and how it could be measured (e.g., Axelsson et al., 2013; Boström, 2012a; Colantonio, 2009; Dillard, Dujon, & King, 2009; Eizenberg & Jabareen, 2017; Littig & Grießler, 2005; Magis & Shinn, 2009; K. Murphy, 2012).
1995; Kelly, 1981; Townsend, Zapata, Rowlands, Alberti, & Mercado, 1999), and an object of policies on international, national, and local levels. Nevertheless, these challenges of violence have only very recently appeared on the sustainability agenda at all. Currently, violence as a human rights issue—and violence against women and children distinctly—is embedded in discussions about sustainability (García-Moreno & Amin, 2016; Kabeer, 2014; Singh & Erbe, 2017; UNESCO, 2017b), and enunciated explicitly in the Sustainable Development Goals (United Nations, 2015), which discusses the eradication of violence as a central concern with respect to women, children, and global peace efforts in particular. Measures for preventing violence traverse sustainable development goals, from education and literacy, equality, and provisions of health care to aims to decrease armed conflicts. One may, therefore, view them as a cross-cutting dimension of sustainability as such, and sustainable development respectively (UNESCO, 2017b). Besides addressing violence from the perspective of violence prevention as a goal for a multi-stakeholder agenda and actions, on a policy-making level violence aligns also with sustainability as an issue of non-violence and peace with a wider emphasis on social justice as central and irrevocable human right. Moreover, one can see the role of non-violence as a flagship for rapprochement of cultures, belonging, and responsibility for humanity, as declared and fostered in the UNESCO culture of peace and non-violence, for example (UNESCO, n.d., 2017b).

In addition to substantial contributions such as the inclusion of the consideration of violence within the sustainability programme, one may also consider social dimensions as threaded through sustainable development in considerations of the processes of change. In discussions about “just sustainabilities” 16 (Agyeman, Bullard, & Evans, 2003) and “procedural sustainabilities” (Boström, 2012a; Boström et al., 2015), among others, efforts

15 Addressing violence against women specifically grounds international policies such as the Convention on the elimination of all forms of discrimination against women (CEDAW) (1979), which was drawn to help address and monitor questions related to women’s human rights in all spheres of life, from economic to intimate partnerships. Currently, European countries are ratifying the Council of Europe Convention on preventing and combating violence against women and domestic violence (Istanbul convention) (2011), which resulted in the European Commission designating 2017 as the European year of focused action to fight violence against women (European Commission, 2017).

16 “Just sustainabilities can be thought of as a counterbalance, an infusion of ideas of equity and justice into a discourse whose sole focus at that time was on environmental sustainability. The argument, put simply, was ‘sustainability cannot be simply a ‘green’, or ‘environmental’ concern, important though ‘environmental’ aspects of sustainability are. A truly sustainable society is one where wider questions of social needs and welfare, and economic opportunity are integrally related to environmental limits imposed by supporting ecosystems’” (Agyeman et al., 2016, p. 326).
towards a sustainable future are scrutinised increasingly for their capacity to effect sustainable change. Scholars, among others, have called for more reflexive approaches to processes of change-making (Allen, 2015; Leach et al., 2010), and for a more nuanced understanding of the complexities of local and “actual existing sustainabilities” (Kruger & Agyeman, 2005). This provides a form of articulation that foregrounds how sustainable development must be “locally engaged and engaging” (Peterson, 2016, p. 5) or, in the language of Vallance, Perkins, and Dixon (2011, p. 347), “re-humanised” and “context aware.”

On the other hand, sustainability becomes void of meaning, I contend, unless understood as inherently ethical. Sustainability, by nature, becomes entangled in complex ways with the questions and goals we pose, the values we inscribe, and the judgements we make, underlined by ethical assumptions and injunctions (Becker, 2012; Stumpf et al., 2015). Researchers have discussed the ethical affinities of sustainability extensively, particularly in the context of applied ethics, where issues such as those of corporate responsibility and business ethics (e.g., Crane & Matten, 2016; Heikkurinen & Mäkinen, 2016) are foregrounded—and in the context of those who in the field of environmental ethics and environmental humanities, for example, seek to enfold social and environmental sciences in the face of current ecological urgencies by challenging human exceptionalism and anthropocentric thinking (e.g., Plumwood, 1993; Rose et al., 2012). In relation to my interests, ruptures in the management of sustainabilities challenged particularly by discussions in environmental humanities, among others, prompt me to ask more nuanced questions about one, how sustainabilities come to matter as a concern—with past, present, and future unsustainabilities deeply inherited in their matterings; two, how such entangled sustainabilities and unsustainabilities—or un/sustainabilities—are enacted; and three, how to maintain sustainability as an intrinsically and intricately ethical matter. Moreover, the plurality of sustainability challenges me to ask how the ethical, responsible, and just might be brought to bear for scholars, designers, educators, and policy makers, prompting them, or rather us, to look more closely at how we as designers, researchers or educators weave ourselves into the fabric of sustainability and how we enact sustainability.

Within the sustainable development paradigm, unsustainabilities in environmental or social spheres, such as climate change, biodiversity loss, forced migration, global conflicts, and poverty (United Nations, 2015), can and should, I contend, be addressed through policies, educational efforts, and development initiatives, among others. While such efforts are incremental in nature, the mainstream sustainability paradigm has been criticised for its ontological and
epistemological premises, particularly for focusing on the modernist rational individual subject, for a reliance on techno-scientific expertise, and for the anthropocentric premises that stand on taken-for-granted values of progress and development (see Alaimo, 2012, 2016; Braidotti, 2006, 2009; Goeminne, 2011; Haraway, 2008, 2016; Nixon, 2011; Parr, 2009, 2013).

If one turns away from a sustainability based on the modernist rational self, one body of alternative approach rests on a rethinking of us human beings as living on a “damaged planet” (Tsing et al., 2017). In her Spinoza-Deleuzian affirmative sustainability ethics, Rosi Braidotti (2006, 2011, 2013) argues a need for on non-unitary subject, with an “enlarged sense of inter-connection between self and others, including the non-human or ‘earth’ others” (2006, p. 35) and defines sustainability as “regrounding of the subject in a materially embedded sense of responsibility and ethical accountability for the environments she or he inhabits” (2006, p. 137). Donna Haraway (2008; 2016) resituates us in “hot compost piles” of multispecies worlding. Karen Barad (2007), in turn, with her agential realist account of responsibility, Isabelle Stengers with her work on cosmopolitics (Stengers, 2005), and Bruno Latour with his work on common worlds (Latour, 2004a, 2005b, 2014) have generated new modes of thinking about and engaging with underlying challenges of unsustainability in new ways. These openings have been taken up, for example, in educational (Blaise, Hamm, & Iorio, 2016; Duhn, 2017; Somerville, 2017; Taylor, 2017; Van Poeck, Goeminne, & Vandenabeele, 2016) and technoscientific worlds (Ernst, Bath, & Vehviläinen, 2017; Hird, 2016, 2017; Honkela & Irni, 2014; Puig de la Bellacasa, 2015; Vehviläinen, 2017). From one perspective, such new materialist accounts move beyond ready-made and taken-for-granted categories, universal principles, linear trajectories of change, and human exceptionalism (Alaimo, 2012; Fox & Alldred, 2016a, 2016b). On the basis of dynamics, monism, and materiality, such authors challenge the idea of what one should understand by and as sustainable. Fox and Alldred summarise that an alternative view on sustainability should be focused

upon potentials and capacities (Braidotti, 2011: 312-3; Parr, 2009: 161), and be marked by an ethics that ... moves beyond the usual narrow focus on human potential to instead encompass the capacity of all matter within an inclusive “environment” (that includes humans) to become other (Guattari 2000: 20). (Fox & Alldred, 2016a, p. 47)

Instead of contending with modernist frames of mainstream sustainability, the above voices connect by striving—in their own ways—to reimagine a non-
anthropocentric or complexly entangled human agency and by resituating the human subject(ivity) in a fragile, vulnerable, and precarious more-than-human world (Alaimo, 2016; Braidotti, 2006; Fox & Alldred, 2016a, 2016b; Haraway, 2016). These emerging sustainabilities stand on the proposal that the sole basis of agency should not be the human self and that the key to living justly cannot be based on universal ethical principles, but must rest on situated practices of responsibility and care through which more liveable worlds become possible (Alaimo, 2016; Barad, 2007; Braidotti, 2006, 2013, Haraway, 2008, 2016; Puig de la Bellacasa, 2017).

As a promising trajectory for rethinking sustainabilities, a call exists therefore for sensitivities and sensibilities, for an affirmative sustainability ethics based on the collective work of non-unitary subjects (Braidotti, 2006, 2013). When human beings are not the guardians of this universe, but are entangled in its mess and muddle all the way up and down (Barad, 2017; Haraway, 2008), the scholars in this body of work call, among others, for curiosity and care in “sf-mode”17 (Haraway, 2013, 2016); for feminist speculative ethics (Puig de la Bellacasa, 2017; Åsberg, 2013; Åsberg, Thiele, & van der Tuin, 2015); for witnessing by way of listening, connecting and responding (Blaise et al., 2016; van Dooren, 2014; Rose, 2011); and for response-ability (Barad, 2007; Haraway, 2008, 2012) with a sense of care, intimacy, exposure, and implicatedness with the more-than-human world we inhabit (Alaimo, 2016; Hird, 2016, 2017; Neimanis & Walker, 2014; Puig de la Bellacasa, 2015, 2017).

### 2.2 Futures in the making: On designing, educating, and other ways of engaging in and for sustainable change

Discussions in and around un/sustainabilities reinstate a need to make changes and to seek ways to instigate sustainable change. As such, this poses a problem: to envision and work towards more liveable futures and to engage with the contestability and uncertainties—the wickedness—embedded into this task. These are concerns that proliferate a multitude of fields in a more or less critical manner,

17 “SF is that potent material-semiotic sign for the riches of speculative fabulation, speculative feminism, science fiction, speculative fiction, science fact, science fantasy—and, I suggest, string figures. In looping threads and relays of patterning, this SF practice is a model for worlding. Therefore, SF must also mean ‘so far,’ opening up what is yet-to-come in protean entangled times’ pasts, presents, and futures” (Haraway, 2013, para. 12).
both within and beyond sustainability per se, including those of designerly and educational efforts towards more liveable futures.

Design, I contend—whether we consider design in a narrow sense as a professional practice or more broadly as a way of thinking (e.g., Cross, 2001; Ingold & Gatt, 2013; Otto & Smith, 2013)—has proved in its future-orientation and interventionist intentions (Kjærsgaard et al., 2016; Otto & Smith, 2013), a “natural fit” for the problem-solving and future-quest called out by sustainability. Sustainabilities matter to design in manifold ways (Mazé, 2013). Apart from design’s obvious affinities with sustainability, particularly in sustainable design, sustainabilities have also been discussed—for instance—in digital design in connection to resource efficiency and durability, and more marginally “as issues of identity, values, and creation of meaning” (Mörtberg, Stuedahl, & Elovaara, 2010, p. 261), expanding traditional, durability-focused sustainabilities, therefore, into sustainabilities that also pertain to the social and cultural (see also Mörtberg, Stuedahl, & Alander, 2010). Of these multiple touchpoints with sustainability, of interest to me are emerging discussions that scrutinise critically the “what and for whom” of design, asking,

if we agree that fundamental change is needed and it might be change that users don’t want, who gets to decide what change should happen and how, whose needs are met and whose values matter in the end? (DiSalvo et al., 2010, p. 1981)

The call to scrutinise whose needs matter links to wider discussions in—among other fields—feminist technosciences and in practice-engaged design fields that seek manners of thinking and practicing technology design with socio-material or socio-technical sensibilities and located accountabilities (Blomberg & Karasti, 2013; Mörtberg, Stuedahl, & Alander, 2010; Mörtberg, Stuedahl, & Elovaara, 2010; Suchman, 2002, 2007), and to design that foregrounds ethics, politics, values,

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18 One way to weave together sustainability and design is evident in the propositions of sustainable interaction design (Blevis, 2007) and sustainable design, which, as discussed by Mankoff et al. (2007) and DiSalvo et al. (2010), refer to two orientations or alignments of design and sustainability: firstly, sustainability in design—that is, alleviating material effects of the designed products—and secondly, sustainability through design, prompting sustainable lifestyles or decision-making. Another approach to the roles of design in sustainability might draw on its macro and micropolitical affinities, as Ramia Mazé (2013) suggests. Although sustainability unarguably matters in design, some have criticised sustainable design for its prominently neoliberal modernist framing of user, technology, and sustainability, and the interrelations between them (Brynjarsdóttir et al., 2012; Dourish, 2010; Mazé, Olausson, Plöjel, Redström, & Zetterlund, 2013), calling for a more careful scrutiny of the who and what of sustainable design.
and critique (Bardzell, 2010; Finken, 2003; Robertson & Simonsen, 2013; Robertson & Wagner, 2013; Sengers, Boehner, David, & Kaye, 2005)—such as feminism-inspired critical and speculative design practices (Bardzell, 2010; Bardzell & Churchill, 2011; Forlano & Mathew, 2014; Forlano, Ståhl, Lindström, Jönsson, & Mazé, 2016). Likewise, participatory approaches in design, such as Scandinavian Participatory Design19 (Robertson & Simonsen, 2013), to which my research links directly, seek to challenge apolitical and uncritical forms of design. Participatory Design as a field and practice stands on the idea that by involving diverse stakeholders and embracing “mutual learning” (e.g., Blomberg & Karasti, 2013; Kensing & Greenbaum, 2013), user perspectives might be incorporated into the design processes so as to achieve outcomes pertaining to the ethical and political values of democracy, and to make a difference in a sustaining manner (Kensing & Blomberg, 1998; Kensing & Greenbaum, 2013; Mörtberg, Stuedahl, & Elovaara, 2010; Robertson & Simonsen, 2013).

Sustainability also has many more or less “easy alliances” with education. In a sense, education for sustainability is situated in a long line of social change projects in educational policies. For example, Helena Pedersen (2017, pp. 56–57) analyses “certain futures-oriented components” that reiterate the role of education in social change propagated through the imaginings of a “knowledge society,” a “democratic society,” a “multicultural society,” and a “globalized society”—as well as a “sustainable society” as a pervasive public discourse in the educational fields today. With UNESCO as the leading agent supporting and promoting the incorporation of competencies such as critical thinking, collaboration, and the anticipation of multiple futures, these initiatives work to respond to calls for a new sustainability citizen (UNESCO, 2017a).20

19 I will use “Participatory Design” with upper case letters to refer specifically to this Scandinavian Participatory Design community and tradition in Information systems design (see Chapter 3). Lower case letters, in turn, I will use to refer to participatory design as it is employed in design fields more generally.

20 As the offspring of the sustainable development agenda discussed earlier, the goal of education for sustainable development has been to bring principles of sustainability into education with a focus on an “environmentalist approach” of teaching certain skills on the one hand, and a “democratic” focus on teaching future citizens as critical thinkers and agents of change on the other (Sjögren, 2016; UNESCO, 2017b; Vare & Scott, 2007). As a recent UNESCO (2017b) report states, education has been considered more and more for its manifold roles in sustainability, as a human right in itself, and as an enabler of human rights (p. iv), by “developing empowered, critical, mindful and competent citizens” (p. v). In higher education, this task is amplified as a matter of educating future professionals who will—it is presumed and hoped—take on the task of designing, governing, and policing sustainable development (Blake, Sterling, & Goodson, 2013; Jones et al., 2010; Vare & Scott, 2007; Wiek et al., 2011). This discussion has proliferated in dedicated journals, conferences, and institutions with a strong mandate.
While education for sustainability proliferates across educational institutions, much like in design, a body of work exists that acknowledges the lack of a critical examination of the underlying assumptions, values, as well as the ontological and epistemological presuppositions sustainability education has inherited (Clarke & Mcphie, 2015; Franck, 2017; Malone & Truong, 2017; Selby, 2015; Selby & Kagawa, 2015; Sjögren, 2016; Weldermariam, 2017). In a recent doctoral dissertation on sustainability education, Hanna Sjögren (2016) points to a lack of critical questioning of sustainability in education—for what and for whom—and reiterates a call to re-politicise sustainability in education. By doing so, Sjögren’s argument connects to critique of cosmopolitanism and to calls for a careful weaving and mindfulness of different voices, uncertainty, and disagreement as a form of cosmopolitics in education (Duhn, 2017; Sund & Öhman, 2014; Taylor, 2017).

In a sense, both education and design are entangled utterly in the futures and in the challenges of change-making, not least because of the pressing challenge posed by un/sustainability. Scholars and practitioners have been encouraged to find ways of engaging with and for more liveable futures, but are, at the same time, caught up in the contestability of doing so. This has prompted discussions on alternate visions and practices in design and pedagogy respectively. In design, new approaches and articulations for envisioning and enacting futures are being discussed; for example, design anthropology is bringing the mundane and the speculative together in design practices (Akama, Pink, & Fergusson, 2015; Kjærsgaard et al., 2016; Kjærsgaard & Boer, 2014; Mazé, 2016; Otto & Smith, 2013; Smith, 2014; Stuedahl, 2015). Another form of response makes a shift, prompted by Latourian (2005a) thinking on matters of concern and publics (DiSalvo, 2009; DiSalvo, Clement, & Piek, 2013; DiSalvo, Lukens, Lodato, Jenkins, & Kim, 2014), towards a re-articulation of things and infrastructuring, understood as a way of engaging with locally emergent concerns and issues—socio-material assemblies—rather than with technologies or predefined objects.

Sustainability has become a mainstay addition to national and local curricula (e.g., Finnish national curriculum for basic education states building of a sustainable future as one of its seven transversal skills; Finnish National Board of Education, 2016), and to a global agenda, as manifested, for example, in 2005–2014 UN Decade of Education for Sustainable Development (UNESCO, 2006).

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21 The idea of matter of concern refers to Bruno Latour’s (2004b, 2008) proposition of a shift from matters of fact to matters of concern, distinguishing between the sanitized, detached objectivity of the aforementioned and the contextualisation of “issues” into the broader, relational contexts of situated experiences of the latter. In design, this has helped to scrutinise and extend visions, such as those from design projects to design things (Bjögvinnsson et al., 2012; DiSalvo, 2009; DiSalvo, Boehner, Knouf, & Sengers, 2009).
only (Björgvinsson, Ehn, & Hillgren, 2012; DiSalvo et al., 2014; Emilson & Hillgren, 2014; see also Karasti, 2014b). For example, Lindström & Ståhl invite participants into a designerly public engagement as a form of co-articulating issues (2016b), and to cultivate design participants to become “response-able stakeholders” (Lindström & Ståhl, 2016a).

At the crux of anthropological understanding and of designer imagination, of innovation, of locally contested and contestable everyday, and of design objects and their socio-material entanglements, future-making unfolds as multiple possibilities (Ehn, Nilsson, & Topgaard, 2014; Kjærsgaard et al., 2016; Mazé, 2016), not as “the exclusive territory of the privileged few, but dispersed and circulated as a part of the social (re)production of daily life” (Kjærsgaard et al., 2016, p. 3). The “future,” “long-term,” and “sustainability,” are therefore contestable ideas that are open to critique, alternatives, and speculation—and which do not constitute a once-and-for-all question, in any sense. Rethinking responsible practices of designing with the complexity described has evoked calls for designers and researchers to reconsider reflexivity in and for design, so as to better account for the critical, speculative, and engaged practices that future-making entails (Bardzell, 2010; Blomberg & Karasti, 2013; de Jong, Önnevall, Reitsma, & Wessmann, 2016; Ehn et al., 2014; Karasti, 2010b; Mazé, 2016; Otto & Smith, 2013; Suchman, 2011); to scrutinise participatory practices more carefully (Andersen, Danholt, Halskov, Hansen, & Lauritsen, 2015; Ehn et al., 2014; Karasti, 2010b; Light & Akama, 2014; Lindström & Ståhl, 2014, 2016b; Vines, Clarke, Light, & Wright, 2015); and to engage with the renewed politics of imagination before, during, and after the design process (Bardzell, 2014; Forlano & Mathew, 2014; Light & Akama, 2012, 2014, Lindström & Ståhl, 2014, 2016b).

In the educational terrain also, working with uncertainty and indeterminacy has emerged as a cause of concern, challenging scholars to reimagine education and pedagogical practice (Harp-Rushing, 2017; Pedersen, 2017; Sjögren, Gyberg, & Henriksson, 2015; Van Poeck et al., 2016) as existing modes of address are more frequently considered insufficient for the goals posed. For example, on Human Rights and Global Education fronts, scholars have challenged being content with cheap sentimentality and declarationalist approaches void of local specificities of struggle, momentum for social change, or affects (Adami, 2014; Zembylas, 2017, 2018) and have spoken out against soft forms of reform, calling for more radical approaches (Andreotti, 2015; Zembylas, 2018). In a recent anthology, Sustainability Frontiers: Critical and transformative voices from borderlands of sustainability education (Selby & Kagawa, 2015), scholars seek new pedagogical
modes for enacting sustainable futures. Therefore, drawing from critical pedagogy, transformative learning, and transgressive teaching (e.g., Bodinet, 2016), education in and for sustainability aims—in varied manifestations—increasingly not just to pass on skills and tactics, but also to incite social change. For feminist scholars and teachers, this has been a pedagogical premise to begin with (hooks, 1994; Saarinen, Ojala, & Palmu, 2014; Testoni, 2014; Tissdel, 1998), which in a time of political crisis (Revelles-Benavente & Gonzáles Ramos, 2017), is prolonged in new feminist pedagogies that work with affects (Hickey-Moody, 2013), sociomaterialities (Hinton & Treusch, 2015), and feminist politics of responsibility (see also Reardon, Metcalf, Kenney, & Barad, 2015; Revelles-Benavente & Gonzáles Ramos, 2017); and in socially just posthuman pedagogies (Bozalek, Bayat, Motala, Mitchell, & Gachago, 2016; Braidotti, 2013). Concurrently, scholars working at the intersections of environmental humanities and education—and in environmental education—are taking seriously a need to abandon human-animal and nature-culture dualisms (Sjögren et al., 2015; Sund & Öhman, 2014), and to become responsible for the world we inhabit in a more intimate manner. Therefore, scholars are—for example—reimagining teaching and learning with children in more-than-human worlds, drawing attention to the potentialities of encounters with and in the minute and the mundane, through socio-material, multispecies, and common world pedagogies (Adsit-Morris & Gough, 2017; Duhn, 2017; Gannon, 2015; Malone, 2016; Malone & Truong, 2017; Somerville, 2017; Taylor et al., 2012; Taylor & Pacini-Ketchabaw, 2015).

In these new materialist and posthuman accounts and approaches, the relation between sustainability, change, the future, and concerns does not amount to an aspired-to mastery of skills for problem-defining or problem-solving enacted by collectives or by individuals, but to responsible, accountable modes of relating. These accounts ask that we engage not simply in imagining possible futures but in enacting and caring for those futures in all their imprescriptibility and open-

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22 Feminist pedagogy refers here to principles and practices in and of teaching informed by feminist theory. At its roots, feminist pedagogy affronts normative teaching practices drawing from critical pedagogies and from ideas in feminist standpoint, poststructural, queer, and postcolonial theories, in an effort to promote and incite transformation and empowerment by unsettling power asymmetries, rethinking knowledge and the knowing subject, and by challenging us to engage with differences both within the feminist classroom, as well as—and perhaps particularly—beyond its bounds, in an effort to bring about social change (Hesse-Biber, 2012; Saarinen et al., 2014). The wide range of feminist pedagogical practice and theory is covered, for example, in the continually expanding Teaching with Gender series by ATGENDER (2017).
endedness (Reardon, 2013; Reardon et al., 2015; Sjögren, 2016; Snaza, 2013; Snaza & Weaver, 2015; Van Poeck et al., 2016).

Nevertheless, with all its uncertainty and open-endedness, living within a world of vulnerability and precarity is not a completely open-ended endeavour; rather, as Haraway states, it requires us to take risks, to commit to “some worlds rather than others and helping to compose those worlds with others” (2016, p. 178). In relation to interest in my research, one can consider violence permeating relationships and cutting across manifold everyday sites, causing suffering and an inability to belong and become a part of a community (Huuki & Juutilanen, 2016; Huuki & Renold, 2016; Sunnari, Kangasvuo, & Heikkinen, 2003)23 as a concern and a challenge to sustainability that requires commitment to particular non-violent worlds.

Feminist scholars have been at the forefront of fighting violence and gender-related violence. Addressing violence in everyday and institutional sites has manifested in a range of socio-cultural theorisations that tap into gender and sexual violence (e.g., Heikkinen, 2012; Hird, 2002; Sunnari et al., 2003) and which have expanded understandings of violence, power, and the intersectional dynamics between violence and power in an extensive manner (Crenshaw, 1991; Husso, Virkki, Hirvonen, Eilola, & Notko, 2017; Kappeler, 1995; Townsend et al., 1999; Walby, Armstrong, & Strid, 2012). More recently, scholars drawing from posthuman and new materialist theories (Bansel, Davies, Laws, & Linnell, 2009; Huuki & Renold, 2016; Ivinson & Renold, 2013; Ringrose & Renold, 2014; Søndergaard, 2012, 2016; Zabrodska, Linnell, Laws, & Davies, 2011) have begun to rethink violence as emerging through manifold relations as material-discursive flows of force—as entanglements of discourse, place, materialities, and embodied practices—that create a threat to a person’s identity, body, capabilities, and desire to belong and be recognised as competent, legitimate members of communities (Huuki & Juutilanen, 2016; Huuki & Renold, 2016; Zabrodska et al., 2011).

23 In this research, I refer to violence through multiple ideas, such as gender related violence, in that case referring to an analysis of violence as produced through intricate entanglements of gendered and sexualised structures and power (Hird, 2002; Huuki & Juutilanen, 2016; Huuki & Renold, 2016; Sunnari et al., 2003). I also use more defined conceptualisations such as bullying, harassment, and intimate partner violence, particularly pertaining to the two empirical research terrains. In general—inspired by the emerging posthuman discussions—I understand violence as a phenomenon in a wide sense as any act or structure that diminishes another person and limits possibilities of belonging to and becoming a part of a community (Hird, 2002; Huuki & Juutilanen, 2016; Huuki & Renold, 2016; Sunnari et al., 2003). One might understand the concepts and categories of violence, in turn, as material-discursive reconfigurations and performative rather than representative of reality (Barad, 2003, 2007). For the theoretical grounding of this understanding, see Chapter 4.
Awareness of violence and an increased understanding of its effects and dynamics has supported education, a change in policies, and the development of multiprofessional practices; it has also incited empowerment and collective action to foster more sustainable relationships. Linking to extensive work in feminist research, scholars have constructed theories and aimed to nurture alternatives to oppressive and excluding forms of relation. This has manifested in works that have claimed room for care (Gilligan, 1982; Lynch, 2007; Noddings, 1984; Puig de la Bellacasa, 2017; Tronto, 1993, 2013), love (Gilligan, 2002; hooks, 2000; Lynch, 2007; Nussbaum, 2013), compassion (Huuki & Sunnari, 2015; Nussbaum, 2001, 2010), and belonging (Griffiths, 1988, 2005; Yuval Davis, 2011). At the crux of violence prevention and care, non-violence emerges as ethico-political imaginaries—imaginaries of relationships standing on care, belonging, and equality—animated, enacted, and maintained in multiple everyday and institutional sites.

Unsustainabilities persist, nonetheless. Violence remains an everyday struggle in manifold everyday realities. Discovering ways of nurturing sustainable change—it seems—demands new modes of thinking about sustainability, about the prerequisites for sustainable change, and about how responsibilities in and for sustainable change come to matter.

2.3 Patterning the trouble(s) of sustainable change

Sustainability, while generative policy-wise and understandable to the wide public, has been criticised for its ambiguity and inability to make a dent in “business as usual” (see Goeminne, 2011; James, 2017; Selby, 2015; Vallance et al., 2011). For example, Stacy Alaimo (2012, 2016) questions whether sustainability is a workable idea at all, considering its techno-rational packaging, anthropocentric premise, and capitalist appropriation. Indeed, as Gert Goeminne (2011) has argued, among others, sustainability has left us uninvolved spectators due to its expert-based technological foundation. This critique of a detached facts-based orientation resonates also with the previously discussed educational quest to move on from declarationist approaches. Judith Butler and Athena Athanasiou (2013; see also Revelles-Benavente & Gonzáles Ramos, 2017) have, in turn, discussed how the contemporary crisis, “predicated on a form of neoliberal crisis management,” (Revelles-Benavente & Gonzáles Ramos, 2017, p. 1, [italics added]) controls and
affects—and responsibilises (Butler & Athanasiou, 2013)—its subjects in an unsustainable manner. Therefore, between such “sustainabilisation”—to borrow from these arguments—and “eco-apocalyptic cynicism” (Kenney, 2016, p. 73), a “naïve belief in efficacy of ‘spreading awareness’ without really changing anything, and flat-out denial” (p. 73), one may argue that sustainability has not addressed the prerequisites of change. Sustainability remains spatially and temporally abstracted and detached from everyday living, managed and encountered through scientific facts, representations, norms, and prescriptions (Alaimo, 2012, 2016; Braidotti, 2006; Goeminne, 2011; Haraway, 2016; Neimanis & Walker, 2014; Van Poeck et al., 2016).

At the same time, sustainability matters. It matters, I contend, as a normative, practical, ambiguous, and conflicting meshwork of goals, obligations, and care, enacted in multiple—contented—ordinals of different kinds. It matters in the ordinary practices of design and it matters in those of education, as I discussed. It matters, I propose, in the challenges posed by non-belonging, inequality, and violence. In relation to these multiple matterings, it seems sensible to consider sustainability not as any one thing, but rather as a multitude. For me, building this work around the idea of sustainabilities—as opposed to any one sustainability—is primarily an act of dislocation and location as a simultaneous move; situating my research in manner that allows room for sustainability to unfold itself in and through multiple ordinary constellations. My interest, in this study, lies particularly in how sustainability unfolds and matters in engaged change-making practices in design, education, and the everyday, with non-violence as an object of concern and participation and reflexivity as responsible, accountable modes of engagement.

The openings from posthuman and new materialist terrains discussed in the previous subsections bring about modes of thinking about sustainability that account for the more-than-human and which unsettle the idea of agency as a solely human affair. Situating human beings in the midst of—and implicated in—the world’s becoming has challenged new modes of thought on responsibilities, care, and ethics. Consequently, Barad (2007) and Haraway (2008) decentre

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24 In Dispossessions: The Performative in the Political (2013) Butler and Athanasiou discuss “responsibilization” (p. 105) as “the appeal to personal responsibility as flight from social responsibility in the discourses of neoliberal corporate privatization: there are no social forces, no common purposes, struggles, and responsibilities, only individual risks, private concerns, and self-interests—all individually calculable and imperviously self-mastered” (p. 105).

25 One may consider feminist theorisations of the ethics and politics of care as particularly pivotal in this respect; such works have centrally challenged and reimagined care in the social spheres of life (Gilligan, 1982; Held, 2005; Noddings, 1984; Tronto, 1993, 2013) and more recently in connection to...
responsibilities from human selves, finding responsibilities enlivened in relations of response, in a world that is constantly in-becoming. Feminist scholar María Puig de la Bellacasa (2017)—prolonging a feminist ethics and politics of care—challenges us to rethink care as a “force distributed across multiplicity of agencies and materials” (p. 20), a force that works to support “our worlds as a thick mesh of relational obligation” (p. 20). These approaches to care and responsibility challenge to rethink the dyadic in relation to goals and processes in sustainability; they—these accounts—also afford an important shift in recrafting responsibilities and accountabilities in a world that is more-than-human, more-than-individual, and more-than-now, a world that desperately needs more care than can ever be afforded solely by concerns. These accounts provide generative companions for asking how, for what, and with what our responsibilities are crafted when we make commitments to sustainable futures.

In this study, and as the aim of this synopsis, my goal is to tap into how this always-relational, de centred, and distributed form of ethics and responsibility might make it possible to understand and renegotiate sustainability in the engaged practices of change-making; in practices that occur in always-provisional, social-material entanglements in and around participatory design and education and towards non-violence. I maintain, moreover, that sustainability entails a commitment to specific futures; therefore, sustainability inevitably comes face-to-face with uncertainties and contestability in relation to that which comes to matter as a concern. I explore this matter of commitment in my research particularly with and through non-violence, understood in this context as a gesture towards relationships standing on care, belonging, and equality. Violence and non-violence are included in the “social sustainability programme”; local policies address violence widely through everyday interventions, guided mostly by individual-centred accounts of violence and non-violence. However, placing a focus solely on policies, structures, and individual practices risks hiding, firstly, the more complex, technoscientific and more-than-human worlds (Despret, 2004; Martin, Myers, & Viseu, 2015; Mol, Moser, & Pols, 2010; Puig de la Bellacasa, 2011, 2017, Schrader, 2010, 2015). Acknowledging this continued—if also contested—work on care, my approach to care unfolds in particular as influenced by accounts of care from the latter, to a greater extent in line with the decentred and distributed agency of posthuman and new materialist thinking.

26 Discussing the shift from “matters of fact” to “matter of concern” in Science and Technology Studies, (STS) as proposed by Bruno Latour (2004b, 2008), Puig de la Bellacasa (2011) proposes to add “care to our concerns” (p. 89). This argument rests centrally on a politics of care in which care, as Puig de la Bellacasa writes, signifies “an affective state, a material vital doing, and an ethico-political obligation” (p. 90).
dynamic ways in which non-violence comes to matter, *secondly*, how non-violence is maintained over minute practices in the mundane; and *thirdly*, how non-violence could be sustained.

Therefore, employing these “social concerns” of sustainability—as they may be pooled—as a touchpoint, prompted by posthuman and new materialist proposals for sustainability and working with my encounters in the engaged practices in change-making and change-making towards non-violence, I aim in this synopsis to explore how sustainability matters. I depart from the discussions on posthuman ethics and sustainability taking place in environmental humanities and feminist technosciences (e.g., Alaimo, 2016; Gabrys & Yusoff, 2012; Hird, 2016; Neimanis & Walker, 2014; Puig de la Bellacasa, 2015). Instead, my interest is in allowing these different ways of encountering a world beyond the human world to generate new insight into how non-violence as a matter of sustainability is nurtured and maintained—and into how we construct and maintain sustainable relationships *in and through* our socio-materi ally entangled, engaged design, pedagogical, and other everyday practices.

Designing, teaching, and learning are now more explicitly than ever about thinking and enacting towards liveable futures. This raises the challenge of discovering theoretical and conceptual companions capable of navigating the trouble of being responsible and taking responsibility for specific futures without disclosing the potentiality of the indeterminate and the uncertain, and in a manner that accounts for the complex dynamics and topographic planes—inherently uneven, spiky, and interfering (see Åsberg et al., 2015, p. 150)—from where responsibilities and sustainable change are enacted. If we consider there is a need to commit to specific futures, how should we, I ponder, engage with the emergent in our always-provisional participatory practices, which design and education always are and how should we understand the goals and responsibilities therein, so as to enact those commitments in our “multiple ordinaries of different kinds,” in a sustainable manner?
3 Researcherly choreographies

Before diving into the theoretical and methodological patterns of this dissertation, I will describe how my research came to be, its empirical context, and becoming. I will accompany this with a narrative describing how the four articles included in this dissertation have contributed to these aims. In closing, I will explicate my disciplinary choreographies.

3.1 Delineating the case and concern

When I began to write about the becoming of my research, I stumbled upon Annemarie Mol’s (2014) Marilyn Strathern-inspired elaboration on the formation of research cases as merographic:

Merographic research cannot fully map any domain (be it theoretical or empirical) because it is not into mapping domains. Instead it follows trails that never end. Thus, it is bound by practical limits, such as research time and publication outlets. But most importantly, in this kind of research cases are delineated by the concerns that drive the inquiry and that, in their turn, they help to transform. As one follows merographic trails, what counts for most is not finding an end but making a point. It is to allow a concern and a case to mutually shape and reiteratively fine-tune each other. (Mol, 2014, p. 110)

In delineating the object of research, Mol’s thinking, with Strathern’s, makes a point for a point. Mol argues for research that does not move in the world in an effort to provide overviews and conclusions, but to make a point, moving along partially connected trails, “instances that do not form or fit into larger wholes, but may rather be found along trails where links go together with gaps, and similarities hit up against differences” (Mol, 2014, p. 102). This thinking resonates with accounts that approach the research process as a nomadic, rhizomatic course of events (Braidotti 2002; see also Lykke 2010, p. 113). Braidotti (2002) writes about “moving on, passing through, creating connections where things were previously disconnected or seemed unrelated, where there seemed to be ‘nothing to see’” (p. 173). Drawing from Barad (2007) and Haraway (1997, 2004), Natasha S. Mauthner proposes, in turn, a method of diffractive genealogies that “do not innocently go

27 Mol borrows merographic, a Melanesia figure of relatedness, from Marilyn Starthern (1992) to illustrate the possibility of trailing after concepts. Merography, as proposed by Starthern, foregrounds the idea of always being a part of something through myriad of connections.
back in time and through space searching for origins and tracing a past and a history that really happened” (2016, para. 4). I understand these discussions as informing a need to account for spacetime-entangled (Barad, 2007), non-innocent research trajectories mapped and made by following unobediently, by following what emerges as it emerges (Kontturi, 2012). What comes to matter does so in a series of events, encounters, sideway shifts, and coincidences. To follow a trail of concern suggests that research is emergent and open-ended; research is not about questions being answered, but about concerns being addressed. I argue, moreover, that such concerns may also be a case and matter of care (see Puig de la Bellacasa, 2011).

As introduced previously, one might see this research as originating in two particular projects. From 2007 onwards, I was involved in developing and teaching an international e-learning study programme on violence and violence prevention. In around 2010, as part of this researcherly pedagogical project, we—the coordinators of the programme—started to explore the affordances of our pedagogy of non-violence to nurture caring, empowered selves by analysing student writings and feedback from their participation in our study programme (see Article I). Continuing to work closely with the programme over the years—as it was developed and offered to students on a regular basis—has kept me in touch with the trouble and possibility involved in breaking the silence around violence. It has offered continued opportunities to embrace certain degree of uncertainty in the practices of engaging in teaching about violence and non-violence.

As time passes, perspectives change and new types of “thinking with companions” emerge. In my case, for instance, I began to scrutinise participation, wondering what is meant by participation and how is it enacted and configured. I was also beginning to move towards new materialist and posthuman theories of relationality and becoming. Therefore, when a possibility presented itself to revisit our pedagogical, scholarly efforts, in order to gain insight into the possibilities of nurturing non-violence, it seemed impossible not to venture beyond the confines of the study programme in question. In order to situate non-violence within a more complex web of engagements, we returned to one of our study programme participants, “Lena.” Listening to and learning from her stories, we came to reconsider how to approach the quest of nurturing non-violence, beyond individual or collective responsibilities. Engaging with Lena’s stories of struggle with violence and with her efforts towards violence prevention and non-violence in her life, afforded us a reading of non-violence in its “lively becoming” and of entangled responsibilities for sustainable non-violence (see Article IV). For clarity, I will refer to these wanderings and trails as taking place in a pedagogical terrain.
The other project with which I was involved was conducted in 2010 and 2011 as part of Openrisk, a larger collaboration on the professional uses of social media among communities for workplace safety and well-being (Heikkilä et al., 2012). I became involved in the project in question as a designer-researcher (see Article III on the use of this term) in one of the project’s four pilots and—more concretely—in designing a new mode of collaboration with a group of union professionals and practitioners working against workplace harassment and bullying. This interdisciplinary collaboration, in its manifold manifestations—with the researchers from the other pilots, union professionals and practitioners, and a senior researcher involved with the pilot—incited in me a humble curiosity. As I negotiated my undeniable uncertainty in navigating these interdisciplinary “participatory assemblies” (see Article III, p. 21), I discovered a generative company in the senior researcher on the project—who later became one of my two supervisors—with whom an interdisciplinary reflexive dialogue emerged, as we articulated our discussions at the time, through hours-long sessions of talking and mulling through the process at hand. By opening ourselves to the complex dynamics of designing, participating, and making inquiries, a new thinking of reflexive engagement (see Article II) emerged, allowing us to address how the to-be-co-designed collaboration in work against workplace harassment was and could or should be layered with responsible, accountable research and design practices. Later, we began to dwell in a more in-depth manner on the nuances of reflexivity as enacted in design and research practice, focusing in particular on enriching our understanding of participation—and participatory practices—as dynamic and relational, even making a tentative shift beyond the examinations of human participants only (see Article III). I will refer to this set of trails and wanderings as the designerly terrain.

The two terrains, the pedagogical and designerly, were distinct initially from one another and, perhaps, from one viewpoint, might continue to be viewed as distinct. Indeed, the articles in this study present very particular cases of change-making targeting particular disciplinary communities. Yet I argue in this research that the complex, dynamic ways in which the pedagogical and designerly terrains were and are woven together afford unique opportunities for inquiry. This synopsis builds, therefore, upon the study conducted and reported in the articles mentioned;

28 Two of the publications—Articles I and IV—target audiences familiar with feminist research, while the others—Articles II and III—are published in forums dedicated to the information systems design and, in the case of Article III, Participatory Design specifically.
but, equally, this study builds on my engaged presence as researcher, on my wanderings and wondering, which make and mark trails and connect gaps. The concern of this research has become delineated through this dynamic.

As the pull between the two terrains intensified, sustainability became a notion traversing my study as an idea that tapped into the ideas of care and hope traversing both terrains, hope for relationships that rest on belonging and justice and care for the quality of our engagements. However, as I sought to find manners of discussing those challenges as matters of sustainability, not many articulations seemed available that would have suited an examination of the sustainability with which I aimed to grapple. They did not fully resonate with the change-making practices that I encountered in my engagements with participation and towards non-violence. Initially, social sustainability in particular seemed to afford a meaningful way to negotiate participation and non-violence in the otherwise environmentalist field of sustainability; it—social sustainability—operated as an entry point into sustainability as a substantive and procedural matter. At the same time, sustainability “stuck” to my cases or terrains in a rather dyadic manner. Considering the two projects, the goal of non-violence was articulated clearly in the e-learning project, whereas the focus of the participatory design project was more closely on the design process itself. I came inadvertently to maintain the distinction between goals and process, while valuing and problematizing them both in their own right. However, in conducting this research and particularly in weaving it together in this synopsis, this dichotomy has become replaced with a more complex approach that seeks intentionally to show sustainability as emerging through intricately entangled, dynamic constellations in the social-material, always-relational everyday life. The assemblage of these two particular empirical settings or terrains brought about distinct accounts of how sustainability is enacted, nurtured, and maintained in the practices of change-making, such as I consider design and education to inherently be.

That the roots of this research are in ordinary, practical engagement with participation, with non-violence, and with responsible, accountable modes of engagement has enabled unique possibilities to “slow down” in scrutinising sustainability and in thinking about sustainability “otherwise.” Most importantly, this has enabled me to wander and wonder with sustainability in places and spaces I may have ignored, had I gone out in search for sustainability with intent. Sustainability, I argue, matters in the mundane engaged practices of change-making. Exploring how sustainability matters and what one may learn from those matterings, has come to figure as the overall tasks of this research.
3.2 Research questions

As I elaborated in Chapter 2, a search for new modes of address in the face of ecological and socio-economic unsustainability and vulnerabilities has proliferated in public and scientific debates. Concurrently, a shift towards ontological thinking, affects, and becoming has, for its part, reanimated considerations of ethics in new forms. From such efforts also emerge feminist (new) materialist accounts of ethical encounter and relationality that have come to offer alternative visions and practices to rationales of human-centric and individual-centric sustainability. In this synopsis, in order to begin to consider how existing and emerging understandings of the ethical always-relational encounter might help one rethink sustainable change, I will explore engaged practices of change-making and of making change towards non-violence in particular. Drawing from and expanding on the four articles, the research questions as presented here are formulated through reiterations and do not follow a chronological order; rather, they are a stack of skips, jumps, and re-turns, settled as follows.

My first task is to explore how sustainability comes to matter in the engaged practices of change-making. Thinking with the empirical terrains mentioned, I approach this task seeking to answer three questions. Firstly, I focus, in particular, on responsible participatory practices and ask, “In what ways does participation matter and what matters in participation?” Articles I and III have explored this question explicitly. Secondly, I examine non-violence as an object of concern in sustainability, and ask, “How does non-violence come to matter, how is it nurtured, and how is it sustained?” Focusing on non-violence as a question of relationships that rest on care, belonging, and equality, I gain materials to explore this question from the analyses and discussions in Articles I, III and IV. Thirdly, in relation to sustainability in the practices of change-making, I ask, “In what ways do responsibilities come to be enacted within the unfolding dynamics of change-making?” For this, I re-engage with the captures from Articles II, III and IV.

These three questions help me unfold sustainability in-becoming, reconfiguring the final task, and leading to an overall question, “What kinds of understandings do these entanglements and engagements with non-violence, participation, and sustainability animated in the practices of change-making afford for responsibilities in and for sustainable change?”

Chapter 6 presents the contributions of the articles to answering these questions. In Chapter 7, I re-engage with those contributions from the perspective of each research question, generating a diffractive reading between the articulations
proposed in the respective articles and the theoretical thinking presented in this synopsis. My aim is to weave sustainability in-becoming—unfolding through participation and non-violence and through responsible, accountable modes of engagement—with the feminist (new) materialist reconfigurations of ethics and responsibility, as discussed by Karen Barad and Donna Haraway so as to generate new modes of thought about and for the practices of sustainable change.

Through reiterative cycles of engaging with the stories that constitute this research, I come to consider the co-constitutive formation of the with what or whom, how, and for what of sustainable change. By doing so, I offer insight into the following very practical conundrum: for what and how are we to care in these quests with utterly indeterminate sustainability, in our always-provisional ordinaries of different kinds? Although iterating the word we, I am not suggesting there is a unitary “we,” nor do I want to gesture to an individual responsibilisation (Butler & Athanasiou, 2013); rather to response-ability, a theoretical-conceptual companion I will discuss in Chapter 4. By the idea of response-ability, I want to extend our commitments from connections to an externalised object to which we should object or adhere—I think most would agree—or objects we attempt to keep at an arm’s length. Instead, I want to shift towards considering such connections and commitments as entangled, already-ethical encounters and engagements everywhere, beyond that which is easily sensible to us. I want to bring about a manner of thinking about responsibilities, about the conditions of possibilities, and about the prerequisites for sustainability in the mundane, which is to consider how we are all entangled in a process of breathing life into “ever new possibilities of living justly” (Barad, 2007, p. x).

### 3.3 In(ter)disciplinary negotiations

While conducting this research over the years, I have employed the idea of interdisciplinarity as a manner of positioning my research in alignment with gender studies, feminist research, cultural anthropology, educational sciences, and participatory design. An awareness of moving in and between disciplines has been painful at times and, at others, has afforded me critical creativity. In the latter sense, of critical creativity, interdisciplinarity has become an interdisciplinary reflexive dialogue—as articulated in Articles II and III—that aims to help one re-examine one’s manner of thinking through and working with different and even opposing vantage points (Romm, 1998; Stober, 2010). In relying on “the promise of interdisciplinary scholarship ... that the failure to return text to their histories will
do something” (Ahmed, 2006, p. 22) and on the belief that the frictions and fractions will incite something new in the excitement and possibilities of conversations and translations (Irni, 2010), interdisciplinarity has seemed an articulation to which I could relate. On the other hand, by seeming to place focus on differences, on different vantage points and unshared histories, interdisciplinarity also risks hiding threads woven in different disciplines; it risks concealing histories, discussions, and stories shared among those disciplines—the companionships.

Over the course of my research, while navigating differences and comraderies, I have come to use the notion of thinking-with amplified with care. With the use of this notion, I make connection in particular to the work of María Puig de la Bellacasa (2012), and her “thinking with” Donna Haraway (1991, 1997). 29 I regard “thinking-with amplified with care” as a guiding principle that allows for the crafting of connections and commitments with expected and unexpected partners, as a form of tentacular analysis and thinking (Haraway, 2016). This thinking-with as a “style of connected thinking” (Puig de la Bellacasa, 2012, p. 202) ties knots-of-relation between disciplines, texts and theories, conceptualisations, and conversations as a form of care-full30 knowing. In my study, accompanied by feminist understandings of the multiple ways of knowing in and beyond the academia (Hesse-Biber, 2012), this thinking with care (Puig de la Bellacasa, 2012) suggests connections and commitments beyond scholarly thinking, with manifold companions and participants (see Chapters 4 and 5). It has meant following and then, with the right companion, trailing off and moving along a less trodden path31

29 This is a slightly different thinking with than the thinking with theory (Jackson & Mazzei, 2012, 2017) proliferating in post-qualitative discussions in social and cultural studies which gestures the suppleness, co-constitutiveness and in-between-ness in the relations of theory and practice, analysis, and data. In Puig de la Bellacasa’s (2012) work the concept and practice of thinking with is developed with the work of Haraway (1997), and with the notions of care and care-full relations required in the processes and practices of knowledge production, as accountability for the ways knowing and being are inseparable. Related work by Haraway and Barad is elaborated upon further in part II of this synopsis, particularly in Chapter 4.

30 I opt to intentionally use care-full as a way of embellishing care as an ethical, affective, and political form of attention. It is not merely to be attentive, but an engaged and affective practice.

31 I must add that I also find inspiration in Sara Ahmed’s (2017) notion of companion text which, as she elaborates, “could be thought of as a companion species, to borrow Donna Haraway’s (2003) suggestive formulation. A companion text is a text whose company enabled you to proceed on a path less trodden. Such texts might spark a moment of revelation in the midst of overwhelming proximity they might share a feeling or give you resources to make sense of something that had been beyond your grasp; companion texts can prompt you to hesitate or to question the direction in which you are going, or they might give you a sense that in going the way you are going, you are not alone” (p. 16).
while remaining accountable and care-full in that practice of wandering; in other words, interdisciplinary negotiations enacted with care.

Nevertheless, if we follow Sara Ahmed’s (2006, p. 22; 2017, p. 2) suggestion to view disciplines as homes, places of dwelling, places exist in which I dwell more than I do in others. Firstly, I find my footing in gender studies and feminist research. Residing in the field of gender studies has provided me with a substantive, epistemological, methodological, and ethical companion. It has brought me into close alignment with non-violence and gender-related violence as a feminist, practical, political, and theoretical concerns and to thinking rooted in located, accountable practices of knowledge production (Doucet & Mauthner, 2006; Haraway, 1997; Hesse-Biber & Piatelli, 2012; Lykke, 2010; Suchman, 2002).

Feminist research does not, however, allude to any island-like territory from which I would make provisional visits to other terrains. Rather, feminist theory and thinking traverses and travels across, through, and within the “disciplined disciplines” that form my disciplinary cartography. Moreover, feminist theory and thinking, in accordance with Lykke (2010, 2011), potentially “shakes and even removes the disciplinary structures” (Korvajärvi & Vuori, 2016, p. 138). Therefore, issues central to feminist research traditions, relating to multivocality, polyvocality, social change, transformation, and empowerment (Hesse-Biber, 2012) are such “projects” that traverse and resonate equally—for example—in the field of Scandinavian Participatory Design, a field my research aims to speak with and to.

In the context of this research, Participatory Design refers to a Scandinavian tradition in information system design. Participatory Design’s political, ethical, practical, and technological design aims have always aligned closely with feminist traditions and understandings of situated knowledge and with emancipatory goals and political affinities shared with feminist research (Finken, 2003; Kensing & Greenbaum, 2013; Robertson & Simonsen, 2013; Suchman, 2002). While Participatory Design as a field has become central to this study through my empirical work with the social media and workplace bullying related project, it has provided interesting reconfigurations for the topics of this research beyond the merely empirical by offering, among others, accounts of socio-material embeddedness of practice and design (Bratteteig & Verne, 2012; Suchman, 2002), and by opening important windows onto emerging discussions on designerly engagement with future-making (Kjærsgaard et al., 2016; Kjærsgaard & Boer, 2014; Otto & Smith, 2013; Smith, 2014) and on interventions for social change (Ehn et al., 2014; Mazé, 2016). In addition, interestingly, it is thanks to Participatory
Design that I began to rethink my cultural anthropological roots\textsuperscript{32} and gained entry into the feminist technosciences.

My interdisciplinary choreographies take place in and between these—of-themselves—interdisciplinary disciplines. I have wandered nomadically in what seemed, at first, to be distant disciplinary traditions, but which transpired, in their own time, to constitute their own kinds of dwellings for me, probably because there was something shared there too. As such, this research involves engagements with disciplines but also engagement with echoes and resonances that run across the disciplines inviting one to wander in new directions. Through those wanderings, disciplines matter but become blurred as well. If interdisciplinary is about moving in and between, then transdisciplinary research would be about moving beyond and pushing boundaries (e.g., Irni, 2013b; Korvajärvi & Vuori, 2016). Ultimately, I maintain that being bound within disciplines and unsettling their boundaries as a simultaneous project is all the more important when we—the academic community—want to address common concerns such as sustainability or social justice. Perhaps we might regard this as a need to be and become in(ter)disciplined, so as “to know, respond, and care for a diverse range of liveable and desirable lives” (Reardon, 2013, p. 192).

\textsuperscript{32} With reference to the fact that for my Master’s degree I had cultural anthropology as my main subject.
Part II: Reading/writing/thinking/engaging

That knowledge is situated means that knowing and thinking are inconceivable without a multitude of relations that also make possible the worlds we think with. The premise to my argument can therefore be formulated as follows: relations of thinking and knowing require care.

(Puig de la Bellacasa, 2012, p. 198)
4 Theoretical and conceptual companions

Reading/writing/thinking/engaging being the middle part of this synopsis, will elaborate on the matters and materialisations of this research. I will begin by outlining my theoretical companions and by elaborating on the multiple webs of thinking I have—I hope—woven with care. I consider the theoretical framing of this study with and through Haraway’s figuration of “messy genealogies” (2010, p. 53). The idea of messy genealogies links to the idea of “thinking with care” that I introduced as a thread cutting through this work earlier when discussing my interdisciplinary alliances and alignments (see Subchapter 3.3) and gesturing towards diffractive readings that stand on affirmative engagement, commitments, and connections, rather than on critiques and closures (Barad, 2014a).

The theoretical and conceptual trails of this work are disparate, spanning over ten years and entail disciplinary choreographies and commitments of many kinds (see Subchapter 3.3). Traversing the theoretical and conceptual choices made along those trails—namely, choices related to participation, care, non-violence, and reflexivity, created in specific moments and in specific, situated researcherly engagements—is a gradual opening-up to an ethical encounter that is more-than-human and more-than-present. I aim, in the following subchapters, to discuss the premises of my ontological thinking, as well as knowing and ethicality as inherent parts of this ontology—or ethico-onto-epistemology, as discussed by Barad (2007). The theoretical work in which I will engage will focus in particular on generating conceptual companions with whom to consider what else might matter in the ethical encounters that inhabit engaged practices of sustainable change in participatory design, education, and everyday engagement for non-violence.

Positioning this study within frames of feminist (new) materialist thought, I elaborate in the first subchapters on my understanding of the world continuously in-becoming. Based on Barad’s agential realism, I discuss the idea of a crowded world reconfigured and reconfiguring through enfolded times, spaces, and matter. At this point, it is important for me, as it is to feminist scholars in these landscapes, to bring focus to matters of ethics, responsibility, and an imagination of and speculation about specific futures (Haraway, 2016; Puig de la Bellacasa, 2011, 2017; Thiele, 2014a). I develop my thinking particularly in the company of Karen Barad’s agential realist project (2007) and Donna Haraway’s (2008) “com-post” project—

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33 I use the word figurations purposefully and follow Haraway’s (1997) discussion of figurations as material-semiotic or material-discursive performative images. Examples of such figurations might be, for example, Haraway’s (1997) cyborg or Sara Ahmed’s (2010) killjoy (cf. Lindström & Ståhl, 2015).
not post-human (see Haraway, 2016, pp. 11, 32)—as two prominent feminist transdisciplinary negotiators of materiality (see Irni, 2013b), ethics, and responsibility. I open my thinking to these discussions by first focusing on the notions of touch, touching, and becoming with, and the ethics of encounter through the idea of response and response-ability. Finally, I conjugate the notion of touch as a site and practice of becoming with, including a for, which enables a drawing of attention to becoming with-for as a way of making connections to matters of concern and conditions of possibilities for engagement and care.

4.1 Grappling with a world that doesn’t hold still

In this research, I set out to explore sustainability and sustainable change, which emerged as a concern in my engagements with care, non-violence, and participation, on the basis of an ontology that, as Fox and Alldred (2016a) point out, refuses the possibility of any assemblage, or the world for that matter, being factually sustainable; all assemblages “fall apart or transmogrify into something else” (p. 47).34 A definite rethinking of sustainability is in order, I contend, and—as stated by Fox and Alldred (2016a, p. 47)—this sustainability should stand on an understanding of a need for a capacity to “become other,” not just for “us humans,” but for “us” in a much more inclusive manner.

Over the course of the articles in this dissertation, I have become gradually and increasingly troubled by the messy, contentious, and dynamic everyday encounters that challenge my sense of comfort of categorisation or certainty in efforts towards sustainable change. This trait traverses the articles in question (see Chapter 6) and has brought me in my approach to sustainable change, to an exploration of the potentialities of what might be assembled under the heading of feminist posthuman and (new) materialist thinking. Feminist posthuman and (new) materialist works originate and are entangled in a landscape of turns to ontology, materiality, and affect, gathering scholars such as Bruno Latour (2005a), Gilles Deleuze and Félix Guattari (e.g., 1989), Karen Barad (2007), Rosi Braidotti (2006, 2013), and many others within the broader frames of new materialisms.35 Importantly, posthuman and new materialist bodies of work form a non-unitary terrain. In a perhaps looser

34 Therefore the title of this chapter. These are, indeed, ontologies of a world that does not remain still.
35 On the range of new materialism and its manifold accounts, see, for example, New Materialisms: Agency, Ontology and Politics edited by Coole and Frost (2010), Sociology and the New Materialism. Theory, Research, Action edited by Fox and Alldred (2016a), or the collection of interviews New Materialism: Interviews and Cartographies edited by Dolphijn and van der Tuin (2012).
sense, and to follow Haraway, cutting across this sometimes conceptually and
genealogically disparate “post-human landscape” (Haraway, 2004, pp. 47–64; see
also Taylor et al., 2012), is a shared embrace of matter, of materiality, and
importantly—from a feminist standpoint—of the ethicality of living in a world
“that is much bigger than us (humans) and about more than our (human) concerns”
(Taylor et al., 2012, p. 49). What one may say regarding these material, ontological,
and affective shifts is that they entail a rejection of “the mind-matter and culture-
nature divides of transcendental humanist thought” (Dolphins & van der Tuin, 2012,
p. 96). They concern, moreover, a removal of the final dichotomy that even post-
moderns, in their claim to reject all dichotomies, seem to embrace, namely the
dichotomy of language and reality (Fox & Alldred, 2016a). In this removal of any
distinction between the “physical” world of things and bodies and realm of
thoughts, social structures, and cultural products (matter vs. mind); between a
‘reality’ independent of human thought and the social constructs that humans
produce to apprehend reality” (Fox & Alldred 2016a, p. 14), what remains is the
possibility of a monism, multiplicity, and indeterminacy, that “exceeds and
overwhelms the dualities it replaces” (p. 14).

For the diffractive task of this synopsis, I develop my theorisation in the
company of Karen Barad and Donna Haraway, in particular, as two prominent
feminist negotiators of ethics and responsibility in more-than-human worlds. In
Meeting the Universe Halfway (2007), Barad develops a distinct onto-
epistemological thinking based on a rejection of the primacy of language and
representation (Barad, 2003). For Barad (2003, p. 801), “[l]anguage has been
granted too much power” at the cost of reducing nature to passive surface or a
product of human performance (2003, p. 827). Therefore, through diffractive
reading of Nils Bohr’s philosophy-physics in quantum theory on the one hand, and
theories in social sciences—such as those of Michel Foucault and Judith Butler—
on the other, Barad (2003, 2007) develops an agential realist account of the world.
According to Barad, in building an alternative via agential realism,

it is once again possible to acknowledge nature, the body, and materiality in
the fullness of their becoming without resorting to the optics of transparency
or opacity, the geometries of absolute exteriority or interiority, and the
theoretization of the human as either pure cause or pure effect while at the same
time remaining resolutely accountable for the role “we” play in the intertwined
practices of knowing and becoming. It is a move of avowing our inseparability
as well as our coming to matter. (2003, p. 812)
Instead of trying to give a full account of Barad’s work, I will carve out three entries—on *intra-action*, *phenomena*, and *indeterminacy*—as they influence my thinking and are foundational for the theoretical-conceptual companions I will discuss in the coming subchapters. These ideas help me negotiate the ontological entangledness and possibilities in and through which things, issues, and, concerns—such as participation, non-violence, and care—come to matter—and to explore the ethics and politics involved in what does and does not. Later, I will rethink this understanding of ethics with the notions of touch and response-ability, contemplating those ideas more in-depth, in relation to the engaged practices of sustainable change.

Firstly, for Barad, the ongoing materialisation of the world is captured by the notion of *intra-action* (2007), which suggest a shift from an interaction of separate entities to an entanglement of never-separate entities. According to agential realism, the world is a “reiterative reconfiguring” (Barad, 2010, p. 268) in which the subject and the object come to matter through their ongoing intra-actions:

> The world is an ongoing intra-active engagement, and bodies are among the differential performances of the world’s dynamic intra-activity, in an endless reconfiguring of boundaries and properties, including those of spacetime. (Barad, 2007, p. 376)

Barad’s (2007) theorisation disrupts accustomed understandings of space, time, causality, knowing, being, and mattering, because of the foundational premise in her thinking that no entity pre-exists its relatings. Moreover, in the reconfiguring of boundaries and properties, matter and meaning are in an ongoing process of intra-action, which accounts for the perpetual threading of the material and the discursive through one another; “matter and meaning are mutually articulated,” as Barad (2003, p. 822) contends; “Neither discursive practices nor material phenomena are ontologically or epistemologically prior” (p. 822).

Understanding the world through ongoing intra-action has profound implications on the comprehension of causality, agency, time, and space. For Barad, (2007) agency—for example—is “not something someone or something has” (p. 235). Agency is, rather, a matter of intra-acting, an enactment, “‘doing’ or ‘being’ in its intra-activity” (p. 178). Time and space are also entangled in a continuous play of reconfiguring. Barad (2007, pp. 179–182) uses the notion of “spacetime mattering” to emphasise that space and time do not afford fixed coordinates. Rather, the ongoing processes of mattering and materialisation in effect reconfigure time and space. This “queering” of time and space affects how
we understand remembering, memories, histories, and futures yet-to-come (Barad, 2007, 2010, 2014a). To draw time and space into focus holds a particular interest for me: it challenges the idea of sustainability and change profoundly. Time and timely trajectories do not become irrelevant; rather, they become more relevant because they are continuously recrafted: “intra-actions reconfigure both what will be and what will be possible—they change the very possibilities for change and the nature of change” (Barad, 2007, p. 391).

The second topic I will examine is that of phenomena. Barad discusses phenomena as “dynamic topological reconfigurings/ entanglements/ relationalities/ (re)articulations of the world” (Barad, 2007, p. 141):

[P]henomena—whether lizards, electrons, or humans—exist only as a result of, and as part of, the world’s ongoing intra-activity, its dynamic and contingent differentiation into specific relationalities. “We humans” don’t make it so, not by dint of our own will, and not on our own. But through our advances, we participate in bringing forth the world in its specificity, including ourselves. (2007, p. 353)

In essence, we are part of generating phenomena in grappling with the world; phenomena is what we obtain through scientific measurements and what the world produces when it experiments with itself (Barad, 2014b). According to Barad (2007), phenomena are the products of—or rather materialise through—agential cuts performed through entangled material-discursive apparatuses,36 which we humans are part of shaping and through which we are shaped, but which we do not shape alone.

Phenomena affords a shift of focus from “things” or objects to the apparatuses that produce a phenomenon, and to the sedimenting iterative intra-activity of matter, its ongoing differentiation. For example, Myra Hird (2016) uses Barad’s proposition of phenomena to underpin her study of the becoming determinate of waste through intra-active entanglements of bacteria, landfills, scientific concepts, and measurements. Sari Irni explores “troublesome aging women” (2010, p. 22) and hormones (2013a) as phenomena. In Irni’s social-scientific interpretation, a phenomenon is “something that is perceived or conceptualized (not necessarily by humans), something that seems to, for someone and in some sense, exist” (2010, p.

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36 Apparatus, drawing from quantum physics, is an intricate assemblage of measuring units; Barad goes further in her theory, “apparatuses are specific material reconfigurings of the world that do not merely emerge in time but iteratively reconfigure spacetime matter as part of the ongoing dynamism of becoming” (2007, p. 142).
87). In a similar vein, non-violence or a sustainable future, one might argue, is reconfigured in particular material-discursive entanglements, through particular apparatuses that enact local resolutions, and which make violence and sustainability intelligible “for someone and in some sense” (see Irni, 2010, p. 87).

The third idea I will draw into focus is indeterminacy. Discussing the agential cut, Barad distinguishes clearly between the agential cut and the “Cartesian cut,” which assumes the existence of independent entities. The agential cut does not cut off and leave out, which would suggest that there is a “here-here” and a “there-there”; rather, the agential cut is a simultaneous move of entanglement-differentiating (Barad, 2012b, p. 7). In Barad’s agential realist account, mattering “is about the (contingent and temporary) becoming-determinate (and becoming-indeterminate) of matter and meaning, without fixity, without closure” (2010, p. 254 [italics in original]). To be without fixity and closure foregrounds an understanding of the radical openness in matter. Matter is never a settled, but is, rather, indeterminate—or matter is the play of in/determinacy (Barad, 2012b, p. 16).

Indeterminacy, as understood here, does not allude to uncertainty, but instead, maintains ontological inseparability; enacted cuts are cuts together-apart (Barad, 2014a) as a simultaneous move and therefore always mark constitutive exclusions or, “that which must remain indeterminate” (Barad, 2012b, p. 7). This, as Kathrin Thiele (2016) emphasises in discussing Barad’s work, becomes central for the ethicality of mattering, as indeterminacy “demands the cut and thus encompasses (always/already) the horizon of (ethico-political) ac/countability respectively which cut will have been made” (para. 9).

Indeterminacy highlights two aspects of Barad’s work therefore that have resonated throughout my thinking in writing this synopsis. Firstly, indeterminacy plays with the possibility of otherwise, not in the sense of what might have been, but in the sense of the unintelligible, insensible, inhuman inherent in mattering (Barad, 2014a). Secondly, following Thiele’s statement, indeterminacy is, I contend, an invitation to account for the radical openness of mattering and, consequently, to account for the mattering of our practices; that is, its inherent ethicality:

We are accountable for and to not only specific patterns of marks on bodies ... but also the exclusions that we participate in enacting. Therefore accountability and responsibility must be thought in terms of what matters and what is excluded from mattering. (Barad, 2007, p. 394)
4.2 Becoming with: On the ways touch matters

Barad’s agential realist account brings the world and universe into an intimate meeting: “All real living is meeting. And each meeting matters” (Barad, 2007, p. 353). This meeting could be approached with and as touch, as suggested by Barad when she, with reference to Haraway, asks, “Whom and what do we touch when we touch electrons?” (Barad, 2014b, p. 160). I take this curious question—or perhaps rather a prompted pause—as a challenge to slow down to sense the world in its becoming.

Haraway begins When Species Meet (2008) with the question, “what and whom do I touch when I touch my dog ... How is ‘becoming with’ a practice of becoming worldly?” (p. 3). Asking these questions, as Sánchez-Pardo discusses, is a call for a new mode of address of “rigorous and insatiable curiosity” (2017, p. 74). With Haraway, touching and touch unfold as an attachment site in a crowded world of complexity, with companion species, in thick co-presences, where much more is always going on than “one could ever have imagined when first reaching out to pet one’s dog” (Haraway 2008, p. 41). By asking “what and whom do I touch,” Haraway prompts care and curiosity. She calls for an accountability towards the web of relations of which we are part, in and through which we become with. Developing her account of becoming with the work of Vinciane Despret 37 (Haraway, 2008, pp. 16–17, 2015), Haraway elicits a thinking of becoming much like the entangled intra-action in Barad’s work; not of separate entities, but of reconfiguring entities becoming with each other when they touch. 38

“Becoming with” is a nod towards knots of relatings that are ever-present in Haraway’s (2016) “string figures” 39 and “sf-mode” of thinking. The point, as Haraway elaborates, is that these touches,

this here and this now, not all the time everywhere—gloms us into sticky multispecies knots that track out and into worlds at stake, in all their durational and scalar complexity, where response and not reaction is required of all the players. (2010, pp. 54–55)

38 In effect, Haraway (2008, p. 305) notes how, by borrowing Barad’s (2007) notion of intra-action, she touches her also in ‘Jim’s dog,’ one of the first chapters in When Species Meet.
39 String figure or cat’s cradle game is a traditional game of passing on a string from one hand to another in a play of patterning found in varied forms in different cultures and times (for more on Haraway’s use of string figure as a figuration in her SF thinking, see Haraway, 2016, p. 10–14.)
Indeed, Haraway’s “touch” is not solely one of connection but of curiosity and care in a world in which not being affected is a poor outcome. As Haraway contends, “we become with each other or not at all” (2016, p. 4). Of importance is not the crowd, but the matter of mundane, everyday encounters and of responsibilities in those encounters:

My premise is that touch ramifies and shapes accountability. ... Touch does not make one small; it peppers its partners with attachment sites for world making. (Haraway, 2008, p. 36)

Touch is for Haraway, therefore, an attachment site for accountability, a meeting that re-does what it touches (Haraway 2008, p. 41), as “once ‘we’ have met, we can never be ‘the same’ again. … That is how responsibilities grow” (Haraway, 2008, p. 287).40

Similar to Haraway’s “becoming with” which opens itself through touch to responsibilities, Barad, reformulating Haraway’s care-full question discussed above, emphasises the intensities of touch further. Barad aligns touch with an agential realist account of decentred agency, maintaining that

in decentering and deconstructing the “us” in the very act of touching (touching as intra-action), we might put the question this way: When electrons meet each other “halfway,” when they intra-act with one another, when they touch one another, whom or what do they touch? (Barad 2014b, p. 160)

Barad (2014b) begins her exploration of touch in “On Touching – The Inhuman That Therefore I Am (v1.1)”41 by asking, “When two hands touch, how close are they?” (Barad, 2014b, p. 153). This is—according to my reading of Barad’s work—in order to tease out and swerve off from the classical physical premise of repulsion at the heart of touch, shifting to touch in a quantum mode, to exploring touch in its “physicality, its virtuality, its affectivity, its e-motion-ality” (Barad, 2014b, p. 155). Aligning with her agential realism, Barad decentres us, unravelling touch and touching as what matter is and what it does (2014b, p. 161). In effect, according to Barad’s diffracted quantum-philosophy, touch hums and bristles with infinite

40 One can find an example of how Haraway herself employs this capacity of touch to “re-do” what it touches in her tentacular storytelling, in which she traces tangles and threads (e.g., Haraway, 2012, 2016) and by so doing sensitises us, bringing us into touch with a messy world, prompting us to respond and to recraft a response through “fables of attention” (Kenney, 2013, 2016).

41 The article was first published in Differences in 2012, but that was later revised and re-published in the edited book entitled Politics of Materiality (Witzgall & Stakemeier, 2014). I will make my references to the revised version published in 2014.
possibility: “So much happens in a touch: an infinity of others—other beings, other spaces, other times—are aroused” (2014b, p. 153). Therefore, we might consider that indeterminacy—as explored in the previous subchapter—inhabits touch. In effect, via quantum thinking, Barad (2014b, 2015) proposes that touch is self-touching, an encounter with the infinite alterity of the self. Here, recalling indeterminacy in Barad’s ethico-onto-epistemology, the ideas of touch and touching work to make visible how matter experiments with itself, with its entangled impossibilities, possibilities, determinacies, and indeterminacies.

Reading touch in terms offered by Barad and Haraway, through their own pasts, presents, and futures in relation to touch, touch unfolds inseparably as an enactment and event of touching, an encounter, a site, a knot—a touch—and an affect and effect of being touched and moved (Barad, 2014b; Haraway, 2008; see also Hayward, 2010; Jaeckel, 2014). In this mixture, touch is ontological, epistemological, and ethical. Touching becomes a creative, generative potentiality of becoming(-with) but works also as a cut—a touch—a matter of the finity in the infinity of possibilities, in matter’s radical openness. In this mix, indeterminacy is much more than a hopeful promise or speculation of what might have been, but material forces of creativity and generativity—and responsibility “to feel, to care, to respond” (Barad, 2014b, p. 162). Touching, in a sense, weaves fast feeling, sensing, seeing, knowing, being, and becoming. In such touches response is always at play:

[M]atter is condensations of response-ability. Touching is a matter of response. Each of “us” is constituted in response-ability. Each of “us” is constituted as responsible for the other, as being in touch with the other. (Barad, 2014b, p. 161)

Before continuing to discuss response-ability, I want to elicit, firstly, how touch and touching have the capacity to bring into focus how “with” matters in terms of entangledness and becoming, as intra-action within the thick co-presences in an

42 There exist, I contend, beautiful threads to follow and weave from Haraway’s and Barad’s treatments of touch. Touch lingers in Barad’s and Haraway’s works and entangles with other thoughts in a spacetime-entangled manner. In Haraway’s work, for example, I encounter a tentacular touch drawn from Eva Hayward (2004), who, in prolonging Barad’s introduction of “brittlestar,” provokes sensorial ontology (Barad, 2007, pp. 369–384). Hayward (2010), thinking-with cup corals, discusses “fingereyes” stating how “Cup corals seem full of touch, of sensing, or rather of being literally tact, touch; their tentacular sense—their fingereyes—respond to surface effects, caressing” (p. 577). In Barad’s work, in turn, we meet the quantum physical touch and virtual particles; Jacques Derrida and Jean-Luc Nancy (e.g., Derrida, 2005) morph through Barad’s work into the idea of quantum touch of infinite possibility.
encounter. One might view touch as an encounter, as a meeting. At the same time, touch exceeds encounter in that it is not solely matter meeting matter; it is also the sense of matter meeting matter, the touch of the between. In touch and touching, matter is affected; matter affects and effects and our accountabilities are affected in the process. Touch and touching function, in other words, as generative figurations for eluding the fascination with mere complexity and crowd, for slowing to attend to intensity, intimacy, and infinity in touch, noting what that touch might invite, welcome, and oblige. Queering touch with Barad’s quantum thinking prompts me, therefore, to wonder what and whom else does touch bring us in touch with; what might touch hide in its contours; how do we sense beyond the sensible and how could we make touch, understood as an already-ethical relation, hold beyond encounter (see Barad, 2014b; Yusoff, 2013)?

4.3 Response(-ability)

Barad’s (2007) material-discursive entanglements and Haraway’s (2008) material-semiotic string figures unfurl touch and touching in their multiple reconfigurings, in which interleaved scales of time and space operate in an ongoing reiteration. Matter flows, fluxes, creates fixtures, and finds lines of flights, with starting points that are never pure or innocent and end-points that are always open. To become-with stands for crowded compost piles, “imploded entities, dense material semiotic ‘things’—articulated string figures of ontologically heterogeneous, historically situated, materially rich, virally proliferating relatings of particular sorts” (Haraway, 2012, p. 301). To become-with stands also— or rather, particularly—for “staying with the trouble” (Haraway, 2008, 2012, 2016) in particular, situated crowds, “not all the time everywhere, but here, there, and in between, with consequences” (Haraway, 2012, p. 301).

The above idea of consequences is of particular importance here, not in the sense of causality, but of implicatedness and ontological ethicality. Haraway (e.g., 2008; 2012) and Barad (e.g., 2007; 2014b) approach this ontological ethicality and implicatedness as response-ability. Response-ability disrupts and diffracts the humanistic, anthropocentric responsibility based on the rational individual self. Response-ability situates ethics in the mundane as accountability, as a matter of caring for and being affected (Haraway, 2008, p. 36). At the heart of this understanding of responsibility is the ontological ability of all manner of matter of response. In Barad’s thinking (2007, pp. 369–396), responsibility is an inheritance—not a choice, but an incarnate relation, preceding intentionality. As an
“inherent relation” preceding intentionality, *ethics is queered in its tenor and temporality* from an ethical “add-on,” from a sense of obligation to being responsible for the other, from seeking alignments with universal principles (Barad, 2007; 2012a; Haraway, 2008; 2012) or from “taking charge and giving reason” (Meissner, 2016, para. 3). Instead, responsibilities are “always already integral to the world’s ongoing intra-active becoming and not-becoming” (Barad, 2014a, p. 183). Barad views ethics, not as demanding a correct response to a “radically exterior/ized other,” (2007, p. 393) but as concerning a responsibility and accountability “for the lively relationalities of becoming of which we are a part” (2007, p. 393). These ethics of encounter, mattering and entanglement (Barad, 2007, 2010, p. 266) unsettle a taken-for-granted premise that ethics are a solely human concern and the result of our conscious choice. Instead, for Barad (2007) we are already responsible “through the various ontological entanglements that materiality entails” (p. 393). Consequently, this responsibility, while decentred from “human,” is not detached; rather, its effect is for our (human) responsibilities and accountabilities to become more pronounced, calling attention to existing power asymmetries (Barad, 2007, p. 219). The move is understandable within a context of agential realism: our accountabilities and responsibilities are intensified, not because we are human, but because of the material-discursive sedimented historicity, through which “we” has become intelligible in the first place (Meissner, 2016). To think with Haraway, “we are all responsible, but not in the same way” (2012, p. 313).

In reading Barad and Haraway, I am invited to re-engage with ethics—which is, perhaps, more profound task than just rethinking—in terms not of response-ability for the other, but of response-ability with (see Thiele, 2014a, p. 213). In this “with”—adding yet another layer to the thick meanings and roles of the term in this study (see Subchapter 4.2)—responsibility becomes inherently entangled, not as a question of delivering the correct answers or responses, or even about asking the right questions, but of “inviting, welcoming, and enabling the response of the Other” (Barad, 2012a, p. 81). Importantly, response-ability concerns not only a response, but the *condition of possibility of* and *for* a response; in other words, how we—the term “we” understood here as always already troubled—“render each other capable of worlding and reworlding for flourishing” (Haraway, 2016, p. 96).

The response at the heart of response-ability is, therefore, an invitation and an ethical call to meet “each moment, being alive to the possibilities of becoming” (Barad, 2007, p. 396), conditioned by entanglements of spacetimemattering (Barad, 2012a, p. 81). Being conditioned by the entanglements of spacetimemattering
entails a continuous re-crafting of accountability for the conditions of possibilities of response-ability (Barad, 2007; Haraway, 2012; Hinton & van der Tuin, 2014). In this important feminist premise, response-abilities and becomings are not enacted from flat surfaces; rather, they are diffracted from within spiky, uneven, interfering surfaces (Barad, 2007; Haraway, 1997, 2008; Hinton & van der Tuin, 2014; Meissner, 2016; Thiele, 2014a, 2014b; Åsberg et al., 2015). To be and become response-able—as an inheritance and an injunction—is to sense, feel, listen; to enable and to welcome response. Through the conditions of possibilities of response, we become tied in an entangled web of care—and commitment.

4.4 Tying knots: Becoming with-for

I have built, in the previous subchapters, my theoretical thinking with Barad’s ethico-onto-epistemology, which maintains that matters of ethics are at the marrow of the world in its ongoing becoming and not-becoming. By way of embracing this ethical inheritance and injunction, I engaged with Haraway and Barad in reading of layers into a “thick with” of intra-acting and never separate selves and others. According to that reading, “with” involves rich material-discursive entanglements of multiple pasts, presents, and yet-to-comes; it is always-towards in a worldly, situated webs of relating and reconfiguring. Moreover, when considering touch and response-ability, I came to understand the idea of an ethical, always-relational encounter as open to the possibilities of becoming; response-abilities with are woven into the intensities of touch. However, I propose that one must pause at this point to wonder if more may not be said to value what is really at stake in claiming to “meet each moment,” alive to the possibilities of becoming. Such question iterates upon the question posed by Kathrin Thiele (2016), who, discussing the “opening up” of becoming in new materialist ontologies, asks,

how, in a purely differential world from which there is no escape, do ‘we’, to say it with Donna Haraway, respond-ably work for some worlds and not others ... Is there not something more to be said? (para. 6 [italics in original])

I read this question as a feminist ethico-political move to “stay with the trouble” (Haraway, 2008, 2010, 2012, 2016) in terms of what it means to response-ably engage in a world of multiplicity and dynamics; to engage with the thick “with” and its ongoing reconfiguring. In this mode of dynamic multiplicity, becoming different becomes a matter of differences that matter and agential conditions of possibility (Barad, 2007, p. 230; see also Dolphijn & van der Tuin, 2012, p. 52).
Kathrin Thiele (2014a, 2016) states that this takes the ethical challenge of becoming beyond the quest of “‘opening’ towards alternative subjective capacities” (2016, para. 9) to ethics “directed at envisioning specific futures” (Thiele, 2016, para. 9 [italics in original]). Indeed, Barad reminds us about the challenge and possibility of “making a better world, a livable world, a world based on values of co-flourishing and mutuality” (Barad, 2011, p. 450), about “an ethics committed to the rupture of indifference” (Barad, 2014b, p. 161). This means the worlds we should enact are specific worlds; involving specific forms of relating and not others. More profoundly, such worlds entail relatings of becoming-with.

In the current times, the call for a “rupture of indifference” (Barad, 2014b, p. 161) is as important as ever. The “ethico-political” quest of feminist thinking calls for a reconsideration of responsibilities in a manner that can generate differences that matter. Reading Barad and Haraway, I am invited therefore on an affirmative quest, into an engagement with ethical encounter and relationality in the mundane, nitty-gritty practices that matter. By engaging with Barad and Haraway, I situate ethics and responsibilities on a topographic plane of indeterminate possibilities and therefore also impossibilities. Connecting and committing to feminist think-practice (Thiele, 2014a), this study incorporates the idea that makings of differences involves ethico-political engagements with and for differences that matter. For sustainable change, a weaving together of touch and response-ability would entail not only an envisioning of and taking responsibility for specific futures; it would account for how response-abilities with and for come to matter through an ongoing, iterative reconfiguring of the world.

43 The idea of think-practice is inspired by Kathrin Thiele’s use of the term to emphasise thinking as an active force in the world (2014a).
5 Empirical engagements

The writing here is committed to speculations, experiments, recognitions, engagements, and curiosity, not to demystification and uncovered truths that snap into place to support a well-known picture of the world. I ask the reader to read actively—to follow along, read into, imagine, digress, establish independent trajectories and connections, disagree. (Stewart, 2008, p. 565)

Cutting across this study, to think with Kathleen Stewart (2008), is a commitment to speculations, experiments, engagements, and curiosity. By this note, I gesture in the direction of non-representational thinking and post-qualitative research and inquiry,44 which has begun—in turns towards ontology and affects—to challenge the normative practices and methods of qualitative research (Anderson & Harrison, 2010; Coole & Frost, 2010; Denzin & Lincoln, 2017; Jansen, 2016; Koro-Ljungberg & MacLure, 2013; Lather & St. Pierre, 2013; St. Pierre, 2013, 2014).

At the re-membered beginning of this work, perhaps 2007, 2008, or even earlier, discussion about post-qualitative inquiry was not yet as proliferate as now, in 2018. A shift to ontology and materiality was still teasing itself out as “unease” with projects of deconstruction and critique (e.g., St. Pierre, 2014), but was not yet as readily available as it is now. On the other hand, at that time, by venturing into the projects that subsequently became a part of this research, my commitments were not to conducting research. They were practical and messy—as practice is. However, as years passed, something—a practical, theoretical, intuitive, impalpable force—shifted the course of that work in a manner that began to reconfigure that work as this research. At the time of writing this text, post-thinking has become embedded into my lexicon and my thinking, enabling re-articulations, and possibilities towards a reconsideration of reading, writing, thinking, and engaging as spaces always “in the middle” (Koro-Ljungberg, MacLure, & Ulmer, 2017; St. Pierre, 2013)—and understanding the practices of knowing and knowledge production as much more complex and unsettling than I had perhaps been trained to think (see Honan & Bright, 2016).

The first of the following subchapters aims to explicate my understanding of methods and methodology, or methodology—an articulation I use to emphasise

44 With “post-qualitative research and inquiry,” I refer to the challenges that posthuman and new materialist ontologies of becoming, entanglements, and affects (see Chapter 4) bring to accustomed methods and practices of humanist qualitative inquiry—and to the consequent efforts to navigate the possibilities and impossibilities that have emerged as a result (Denzin & Lincoln, 2017; Lather & St. Pierre, 2013).
their close contiguity in my research—and the general approach of my work. The next Subchapters 5.2 to 5.4 elaborate on—each from a different entry point—the empirical and analytical processes leading to discussions of the ethical considerations pertinent this work.

5.1 Method/ologie/s then, now, and after

Aligning my thinking with the theoretical and conceptual companions discussed in Chapter 4, the methodological points of orientation I describe in this synopsis draw on a disparate field of feminist posthuman and new materialist onto-epistemologies, from what Nina Lykke (2010, pp. 133–134) has called feminist postconstructionist, and from what others might label non-representational (Anderson & Harrison, 2010) or nomadic approaches (Braidotti, 2011, 2013) in the humanities, social sciences, feminist research, and beyond.

The epistemological imprint in these works—or the question of the possibilities and constraints of knowledge—lies in the inseparability of knowing and being. No knowing exists from a distance; knowing is a material engagement within the world, or as Malou Juelskjær writes, paraphrasing Barad, “knowing from within various and specific intra-actions” (2013, p. 756). Knowing is a material practice and concepts are “material articulations of the world” (Barad, 2007, p. 139). The practices of knowing and theorising we enact through the “measurements” we make, through the cuts we enact by cutting-within the world, have materialising effects. To know from that onto-epistemological stance is partial, localised, and performative in nature (Barad 2003; 2007; see also Lykke, 2010, pp. 140-142). Knowing is an already-ethical practice.

When the world is always-in-becoming, when change is constant and the objects and the subjects, the knower and the known, and the beginning and the end are utterly entangled, the possibilities for scientific captures and closures—such as representations—become problematic (Barad, 2003, 2007; Denzin & Lincoln, 2017; Fox & Alldred, 2015; Jansen, 2016; MacLure, 2013b; Stewart, 2007). In effect, no awaiting world exists, as I came to assert in the previous chapters. There is only a world in a constant state of reconfiguring and being reconfigured in return (Barad, 2007). Therefore, by making a critical move from the premise or possibility of objectivity of modernist kind and the representational aspirations in knowledge production, scholars in these bodies of work tend to turn to more speculative, open-ended accounts of the world (Denzin & Lincoln, 2017; Jackson & Mazzei, 2012; MacLure, 2013a, 2013b; St. Pierre, 2013). In short, to engage with and in research
in the world as outlined, requires methods and methodologies more closely attuned to the unexpected, affective, non-categorical, and plural.

Methodologically, such approaches have become emblematic in their attempt “to not” (Jansen, 2016, p. 65) try to capture the world, to not find a truth lying ready to be uncovered. Instead, the methodological interests of such approaches have been in wonder (MacLure, 2013a, 2013c) and in slowing down to become attuned ethnographically or in terms of one’s analytical praxis and mode of thinking (Lenz Taguchi & Palmer, 2013; MacLure, 2013b; Michael, 2012; Millei & Rautio, 2017; Stengers, 2011; Stewart, 2011). Slowing down works to provide a sentiment for the potentiality in the ordinary and unexpected. It is about “the power of wonder” (Stengers, 2007, p. 11–12) as an “event of knowing things differently” (Lenz Taguchi & Palmer, 2013, p. 672).

Wonder offers a generative figure, in turn, with which to note the emergence of attention that invites us along and directs our trail. Therefore, I have come to consider my research as an entanglement of wondering and wandering. Wandering and wondering, or wandering-with-wonder, weaves together Mol’s Strathern-inspired thought on trails (2014), as mentioned previously (see Subchapter 3.1), which resonates with Haraway’s string figures (1997, 2016) and with Braidotti’s nomadic wanderings (2002). Fascinatingly, all of these figurations point to lines without linearity; to connections and complex entanglements; knots and patterning. In such lines, trails, and string figures there are no end points nor beginnings—“we always start in the middle of things” (Koro-Ljungberg et al., 2017, p. 469)—and there, in the middle, we wonder.

In writing this synopsis, rather than telling a method/ology-then by recounting what the articles in this study already described and which Chapter 6 outlines, I made a choice and commitment to slow down in my exploration of the methods and methodologies in order to embrace the possibility of a method/ology-after. In other words, I choose to embrace how method/ologies are not accomplished and applied, but continuously re-enacted and reconfigured. I seek a way for telling about my research, not from the perspective of research terrains as figured in the then-and-there, but from the viewpoint of how those terrains are reconfigured reiteratively and in-becoming as is. My method/ology-now is—in short—my arrival at a pit stop from which I aim to make intelligible the moves and move-abilities of my work.
I offer three “storyings” of the research process and “data,” each unfolding in a different partial and particular way. The first story, in Subchapter 5.2, recaps my engagements in the processes of working “in the field” while generating data and of thinking and writing the four articles in this dissertation. This recap attempts to (re)store the methods and materials of this research—(re)storing being a gesture towards the academic canons of capture. On the other hand, I want to (re)story the methodological apparatus as something infinitely unfinished, always diffracted, and open to being reconfigured. Therefore, the second (re)storying, in Subchapter 5.3, troubles the segregated structures of qualitative research by exploring the where and with what and whom of research, the non-innocence of engagements, and the non-linearity of the research process. This is particularly important in considering how I weave together the four articles in this synopsis. The third (re)storying, in Subchapter 5.4, discusses thinking-with and diffraction as a methodological lens employed in this synopsis. Through those three storying, I discuss how methods reiterate, instead of exploring and elaborating on methodology for the sake of articulating the linearity of the process. First and foremost, the following subchapters attempt to make intelligible the moves, move-abilities, wandering, and wondering through which this research has figured—and still figures.

5.2 (Re)storing the empirical

I understand this research as constituting a variety of choices leading me into and taking place in numerous researcherly and designerly encounters and engagements that occurred from 2007 onwards (see Subchapter 3.1). Consequently, those encounters accumulated as research materials, as a pile of texts, memories scribbled and not scribbled, images captured, meetings recorded, and discussion lingering on after and in-between. These encounters occurred in different participatory constellations, ranging from listening to and learning from interviews; curious readings of student writings, accumulated during a study programme; and ethnographic, reflexive attentions in the participatory design process. I will first recap in short on the research settings of and data generation for the four articles.

45 Placing the word “data” in quotation marks works to acknowledge the problematics of data as an as-such existing set of collectables that awaits discovery and analysis statically. On reconsiderations of data in post-qualitative inquiry, see, for example, Koro-Ljungberg, MacLure and Ulmer (2017), MacLure (2013c), Koro-Ljungberg and MacLure (2013), and St. Pierre (2014).
discussed and illustrated as the two empirical terrains—pedagogical and designerly—introduced earlier in this synopsis.

My wanderings in the pedagogical terrain were linked closely to the long-term pedagogical development of an e-learning study programme formulated around questions of violence and non-violence. Within this research-oriented pedagogical process, student writings accumulated as the data that came to be the focus of analysis in Article I. For our analysis, we examined the students’ study assignments and study journals and the feedback forms collected from participants during the academic years of 2006, 2007 to 2008 and 2009 to 2010. 46 Three hundred participants altogether, from fifteen mainly European countries, were included in the vast dataset providing the student writings. I was involved personally in the programme in the role of educator and therefore also had my own embodied, embedded engagement with the processes during which these research materials were generated. This supported my contribution to the article, allowing me to focus on e-learning in particular as a site and space of belonging. In constructing the premise of the article, all authors contributed to the establishing of its theoretical-methodological basis.

Article IV continues with this e-learning dataset by following up on one of the participants in the study programme, Lena. 47 In her writings during our programme, Lena had shared extensively about violence and non-violence in her life. Inspired by those stories, we expanded from viewing her as solely a participant in a study programme, and to focusing on her life more thoroughly by inviting her to interviews. Those interviews, four in total, were conducted by one of the authors in Article IV in 2011 and by her and myself in 2015. While we employed the traditional qualitative semi-structured form of interview (Brinkmann, 2017), towards the end of the process, we began to understand them more as “intraviews” than interviews (Bodén, 2016, p. 254); that is, as spaces of material-discursive intra-action rather than a platform for the research participant to recount past events or provide detached responses to topics of interest pre-defined by the researchers. While all authors contributed to the ideas and theoretical-methodological apparatus of Article IV, as the primary author I held the main responsibility for the article’s theoretical-methodological developments, analysis, and writing.

46 While the 2007–2008 implementation provided the greatest part of the data, complementing materials included writings from an earlier course implementation on the same topics in 2006, and from a consecutive implementation of the study programme up until the year 2010.

47 Lena was included also in the wider dataset.
The designerly terrain was, in turn, based on a participatory design process conducted between 2010 and 2011 as part of a larger social-media-related research project. One might frame that pilot as conducted “in the wild” (Dittrich, Eriksén, & Hansson, 2002; R. Johnson, Rogers, van der Linden, & Bianchi-Berthouze, 2012). The process in question did not rely on professional designers and was invested heavily in its being situated in the ongoing work and collaborations of the participants. The process was based on my participant interventionist (Karasti, 2010a) approach and engagement as a designer-researcher, in close collaboration with a group of practitioners engaged in preventing workplace bullying and harassment. Being “participatory in nature” meant that my focus during the process was on “doing things together.” The interventionist aim, in turn, meant that the goal was to design something viable and sustainable with, for, and by the participants (Robertson & Simonsen, 2013). The design process consisted of an ongoing collaboration with the key participants of the process and of a collaboratively planned set of six workshops with a group of invited experts or user-practitioners, as we discussed in Articles II and III (see Article III in particular for the use of this term). Twenty people altogether were involved in the group work at different stages of the process.

During the pilot, the expert group worked with harassment-related and bullying-related content, both face-to-face and online between the workshops—including at ten short online events—via a variety of social media tools, including social networking site, wiki-writing, and other collaborative writing tools. By doing so, they learnt about and collaborated on topics relevant to their work, engaging simultaneously in the design of structures for their future collaboration. Data was generated in audio and video records, ethnographic notes, co-generated contents, and analytics data from the social media platform used. In addition to the design process and collaboration with user-practitioners in the field, the process also involved what we came to call “interdisciplinary reflexive dialogue” with a senior researcher, as well as meetings and collaborations with other researchers in the larger project. The two publications generated as a result of this work were written

48 Several social media platforms allow access to user data that accumulates automatically as part of platform analytics. This might include—for example—data on user visits, page downloads, or visit lengths. It is also possible to insert analytics and tracking codes into those platforms. In our case, we used Google Analytics to track use trends during our pilot and to explore data visualisation as one of the goals of the wider project (for more information, see Heikkilä et al., 2012). As part of an ongoing participatory process and of our responsible research practices, we also shared the data and visualisations in question with the participants, generating creative encounters on occasion, as Article III makes plain.
by the two authors in collaboration, with myself as the primary author with responsibility for data generation and analysis.

5.3 (Re)storying the research process: The empirical (again)

The previous subchapter offered elaborations that provide a descriptive account of the processes and practices of this research, as relating to the two research terrains of this study—and as resulted in four articles. However, those brief elaborations fail to render visible the resonances and reiterations that reconfigure the case, concern, and nuances of the practices of this iteratively reconfiguring design and research. More wandering and wondering was and is going on than what they let on. No still-standing terrains exist; rather, living, breathing landscapes that change with me and become with me.

In order to rethink, story and re-story this becoming, I use the notion of engagement to enter my researcherly and designerly entanglements so as to capture something to which the temporality at the time—of data generation, analysis, and writing—was perhaps “yet-to-come.” In the following discussions on method/ology, engagement works to elaborate: firstly, on the constructs and contours of engaging-in the sites and spaces of research encounters; secondly, on the collaboration by way of opening up to rethinking research and researcher as engaging-with; third, on non-innocent intents and interventions as a question of engaging-for; and thirdly, on the temporalities of doing research as engagements in and over time. Together these shed light on the flux and flow of the research process, spanning the development of the e-learning study programme, in 2007 to 2008, to my thinking and writing here and now.

49 Engagement often occurs as an idea and a concept, yet it is rarely scrutinised conceptually in relation to participation and collaboration. In general, engagement as a word connotes emotional or affective relations with given or emergent matters. One can find an attempt to bring theoretical volume to engagement in the notion of engaged scholarship (Van de Ven, 2007) and in related discussions about engaged scholarship in the Information Systems (IS) community (Grisot & Aanestad, 2010; Mathiassen & Nielsen, 2008; Simonsen, 2009). Another, perhaps more interesting account unfolds from discussions around public engagement in designerly contexts and STS, where public engagement has been used as a probe to scrutinise the myriad of intimate, affective, and troublesome relations with the known and unknown that inhabit the worlds of scientific and designerly practice (see in particular Lindström & Ståhl, 2016; Michael, 2012; Popplow & Duque-H, 2017). My use of the concept of engagement here is grounded in how Articles II and III employ the it in connection to reflexivity. Regarding engagement, I wish to emphasise, in particular, the importance of affective, committed entanglements in situated—yet never contained—practices of design and research.
First, engagement draws focus to my situated research and design practices; in other words, to *engagements-in* as enacted in particular places, processes, events, and encounters, such as those in the participatory design pilot; in design events and social media platforms; in the e-learning platform with students; or in interview sessions, such as those (re)stored in the previous section. Regardless of the comfort of locatability, or the “wheres” of research practice, I maintain that this study has also emerged from the “thereabouts.” These thereabouts are sites that appear through wondering and wandering, such as through unplanned, emergent interdisciplinary reflexive sessions or through project meetings entangled in the participatory design process (see Articles II and III). Research emerges also through the “re-turns” that reconfigure a site anew, such as through the reanimations of the boundaries of the above e-learning site during my continued work with Lena (see Articles I and IV). Over the course of this research—and particularly when writing this synopsis—the sites, places, and spaces involved have become, to my mind, entangled events and encounters that invite me to weave connections and make commitments through which those events and encounters themselves are reconfigured and come to matter anew. To maintain the case and concern as reflexively constructed (Karasti, 2014a) and reiteratively in-becoming (Mol, 2014) foregrounds temporal and spatial uncontainabilities in the practices of conducting research. In this work of engaging and re-engaging with sites, spaces, and the thereabouts, the *how* and *where* of my wandering and how I am *able* to wander are constructed and constrained by the material-discursive entanglements at play—and by my wonder and attention as an analytical emergence of concern.

Spaces and places are marked by crowds of company, by *engagements-with*. In this respect, my work claims a participatory approach throughout (see also Subchapter 7.1); “*with,*” as used initially in this study, has been very much focused on and indebted to human others, myself included. A participatory and collaborative approach has meant that I have committed to listening to and learning from others, to “dirtying my hands” in a shared puddle, to attending to voices and silences gathering around a mutual goal (Phillips, Kristiansen, Vehviläinen, & Gunnarsson, 2013; Robertson & Simonsen, 2013). Moreover, engagement-*with* has meant “staying with the trouble” of what engaging in these types of participatory practice and constellation actually requires, beyond the questions of *who*, *how*, or *for how long* (see Light & Akama, 2012; Phillips et al., 2013; Vines, Clarke, Wright, McCarthy, & Olivier, 2013).

On the other hand, to remain with “*easy-with*” would work against the point I endeavoured to make in the previous chapter; it would not respect the engaged
presence and socio-material sensibilities I have described in the articles included in this dissertation. Therefore, this (re)storying introduces more breadth to the discussion, asking, “With what and whom do we participate?” Prolonging the socio-technical and socio-material sensibilities in participatory design (Bratteteig & Verne, 2012; Karasti, 2001; Robertson & Simonsen, 2013; Suchman, 2002, 2007), engaging-with allows for a consideration of the material and socio-materially constituted practices of participation; it is more-than-human. In the context of my research, these practices of participation include companions such as participant-bodies, social media technologies, pens and post-its in the participatory design process, and the socio-material everyday work carried out and made visible through “overlapping and intersecting participations” (see Article III). They also include histories, affects, multiple conceptualisation, and—for example—the blatantly mundane copies of study journals flipped through in the interviews (see Article IV).

Moreover, in the end or in the middle, in these works of multiple others, the participants whose voices I feel devoted to listening to and hearing, the theories, concepts, and words that create resonances, and the whats and whoms—the “with”—are all lines of flights that have taken me somewhere, that have affected, that have done something. Thinking with Kathleen Stewart’s proposal (2007, 2008, 2011, 2017) of “engagement based on curiosity and attachment,” the idea of engagement-with that does something prompts an extension from mere participation with companions of varied kinds. Instead, it engages with curiosity and attachment, with the pulls and pushes that the companions involved generate, turning engagement-with into an attunement in the moment to affects, 50 to the seemingly insignificant working through bodies and spaces. Engagement-with ties engagements-in into a meshwork of embedded, emplaced, and embodied knowing that avows the affective, the something (Stewart, 2008; 2011) in enacting methods that methods themselves fail to capture.

50 One may understand affect in this instance—and as I approach the idea of affect later in this work—as flows of forces that precede cognition or the individual. Affect proposes a shift from bodies, things, or issues to what those bodies, things, and issues can do, therefore drawing out matter’s ongoing state of becoming (Blackman & Venn, 2010; Hickey-Moody, 2013; Stewart, 2007). Affective methodologies—drawing most centrally from the works of Deleuze (for more in-depth discussion, see Coleman & Ringrose, 2013)—hold close affinity to the posthuman and new materialist urges “of sidestepping the dualist dead ends of modernist, humanist social science and its unfortunate affective habits of snapping at the world as if the whole point of being and thinking is just to catch it in a lie” (Stewart, 2017, p. 196). Therefore, affect studies provide methodological incentives to refrain from reduction, demystification, and totalisation (Jansen, 2016, pp. 65–66).
Research as engaging in and with sites and spaces of crowds of company, is not an innocent endeavour. The interferences, implications, intents, and interventions entailed in this research, for example, range from interventions in participatory design to interferences that occur in the processes of interview research, in the affects and effects of telling stories, as is happening here and now. Such interferences, interventions, affects, and effects generate a range of ripples, a range of interferences yet-unknown, in-becoming that make also this research. Yet amidst those ripples lies the concerns after which I tumble and trail with intent.

Research and design are always implicated by the something they work towards, guided also by the will of the researcher or designer, in engagements-for. In those practices, research enacts cuts, including the production of otherness, absences (Law, 2004), becomings, and not-becomings (Barad, 2010, p. 265). Similarly, engagements exist not everywhere, but in particular spaces and times, suggesting that some places and spaces “made the cut” while others faded into insignificance, as implied also in the claim that the “case” and “concern” mutually constitute one another through reiterations (Mol, 2014). This, I contend, is important; an acknowledgement of the invisibilities and otherness and otherings (Law, 2004) that are continuously produced. There is always the insensible otherwise or the one that could have been.

Cutting across the sites, spaces, companions, objectives, implications, and interferences is time, or rather, entanglements of tempos and temporalities. Through the years, manifold engagements and encounters occurred. To rework these engagements and encounters as a trail or a string figure (Haraway, 2013) requires an idea of time that does not prevent “coming to matter” merely because I, the researcher, must scroll back through a calendar to reach the date of this event or that event.\(^{51}\) Time forms distances such as “two months later,” or “five years later”; sequences such as “six workshops”; or timelines such as “from March 2010 to December 2011.” However, to adhere to such articulations would be to dismiss that time and times linger, that stories blend into one another, run parallel to each other. A reworking of the meaning of time or the idea of longitudinality, as discussed in qualitative inquiry, certainly invites adoption if Barad’s (2007) heterogeneous spacetime-mattering is to be taken seriously (e.g., N. S. Mauthner, 2015). In such temporalities, engagements extend, indeed, beyond those of my own experience, engaging then, engaging still.

\(^{51}\) While not labelling my research “longitudinal,” I want to embrace its temporal range and sensibilities; its will to trail, to wander among and wonder about the times of when to as great an extent as the times of where (Koro-Ljungberg et al., 2017, p. 471). I do not count the time it took to conduct this research or the longitudinality of the research from a re-membered beginning to a determinate ending, but from the and at the moment of capture, from how time matters now. A reworking of the meaning of time or the idea of longitudinality, as discussed in qualitative inquiry, certainly invites adoption if Barad’s (2007) heterogeneous spacetime-mattering is to be taken seriously (e.g., N. S. Mauthner, 2015). In such temporalities, engagements extend, indeed, beyond those of my own experience, engaging then, engaging still.
other, mix, and become entangled with other times and rhythms, including the times and rhythms of projects, research, a lifetime, abuse, a career, or a dissertation. While events and engagements occur in particular times and spaces, time denotes heterogeneous enfoldings, of which each encounter holds manifold times and is already-towards, the future firmly present. “Past” and “future” bleed into the ‘now’ ... Presence is not a matter of a thin slice of now, but rather the hauntology of inheritance, inheriting the future as well as the past” as Barad maintains (Barad, 2012a, p. 81). Because no single timeline exists, no linearity to lines, my research methodology in this research is that of a diffracted re-turning and re-membering, of re-engaging.

5.4 (Re)storying the research process (again): Weaving data and analysis

Over the course of conducting this type of (post-)qualitative, ethnographically inspired and “reflexively engaged” research, inquiry and participatory design, a considerable breadth of encounters and engagements has come to matter, materialised in data, including video files and audio clips from events; folded flipchart pages; pictures captured on a smart phone; handwritten notes drafted on a flight from a research event location and the transcriptions of those notes to a computer file the next day; interview records and notes; notes on notes; entries in a research journal, in which all continuously reconfiguring memories find one types of fixture; digital traces that create algorithmic collective subjectivities; and memories, senses, and affects that reanimate when “plugged in” (Jackson & Mazzei, 2012, 2017) to the writing as inquiry (Richardson & St. Pierre, 2008).

As will have become clear by now, my methodological approach shies away from detached objectivity or from mechanical techniques of unpacking once-packed research data. When data is a process, when data reiterates, wandering away and ahead (of time), what do you unpack? How does one detach one’s self from something that, in minute, im/palpable ways, steers your trail this way or that? John Law makes a clear, if sarcastic, case against the norms of the detached objectivity in traditional qualitative research:

Sometimes I think of it as a form of hygiene. Do your methods properly. Eat your epistemological greens. Wash your hands after mixing with the real world. Then you will lead the good research life. Your data will be clean, your findings
warrantable. The product you will produce will be pure. It will come with the guarantee of a long shelf-life. (2007, p. 595)

Purity was, however, perhaps never a possibility for data or analysis. When discussing post-qualitative inquiry, Elizabeth Adams St. Pierre and Alecia Youngblood Jackson (2014) argue that analysis “cannot be neat, tidy, and contained”, and continue by saying,

it cannot be easily explained either during or after analysis. It certainly cannot be replicated because it is emergent and experimental. In addition, its space–time cannot be secured in the traditional linear “process” trajectory of data collection>analysis>representation. (p. 717)

Analysis is, instead, there “in the middle of things” and probably happening before I knew it to be there; “without a beginning or end, without origin or destination. ... analysis occurs everywhere and all the time” (St. Pierre & Jackson, 2014, p. 717). In other words, analysis is woven into our attunements in the moment and into our encounters with the data-particles (Koro-Ljungberg & MacLure, 2013) that are being continuously reconfigured through our engagements with the world.

When writing the four articles included in this dissertation, I described my engagements with the “data” and “empirical” in varied ways. Article I discusses “qualitative data analysis on themes derived from theory.” Articles II and III describe a “qualitative analysis integrated in the research,” its “cyclical, reflexive process,” and the “reading and re-reading based on the data” taking place “in interdisciplinary dialogue ... in which experiences from the field were discussed and related to theories and assumptions.” Subsequently, Article IV refers to “thinking with theory” (Jackson & Mazzei, 2017). While discussed in different terms, my analytical approach moves towards understanding data generation and analysis as entangled and in-becoming, offering an example of how each choice, in methods or articulation in an article, is more lively than its provisional captures. This approach became reconfigured in the writing of this synopsis as a form of diffraction.

One might understand diffraction as Barad (2007, pp. 71–94) discusses the concept, as a process of interferences in which patterns of difference emerge, or as a method of diffractively reading insights through one another, building new insights, and attentively and carefully reading for differences that matter in their fine details, together with the recognition that there intrinsic to this
analysis is an ethics that is not predicated on externality but rather entanglement. (Dolphijn & van der Tuin, 2012, p. 50)

In the process of analysis, diffractions are flows and ripples\textsuperscript{52} that emerge through iterative engagements. In my work, particularly when writing this synopsis and weaving my work together, I re-engage with materials, thoughts, and traces, approaching reading through readings, writings, and memories with theoretical and conceptual companions that affect, move, and touch. Everything—data, theory, concepts—“shifts and multiplies on this uneven terrain,” as Jackson and Mazzei (2017, p. 721) write of the threshold of thinkings, thoughts, things, and issues. This allows for considering the empirical encounters as a re-emerging of data, re-animated, re-enacted, and re-engaged. Reconfiguring the methodology-now in this fashion challenges to disrupt the temporal linearity of the research process and to attune ourselves to the possibilities of “understanding-becoming” (Barad, 2014a, p. 187) in the in-betweens, in which the empirical terrains and data-particles captured are open to “being otherwise.” Beyond the mere recounting of data or results, diffraction allows me to draw attention to the ongoing motion of mattering as a form of affirmative engagement (Barad, 2014a, p. 187; see also Bozalek et al., 2016; van der Tuin, 2011).

Analysis is not performed only intentionally to the data; rather analysis is woven out of multiple threads. While “doing its work,” analysis questions the boundaries of data, wandering with and in data that has been and is in-becoming, all at the same time. Therefore, this synopsis also unfolds through reiterations by way of storying once-captured results (see Chapter 6), only to “trouble” their willingness to stick and to embrace potentialities for flow, by way of reading resonances and making diffractive re-turns (see Chapter 7) so as to create new patterns of mattering.

Before moving on, I want to make one more note on entanglements. I began this chapter with a quote from Kathleen Stewart (2008), a commitment to writing experimentally. Wondering and wandering in writing, I contend, is also an invitation to wander and wonder in reading. In effect, Stewart prompts the reader to engage, to trail-with and trail-off. In my research, the methodology of wandering and wondering I propagate operates as a fluent flow of encounters; entangled; intra-

\textsuperscript{52} Zabrodska, Linnell, Laws and Davies use the example of ripples in a pond to explain Barad’s entangled matter, stating, “For Barad, so-called individuals and other entities, like ripples on a pond, or waves in an ocean, are inseparable from and constitute each other. The ripples and waves do not exist without the body of water or the wind, or the other matter they encounter (stones, sand, rocks, human bodies, etc.)” (2011, p. 710).
acting; diffracting; embodied unapologetically in an unbound self then, now and then again.

5.5 (Re)storying with ethics: Response-able practices of research and design

Achieving responsible, accountable research praxis is a matter of ongoing work and commitment in feminist research, involving critical scrutiny of the processes of knowledge production, from the claims of objectivity to the minute dynamics of engaging with study participants and writing research papers (Edwards & Mauthner, 2012; Haraway, 2008; Hesse-Biber & Piatelli, 2012; Ramazanoglu & Holland, 2002). Ethical considerations are often articulated and addressed as a reflexive praxis that works to hold a critical eye to the power, situatedness, and positionalities embodied by the researcher (Haraway, 1997; Hesse-Biber & Piatelli, 2012; N. S. Mauthner & Doucet, 2003), to how voice and authority play out (Doucet & Mauthner, 2006; Edwards & Mauthner, 2012; Finlay, 2002; Hesse-Biber & Piatelli, 2012; Skeggs, 2002), and to how questions of consent and contestation in participation are navigated (Holland et al., 2010; Phillips et al., 2013; Renold, Holland, Ross, & Hillman, 2008).

Diverging from contentment with procedural rights or wrongs, feminist scholars have long propagated ethics as reflexive praxis (Holland et al., 2010; M. Mauthner, Birch, Jessop, & Miller, 2002; Renold et al., 2008). With the turn to new materialist and posthuman thinking, the focus has further shifted from merely doing the right thing to “staying with the trouble” (Haraway, 1992, 1997, 2016) of entangled responsibilities and accountabilities. Barad’s and Haraway’s accounts of knowledge production, as discussed previously, posit ethics as never not there. More than a question solely of ethics-here or ethics-there, at stake is ethics not as a matter of questions to be solved, but as engaging with the mattering of our practices (Barad, 2007).

Nevertheless, guidelines matter also,53 providing ways of managing, storying, and keeping visible some of the ethical conundrums of doing research. In conducting this research, the conduct for ethical research as outlined by the

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53 One must understand here that guidelines matter in multiple senses. Guidelines provide narratives for research ethics and help researchers navigate ethics as part of their work. On the other hand, guidelines are co-constitutive in what ultimately matters as research ethics: they are constitutive, in the material-discursive terrains, of what counts as consent, as a participant, as a research, and as a subject (e.g., McCormick, 2013).
National Advisory Board on Research Ethics (2009) has provided one thread for enacting research ethics. This means following the principle of informed consent obtained from all the participants in the study by verbal communication, written consent letters, or information posted on online platforms. Conforming to the practice of ensuring participant anonymity during writing and reporting, I have withheld or altered details regarding research participants. I have ensured, moreover, that access to this data is limited to the researchers directly involved with the study.

Nonetheless, beyond following ethical guidelines, I understand that one cannot solve ethical dilemmas once and for all and that ethical praxis requires engagement beyond that which is deemed problematic. Here, the idea of engagement continues to work as an entry point into an attuned sensitivity and sensibility to being and becoming involved and to feeling one’s way through the “ethically important moments” (Guillemin & Gillam, 2004, p. 265; see also Hesse-Biber & Piatelli, 2012), by way of critical problematisation of and ongoing engagement in a negotiation of ethics in the evolving dynamics of living research. In my work, reflexivity weaves research ethics into reflexive praxis, operating as a critical sensitivity and openness to discomfort (Pillow, 2003), allowing questions of problematics and trouble to surface and, importantly, prompting a change in praxis (see Articles II and III). For example, concerns of the ethics of participation were not limited to consent, but were maintained as unfinished throughout the process, as always-in-negotiation. This resonates in particular with the challenges entailed in research that is conducted as an ongoing process in multiple online and offline sites, and in which the negotiations of the whens and wheres of participation easily get fuzzy.

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54 Part of the collaboration happened via access-restricted online platforms, including the generation of data in both empirical terrains. At the end of the 2007 to 2008 study programme, student’s consent was requested via feedback form for the use of materials they had produced during the study programme. In later implementations of the programme, participants were informed by default at the beginning of the studies about the use of contents produced, giving them the possibility to deny any use of their material for research purposes. In the designerly terrain, participants were informed and reminded, as an ongoing process, of the space and extent of my researcherly inquiries. The main online platforms displayed a note about the research and provided contact information for further enquiries. Consent for the use of material was also discussed on an ongoing basis. As new participants joined the online platform, they were informed of the research interest in the process.

55 However, rather than being solely a data concern, the blurring of the borders of these fields and sites poses questions about where and when research takes place and where and when it does not. If a recorder, once turned on, intra-acts to create a site for data generation, how do research sites with no material research companions—such as equipment—come to matter to research participants? How does the where and when of research come to matter and how do we as researchers navigate the murky in-
Moreover, parts of the research address sensitive matters of violence. In the practices of this research, as the researcher, I have acknowledged that violence as a topic is a sensitive issue that can cause distress and anxiety when encountered in shared reading or learning materials, for example. Accounting for this sensitivity cuts across this study as part of a careful consideration of how the forms and cases of violence are discussed and how topics that are either intentionally introduced, or which surface unexpectedly, affect research and design encounters. Feminist scholars have long addressed the particularities of sensitive research topics, providing the grounds for the sensibility in question (Edwards & Mauthner, 2012; Guillemin & Gillam, 2004). The prerequisites of ethical research in working with violence were addressed more thoroughly in relation to the parts of the study involving Lena as a participant, as we came to engage closely with Lena on a personal level and with her severe history of intimate partner violence. In our case, Lena, the study participant in question, had worked to process these traumatic events with professionals well before our interviews. In the context of Lena’s history and the conditions of our particular engagements, we believe that a safe, secure setting was provided for Lena in which she was able, though not required, to disclose stories of times of abuse. Close attention was also paid to the anonymisation of the participant’s stories by altering and withholding details. In addition, as a precautionary measure, an ethical research statement was acquired from the Ethics Committee of the Human Sciences in the University of Oulu, in order to permit later follow-ups on Lena’s case.

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*betweens where multiple, perhaps ambiguous, possibly even conflicting “this-is-research-realities” become created?*
6 Captures

In the process of reading/writing/thinking/engaging, as I titled this second part of the study, the “captures” or results from the empirical terrains have acted on their own account: they were captured, but continue to send ripples across each other, being reconfigured with and through new companions. To respect and respond to these ripples and reverberations, this chapter offers discussion of the main results from each of the four articles included in this dissertation. I consider these results as captures, “things” taken and held in confinement, possessed; things of which I have taken control of—and I wholeheartedly take accountability for what I just wrote. It is troubling. I know.

My aim in writing of these “once-made-captures” is to offer insight into the proposals made in the respective articles. At the same time, I hope to make plain the mutual connections between those articles and as pertaining to the two research terrains, guiding you, the reader, to also sense the tension between Article I and Article IV, and the unfolding nuances in Article III that come to enrich the thinking Article II presents. I am extending an invitation to read about the articles, about their results, and about how they have affected one another. These reiterations, moves, and shifts will then serve as a point of orientation for the final part of this dissertation, in which I further diffract the results.

6.1 Article I: Constructing a pedagogy for a caring, empowered self

Article I, “A European E-learning program on gendered and sexualized violence: Developing a feminist pedagogy of non-violence,” was written as an expansion and continuation of work by the Gender Studies team and research group at the University of Oulu to develop a multidisciplinary, multisectoral e-learning study programme for education on violence, violence prevention, and gender equality. In that work, violence, violence against women, and gendered and sexualised violence—our chosen conceptualisation—were pivotal feminist political, pedagogical, and practical concerns. By sharing the story of a pedagogical development process, we aimed to contribute to discussions of tackling this persistent societal challenge and to explore the possibilities of feminist knowing in cyberspace.56

56 The article was published in an edited book focusing on the use of new media technologies in a feminist classroom (Collingwood, Quintana, & Smith, 2012). “Cyberspaces” gesture in that collection
Education is considered a central tool for tackling violence (Adelman & Coker, 2016; Hagemann-White, 2006; Testoni, 2014); nevertheless, multidisciplinary education in and around the topic has not been sufficiently available to students and professionals. This situation in Europe and Finland in the early 2000s prompted our collaboration with an extensive group of partners in an effort to construct a study programme to fill the gap. The programme, which was indebted to multiple preceding European project collaborations, was first compiled into a comprehensive minor study programme in 2007. The programme consisted of five thematic courses targeting at students in higher education and practitioners already in working life. While one might attribute the reasons for developing the study programme in and for an online setting to multiple factors, our principle goal was to facilitate international, multisectoral, and multiprofessional efforts and collaborations against violence.

Acknowledging this need, education, and process of pedagogical development as its context, Article I explores and elaborates on the potentialities of information and communication technologies (ICT) for educating on gender and sexualised violence. In particular, Article I explores the interconnectedness and outcomes of pedagogy and ICT in the context of the study programme in question, drawing from feminist theories so as to build visions of a feminist pedagogy of non-violence. Qualitative data analysis of student writing in study assignments and feedback forms stood on theoretically driven themes, focusing on student accounts of feelings and self-empowerment.

The theoretical principles of the pedagogy of non-violence, as explored in the article, and accompanying our reading of the data, built upon the thinking of at the entangled ways in which technology and classroom become enmeshed, acting as a starting point also for a rethinking of where and how feminist learning might occur.

57 The effort was funded by European commission (EC) Daphne programme, a funding tool dedicated specifically to combatting violence against women and girls by promoting training, educational activities, and other awareness raising activities (European Commission, 2016). The project consortium was led by the Gender Studies team and research group at the University of Oulu, and its interdisciplinary and multiprofessional team consisted of expert partners from five European countries.

58 The project built upon previous EC Daphne-funded projects in the Gender Studies team and research group at the University of Oulu from early 2000s, namely, Aware I – Increasing Awareness in educational Organizations of Sexualized and Gendered Violence (2001–2003) and Aware II – Increasing Teacher Trainees’ Awareness of Sexualized and Gendered Violence (2003–2004). See more, for example, in Sunnari et al. (2003).

59 The focal themes of the course as first implemented in 2007 to 2008 included gender and sexual violence in the lifespan and global contexts of violence, sexual exploitation and trafficking, measures for violence prevention, and practices and principles for non-violence and equality (for more detailed descriptions, see Heikkinen, Pihkala, & Sunnari, 2008).
Morwenna Griffiths (1988, 1993, 2005), Susanne Kappeler (1995), Myra Hird (2002), Jane Parpart (e.g., Parpart, Rai, & Staudt, 2002) and Janet Townsend (1999). We foregrounded the ideas of empowerment, responsibility, and human agency in particular, weaving these ideas together in the seminal notion of the article, that of a caring, empowered self. Thinking with Kappeler (1995), we came to highlight the idea that violence is prevented, not by permitting certain forms of violence while trying to prevent others, but by developing non-violent agencies and structures for action, at the crux of which lies an interdependency of individual and collective conscientisation. A caring empowered self, as theorised upon the analytical reading in our paper, foregrounds four principles; namely, feelings, belonging, authenticity, and interdependency. These principles guided our reading and engagement with the student writings.

In analysing feelings as part of a pedagogy of non-violence, we maintain with Griffiths (1988) that feelings are not only individual but social; not detached, but threaded with the histories and the social contexts in which lives are lived. Feelings are part of us, of our knowing, of our coming to know, and of our learning. The student writings captured how studying about violence evokes feelings. Imagine a computer screen displaying a bruised face of a woman from an anti-violence campaign or a series of articles with accumulating names, categories, and concepts of violence, stories that for some of the participants were and are lived histories, marked in their bodies. Therefore, we showed in our analysis the importance of having a space that allows feelings to be a part of particular processes of situated learning; and the need for a space that accounts for those feelings, allowing a person to share those feelings as central feminist epistemological, pedagogical, and political matter.

In our analysis, we offer insight into the capacities of the e-learning programme to enable a space for feelings—and capture how, in breaking the silence surrounding violence, we trust our refusal of remaining silent with others. Within the site and space of learning, allowing one’s vulnerability to materialise in written personal accounts in online message boards—or in cautiously written and shared study journals that solely the course teachers read—was enacted, in some cases, under the cover of an imagined anonymity, comforted by the virtual as the barrier, laden with the trust that those experiences, feelings, and vulnerabilities are allowed to be and become a part of one’s learning. For a pedagogy of non-violence, it becomes meaningful therefore to allow participants to become part of that community of practice, to belong, as Griffiths (2005) argues. Moreover, belonging
can be understood as connected to *authenticity*; belonging standing on possibilities of avowing and transforming one’s history (Griffiths, 1993).

For an online pedagogical setting in particular, the possibilities of belonging need to be embedded in the structures that work to ensure both a space for *being in* and *belonging to* as an individual, in all our embodied, embedded differences; and must enable the community of practice to move on. Examining the data revealed how pedagogical choices, choices made in framing questions, words of encouragement, and dynamics among the students, as a group, built the frames for belonging. Therefore, how spaces for authenticity are constituted is not bound only by structures constructed by us as educators, even if our choices as educators do make a difference, for which we are accountable. Instead, those spaces of authenticity, feeling, and belonging are in-becoming and must be fostered on the level of participation. As “we” participate in a collective site of learning and action—drawing into relief the multiprofessional, multidisciplinary “we” of students, teachers, mentors, and experts—our *inter*dependence, not independence, enables us to be moved and to move on, to be touched and to touch in return. In the student writings in our data, becoming and belonging as a participant was captured in care among the participants, manifested in tiny words of encouragement and—for example—in connections made by the students beyond the e-learning programme, in sharing links to public events, projects, and articles. This cultivation of connection supported the expansion of belonging in a study programme to a wider community of practice and to different sites of violence prevention beyond those bound by academic education.

Within the frames of Article I, we came to maintain that, in designing and developing a feminist pedagogy of non-violence for the purposes of individual agency and collective action against violence, one should embrace a cultivation of spaces for feelings, belonging, and authenticity, valuing interdependency. Studying the student writings in our study programme, we offer insight into the particularities of e-learning as a site of becoming a caring, empowered self. Focusing firmly on human selves and others, and with the e-learning technology and the contours of the courses as “contextual factors” rather than as agentic in themselves, the paper offered, *firstly*, an opening into the scrutiny of ongoing sensitivities and sensibilities, and into the prerequisites of care-full spaces for belonging for nurturing non-violent agencies and structures for action. *Secondly*, the article offered a window into the temporal continuums unfolded through personal histories, envisioned futures, and emerging communities of practice, as a form of collectivities against violence.
However, a few more years needed to pass for these nuances to truly unravel (see Subchapter 6.4).

6.2 Article II: Reflexive engagement as an orientation in and for participatory design

While Article I was firmly affiliated with our aim to cultivate and nurture non-violence, in Articles II and III I found myself moving into territories wildly new to me. Of the four articles in this dissertation, Articles II and III stood on a social-media-related participatory design process that took place from 2010 to 2011. While violence and non-violence mattered here also—as I will discuss below—the set of articles in question focuses on the process of design and research, as prompted by an emergent interdisciplinary reflexive dialogue between a senior researcher and myself during, and beyond, this process. At the heart of these articles is a reflexive orientation that unfolded over the course of the project and which began, consequently, to reveal the project as multiple, complexly entangled processes.

To elaborate, the background of this study was practical for me. Originally at stake was a project involving the design and research of a social media-supported collaboration model with, for, and by professionals and practitioners working against workplace harassment and bullying. In a manner typical of Scandinavian Participatory Design (Robertson & Simonsen, 2013), this work stood on an iterative process of design collaboration between myself as designer-researcher and a group of practitioners, or, rather, user-practitioners, working in workplace safety and wellbeing with a particular interest in bullying and harassment. The design object was to develop new forms and modes of collaboration for the group of practitioners and their expanding network, and to plan social media support for this new collaboration.

The process advanced through design-in-use, working on contents and technology, social media, at the same time, as a combination of reflection, hands-on work with workplace-harassment-related content online, such as discussions or “wiki-writing,” and “trying out” different ways of working together such as online meetings. The design process evolved through a set of workshops with a group of experts supported by close collaboration between myself and the collaborators from the partner organisation in our pilot. In a manner particular to our work, an interdisciplinary reflexive dialogue emerged in close contiguity with the design process, feeding into that process on and off the field. Consequently, this
interdisciplinary reflexive process functioned as a way of threading my uninitiated entries in participatory design, my frustrations, and my perplexities with the project and process on the one hand, with the understandings of the senior researcher and insights from and in participatory design and research on the other. Therefore, this reflexive dialogue allowed me to re-engage with—and have a space in which to wonder about—the meetings, workshops, planning, and “trying things out” that occurred with the user-practitioners involved. Due to a large extent to that dialogue, a researcherly thread began to figure, reanimating the practical encounters, as well as my feminist, anthropologically sensibilised ethnographic attunement and reflexivity within the processes of design and research.

Importantly, the interdisciplinary reflexivity described was connected to reflexivity that the Participatory Design community increasingly called for and was taking up at that time. Prompted by the diversifying contexts and practices of participatory design (Karasti, 2010b; Rode, 2011; Winschiers-Theophilus, Bidwell, & Blake, 2012; Winschiers, 2006) and drawing from feminist research and ethnography, among other sources, scholars increasingly challenged designers and researchers to scrutinise questions of agency, power, participation, and accountabilities reflexively (Blomberg & Karasti, 2013; Finken, 2003; Karasti, 2010a; Mörtberg, Bratteteig, Wagner, Stuedahl, & Morrison, 2010; Rode, 2011; Steen, 2013; Suchman, 2002). Therefore, through our mutual interdisciplinary encounters, we began to connect the reflexive orientation permeating our design process, to the emerging challenges and needs in design, with new articulations and explorations of how one might understand and, in particular, enact reflexivity.

Article II, “Reflexive engagement – Reflexive orientation for Participatory Design,” is the first article that concentrated on elaborating on the above reflexive stance to the Participatory Design community on the basis of data comprised of my ongoing engagements both in and off the field, captured in research notes and recordings from the process (see Subchapter 5.2). The analysis figured as an ongoing engagement in the process, and later, with the data, to make visible the reflexivity in and beyond the field. We first addressed reflexivity in terms of my attention to myself as a designer-researcher and foregrounded how reflexivity enabled me to negotiate and adjust my role and relations in the field. Attending to tensions in the field through which roles and relations were negotiated in the mundane, such as a the moment of entering the first workshop and encountering the myriad of expectation woven into being a researcher, designer, and “social media expert,” helped us to become attuned to the dynamics of being and becoming a participant. At the same time, reflexivity worked to make visible and attend to
questions of different knowledges, power, ownership, and technology in a sensitive manner. While the participants, myself as the designer-researcher included, negotiated and navigated the technological choices, such as what platform to use or how to use it, we were simultaneously engaging in reimagining whose expertise matters. These engagements helped to generate tiny fractures in the dyadic of the designer and of the user. Possibilities for negotiating new relations emerged from those fractures, as made plain, for example, in the inevitable, care-fully intentional, gradual diminishing of my role as the designer-researcher in the newly built model of collaboration. Therefore, Article I argues for the potentiality of reflexive orientation to offer insights on designing in ways that could be sustained also after the project.

Besides offering insight into the reflexivity of the designer-researcher, which, we contend, is always interdependent on the reflexivities of others, Article II, so as to move on from the self-reflexive stance only, focuses on reflexivity beyond the field and, in particular, on the interdisciplinary reflexivity emerging between the two researchers—between myself, working primarily in the field, and the senior researcher, who engaged with the project mainly off the field. Our analysis focused on roles and participation, two seminal concepts in participatory design. We showed how interdisciplinary reflexivity allows for an unsettling of the taken-for-granted premises of participatory design and affords a fruitful rethinking of invisibilities in the practices of design and research, such as the researcher-designer as the best kept secret (Karasti, 2010b). In terms of the practices of our study, this meant that as I worked to make sense of, negotiate, and discover new modes of engagement in the field, I came to enact and re-enact the theoretical-conceptual frictions anew—and in turn, to push the boundaries of the theoretical and the conceptual.

On the basis of our account of reflexivities in and beyond the field, which grazes the possibilities of collaborative reflexivity, we suggested reflexivity as an orientation for participatory design and research, foregrounding four dimensions through which reflexivity manifests; making visible, paying attention to, negotiating, and discovering. We elaborated on reflexivity, moreover, by arguing for a need to weave reflexivity more closely into the relationships in the field; that is, to enrich the after-the-fact reflexivity that detaches itself from the evolving, dynamic relationships of design and research. Instead, reflexive engagement, as we first formulated the term in our reflexive orientation, is “reflexivity located in the dynamics of multiple situationally evolving relationships” (see Article II, p. 90).
Through our analysis, we emphasised a move towards elaborating reflexive orientation engaged in the practices of design and research. Article II contributed to calls for reflexivity in participatory design by suggesting an orientation through which it could become possible to scrutinise the conceptual and theoretical concerns, and to address the ethical and political principles of the tradition of Scandinavian Participatory Design as a form of responsibility and accountability to which Participatory Design has been centrally and historically committed (Kensing & Greenbaum, 2013; Robertson & Simonsen, 2013).

6.3 Article III: Engaging with and for “participation in plural”

Article II came to graze the affordances of reflexivity in and for participatory design; in Article III, “Reflexive engagement – Enacting reflexivity in design and for ‘participation in plural,’” this orientation was pursued in relation to participation in particular. In so doing, Article III makes two moves in relation to Article II. It examines reflexive engagement as an enacted practice and weaves it into the thinking and practices of participation. Therefore, Article III suggests a more nuanced account of a reflexive orientation that attempts to become more attuned to the generative potential of reflexive engagement towards the “after and beyond” as they matter in the processes of design and research.

Article II suggested a reflexive orientation located in the dynamics of constantly shifting relationships. In Article III our aim was to look more closely at how reflexivity is enacted in design and to suggest what this reflexive orientation—or reflexive engagement, as proposed previously—does or might do in design and for participation. As the article draws from the same data and methods of analysis as Article II, I will not repeat those discussions of methods and analysis here.

Instead of following the division between reflexivity in and off the field, as in Article II, our interest shifted to attending to reflexivity in its manifold manifestations, whether from the perspective of the designer-researcher, of collaboration, or of reflexivities becoming visible in the dynamics of the participatory processes. Here too, however, and remaining true to the unfolding dynamics of our study, we began closest to home; that is, with my own position and location in the field. Article III, much like Article II, continues to scrutinise the dynamics of ”being there,” but works to articulate participation beyond locations, positions, or roles. Instead, we develop a nuanced account of participation as a constant, ongoing negotiation of roles and relationships, in which matters of histories, power, and various socio-cultural issues—for example—play their part.
in a complex, dynamic way. “Being there” began to be crowded with the realisation that we were elsewhere as well. Most user-practitioners had mutual histories and all of us were not simply there, present in that location, but were involved elsewhere in manifold ways, from practical involvements as professionals to belonging to wider social categories such as gender. Those “elsewheres” mattered: they entailed a becoming and belonging as a participant that unfolded as messy and always-in-negotiation—as participation always-in-becoming.

As participation was captured as always-in-negotiation, our analysis pursued that dynamic and in-becoming-ness by addressing how a reflexive orientation enabled us to rethink two goals and cornerstones of our design process, those of technology, social media in our case, and of the object of collaboration. In analysing reflexivity in relation to social media, we attended to the multiple overlapping, intersecting participations that brought different expectations and experiences into the design process. Different participations manifested for some of the participants as involvements in the larger social-media-related project, or, for others, as engagements in minute practices and activities. Importantly, our focus was—however—not on recounting how and where each of us might be involved and engaged, but to attend to how those different involvements and engagements created frictions and fractions, moments of reflexivity, and moments of rethinking. Ascribing value onto these potentialities in the minute and ordinary, while working together with and in social media, opened up new types of possibilities for negotiating the technology of social media, for us or for them, as it was. More importantly, it allowed us to begin to realign the goals of the process, goals pertaining to the application of social media and goals connected to collaboration.

As we worked with social media, with the phenomenon of workplace harassment and bullying at the forefront, the core of the collaboration became drawn into relief. More specifically, ways to better address and intervene in workplace harassment and bullying—and the burdens and troubles of addressing and intervening—became visible as a shared object of care and concern within the particular everyday realities of the user-practitioners. As the user-practitioners began to collaborate, engaging with a selection of real-life stories of bullying collected earlier, with memories of their own work experiences, and with the contentious politics of interventions, the collaboration became not so much about learning about bullying and harassment as about constructing a space for embodied experiences to be shared and articulated safely. I contend that a stark contrast existed between some of the original goals of bringing together people with varied knowledge and experiences of the phenomenon, in order to learn about and expand
on an understanding of workplace harassment; and the closely bound collaboration of the design outcome. However, we propose that in order to engage in a manner that allows for the creation of something viable and sustainable, designers must be open to the unexpected, to a relinquishing of control and embracing of the potentiality in that openness, not by way of a free-fall, but by way of reflexive engagement.

An important new turn in Article III is the reconsideration and resituation of reflexivity on the level of “doing” reflexivity, as it becomes enacted in the minutiae of design and research. Article III, together with Article II, speaks directly to the design community, with Article III seeking specifically ways to articulate the potentiality of reflexivity as ethically motivated but fundamentally generative orientation in and for the practices of participatory design—as a mode of responsible, accountable engagement in the processes of change-making. Our study shows that reflexivity inherently concerns taking responsibility and accountability for what we do, how we do it, and to what end. However, when understood as being engaged in the constantly shifting landscape of the design process, reflexivity becomes generative in nature, generating a form of creativity that unfolds from the attention and visibilities afforded by the reflexivity, which is never ours alone. To consider reflexivity this way, we suggest, allows designers and researchers to rethink reflexivity as ethical and political—concerns and principles deeply rooted in the history of Scandinavian Participatory Design—and creative, embedded and entangled intimately in the evolving dynamics of design.

Concurrently, reflexive orientation allowed us to make participations visible and to value participations “in and beyond” design, to dislodge participation from an appropriated tool or method, and to emphasise the emergent and unfolding in design as a “mattering matter” in and for “responsible participatory practices” (Holmer, DiSalvo, Sengers, & Lodato, 2015; Light & Akama, 2012; Light, Wakeford, Egglestone, & Rogers, 2011). Offering insight on the plurality of participations was important not for the sake of multiplicity, but for the potentiality embedded in this plurality to afford creative frictions and intersections in design, and as a manner of opening design goals to the after and beyond “the project” that often dominates design fields and traditions (Saad-Sulonen, Eriksson, Halskov, Karasti, & Vines, 2018). To design with and for the plurality of participation, is to work with the here-and-now and for the what might be, designing for matters of concern and care with and by publics (DiSalvo et al., 2014). In order to conceptualise this plurality, we use the idea of participation in plural, exploring participation as always-in-negotiation, manifested in multiple assemblies and
constellations that are constantly in motion, extending beyond and after the design process. Addressing this plurality in a responsible, accountable, creative, and generative manner requires an orientation of sensitivity and sensibility to the human and, tentatively, non-human others with whom and which we engage with when we design for sustainable change.

6.4 Article IV: Rethinking non-violence with response-ability

The fourth and final article of this dissertation, entitled “Reconfigurings of non-violence as a matter of sustainability and response-ability,” returns to the e-learning study programme explored in Article I. Written several years after Article I and partly in parallel with Article III and with this synopsis, Article IV is pushed and pulled by a “tedious tension” that prompted reconsideration of participation. What if our participations are accompanied by pasts, presents and futures? What if things and issues, goals and concerns, are not something to pick out and commit to, but, rather are dynamically reconfigured in complex entanglements of matters and meanings; that they are not “just there,” but come to matter and are enacted in particular sites and spaces of engagement, such as an e-learning study programme (see Article I)?

Our starting point in Article I was a caring, empowered self, supported and nurtured in the confines of pedagogical framings and belonging to a community of practice. However, as I was beginning to rethink the plurality of participation while engaged in the processes of participatory design (see Article III), in this instance, also, “sticking with” the sites and spaces we had constructed began to seem insufficient in understanding the prerequisites and possibilities of sustainable non-violence. This need to look beyond the confines of the frames of the education in question was the starting point of Article IV, which examined non-violence as it reconfigures in and through the struggles with violence and efforts towards non-violence in the life and stories of Lena.

The article is based on the talks with and the writings of Lena, a woman in her forties who had participated in the academic year of 2007 to 2008 in our international e-learning study programme. During that study programme, Lena had written extensively in her study journals about her relations to violence, violence prevention, and non-violence. What unfolds in these stories is a life threaded with manifold forms of violence perpetrated by peers and parents when she was a child and by her spouse in an intimate relationship as an adult, a life including efforts to
move towards non-violence, to commit to the prevention of violence, and to support those experiencing violence in their life.

One of the coordinators of the programme, and a co-author of the article, knew Lena previously through a mutual interest in European efforts against violence, which allowed her to contact Lena for an interview. In 2011, she interviewed Lena in two thematic interviews in which, with Lena’s study journals as accompanying material, Lena and the researcher discussed her studies and the role of her participation in the study programme in her efforts in violence prevention and towards non-violence. The stories were quickly expanded upon to cover a period of time from childhood to her more recent anticipations of the future. In 2015, I joined the other researcher in travelling to meet Lena for two new interviews, in order to expand our understanding of non-violence in her life. The interview data and writing from Lena’s study journals became the data used for Article IV.

To rethink non-violence in and through Lena’s stories, we took a “thinking with theory” approach (Jackson & Mazzei, 2012, 2017) and conducted our analysis through cycles of iterations, testing and trying out theories and concepts to find out what would “fit,” what would help us to understand the complexity, non-linearity, and entangledness in non-violence that emerged in and through Lena’s stories.60 Through this process of reading and re-reading, we came to consider violence and non-violence in Lena’s stories in terms of relationality and of feminist new materialist theories of ethics and responsibility; theories introduced previously in this synopsis. We aimed to open up to non-violence in Lena’s stories as intricately relational, and to attend to how this everyday social-material relationality enables, or disables, an ethically sustainable response with violence and non-violence.

Our thinking with and through Lena’s stories rested on the accounts she had shared with us on the forms of violence she has experienced, most prominently as a victim of long-lasting intimate partner violence, and of her ongoing interest in questioning, tackling, and resisting violence. Analytically, we constructed three stories through Lena’s interviews and writings, each story capturing reconfigurations of non-violence in particular entanglements of space, time, and matter, including bodies, abstractions, histories, affects, and each shedding light on

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60 In relation to the entangled, analytical mode of engagement described in Chapter 5, a testing of “what fits” works in close contiguity with the thinking and writing of Article III—for example—that was under construction at that same time. A complexly dynamic, entangled view of participation affected my thinking about Lena’s stories in particular, prompting me to examine the manifold ways in which Lena built affiliations with work against violence, with the sometimes conflicting pulls these entailed, and the particular reconfigurations of non-violence they made visible.
the ways the possibilities—or impossibilities—of non-violence becoming are conditioned by those entanglements of spacetimemattering.

The first story concerned non-violence animated and trapped in the entanglements of intimate partner violence and abuse, in Lena’s “re-membering” of violence in her childhood and during her first marriage. We captured how non-violence became animated in unexpected encounters complex and dynamic in their materiality. Lena’s story of a moment in which she herself engages in violence against her child by pulling the child’s hair provided one such encounter. In talking about this incident very shortly and subtly, Lena’s story shows how she was pulled simultaneously by her own commitment to break the cycles of violence—as she had been herself as a child a victim of such violence and, as affected by this history, she had promised herself not to be like her own mother; by the despair of failing to do so; and, ultimately, by the potentiality of this encounter from years ago to still come to matter anew, as she recounts it in the interview. The second story captures Lena and her care-full commitments to an object of concern in a space constructed to cultivate response-ability—in this case involving non-violence “in-becoming” and “in-the-making” in the e-learning programme-entanglement. Lena’s stories capture the discursive practices of violence that were available in the educational setting and the ways these discursive practices dynamically reconfigured violence and non-violence in Lena’s life as an object of concern to commit to, and with which to participate as a volunteer, a student, or as an experiential expert. However, those commitments were enacted in complex entanglements of pains from the past felt in the body, of haunting memories, practical commitments, and everyday materialities.

The third story, inspired in part in particular by the inseparable materiality of the discursive, invited us to attend to and offer insight on how the affective everyday can create a space and site for reanimating non-violence and inviting an ethically sustainable response to violence and non-violence. A fragment from the final interview captures Lena disclosing the story of an everyday incident with her children, an incident we would hardly have called violence. The encounter in question was an everyday encounter in the hallway of Lena’s home with a vacuum cleaner and household chores, in which one of Lena’s children had felt wrongly judged; this was “pulled” into the interview as part of Lena’s effort to articulate how a “violence-free life,” as she phrased it, is not as simple or easy to achieve and maintain as one might think (see also Pihkala, Huuki, Heikkinen, & Sunnari, 2017). This story of the ordinary invited us to pause to consider how non-violence may become enlivened in the mundane, and how the prerequisites of this enlivenment
are perhaps not to be found in learning to know what violence or non-violence is, but in reiterations and response—in becoming able of response with non-violence as it emerges.

When woven together, the three stories allowed us to engage with the manifold ways non-violence is in-becoming—and to attend to the particular practices of spacetimemattering of the becomings of non-violence, as conditions of possibility for an ethically sustainable response. By unfolding that entangledness, we illuminated how space and time enfold together. The final fragment above illustrates the material-temporal, reiterative reconfiguring of multiple non-violences that are invited to come to matter anew, within the mundane. This allows for a reconsideration of how non-violence is maintained and of how the possibilities for an ethically sustainable response are reconfigured through reiterations in and over time.

Our analysis rejects the idea of non-violence as universal, attending to non-violence as dynamic, manifold, and relational. Non-violence becomes an intricately relational phenomenon that comes to matter in expected and unexpected places, reconfigured and reconfiguring (Barad, 2007). This relationality allows us to examine the multiple times—pasts, presents and futures—already inscribed in those encounters where we captured non-violence in-becoming. In those non-violences, time matters, but not in a sense of thin slices of now (Barad, 2012a, p. 81) nor of a linear trajectory, but as a matter of ongoing reiterative intra-action, in which each ever-unfolding encounter matters for non-violence to become, and for it to be sustained. This drew our attention on those reiterations of non-violence that co-constitute conditions of an ethically sustainable response, enabling and inviting response. Moreover, we encountered this relationality and invitation to respond unexpectedly in the close contiguity of violence and non-violence in Lena’s stories, in an incident in which an act of violence incited non-violence in-becoming. This prompted us to suggest a re-articulation of non/violence (see Article IV) that works to embellish the intricate ways in which non-violence and violence are entangled. Such a rearticulation, I maintain, generates ethico-politically important invitation to unsettle, unlearn, and reanimate non-violence, prompting commitments to a non-violence that is not an “external/ized” object (Barad, 2007, p. 393), but rather non-violence in-becoming.

Learning about Lena’s stories on violence and non-violence in her relationships—and re-engaging with those stories over the years—led us to reconsider the challenge of cultivating sustainable non-violence. Considering non-violence in close relationships as coming to matter in intricately relational social-
material encounters—or in touch as I would now explore—offers insight in particular into what is required to “keep non-violence going.” Barad’s (2007) and Haraway’s (2008) discussions of response-ability address responsibilities as a situational, relational ethics of entanglement. They ask not for the fulfilment of an ethical injunction, but for conditions for the possibilities of response in every perpetually unravelling present. Pursuing this line of thinking, response-abilities for sustainable non-violence are entangled, inherited, and ongoing. Responsability asks us to weave ourselves—be it as educators, bystanders, or policymakers—into the fabric of a liveable world, in a manner that does not contend only with predefined categories. This suggests care and commitment not only to goals that are “out there,” to goals “we can learn about, teach about, pass on, and commit to” (see Article IV), but to remaining open and enabling openness to an ethically sustainable response in carefully structured sites and spaces and in the affective surges of the everyday. In and through Lena’s stories, we captured non-violence, animated and enlivened through affective encounters (Stewart, 2007; Walkerdine, 2010) and enacted as commitments and participations with a co-constituted object of concern. We contend that the cultivation of sustainable non-violence in close relationships requires structures for action, but also conditions of possibilities for response-ability: in other words, “conditions of possibilities for an ethically sustainable response with the reiterative becomings of non-violence” (see Article IV). A reconsideration of responsibilities in this ontological flux and flow suggests entangled response-abilities all the way down.
Part III: Re-turnings

We might imagine re-turning as a multiplicity of processes, such as the kinds earthworms revel in while helping to make compost or otherwise being busy at work and at play: turning the soil over and over—ingesting and excreting it, tunnelling through it, burrowing, all means of aerating the soil, allowing oxygen in, opening it up and breathing new life into it.

(Barad, 2014a, p. 168)
7 Thinking with touch and response-ability

The title of the final part of this dissertation, *Re-turnings*, comes from Barad’s work on diffraction and her entangled conception of space and time (Barad, 2014a), as did the idea behind that of the first part, *Re-membered beginning*. In the notion of re-turning, Barad plays with the hyphen (-), using its capacity to evoke a response rather than claim either-ors. Re-turning, as a form of diffraction, alludes to “burrowing through,” and “aeriating the soil” (Barad, 2014a, p. 168), as the epigraph for this part reveals—tied always with the past and to the yet-to-come. Therefore, through diffractive, affirmative engagement, I attune to the possibility of tying new knots, to new encounters and engagements, and to re-turning to and with where my research takes me, to what it affects, to what it moves—and touches.

As discussed, I have aimed in this study to think about sustainability “otherwise” and in new terms by exploring the affordances of feminist (new) materialist renegotiations of ethics and responsibility in and for the engaged practices of change-making—offering one account of sustainable change. Thus far, I have built my argumentation on two fronts: through theoretical curiosity and through empirical captures. In the following, I suggest that by partnering and patterning these captures and conceptual companions, the possibility appears to begin to rethink sustainability as a “mattering matter” in engaged practices of change-making. That is, the possibility exists to consider sustainability not simply in addressing or assembling concerns of sustainability, but also in terms of the very practices for enacting change. Moreover, in addition to building an alternative approach to practices of engagement, I argue that exploring sustainability in practices of change-making affords new theoretical opportunities for scrutinising how responsibilities for just and sustainable futures are reconfigured as more-than-*individual* and more-than-*present*; as reconfiguring in and through the teeming of times, spaces, and matter that inhabit our multiple ordinaries of different kinds.

The first three subchapters concentrate on unfurling how sustainability comes to matter in the engaged practices of change-making by reading the “captures” diffractively with one another and with feminist (new) materialist thinking of response-ability and touch. One could understand the development of the theoretical and conceptual companions, in this context, as marking a leap from those underpinning the articles (see Chapter 6), which, with the exception of Article IV, are driven mostly by field-specific conceptual negotiations such as regarding
care and belonging or reflexivity and participation.\(^{61}\) However, as discussed, the methodological approach in this research foregrounds an ongoing becoming-attuned-to, and prolonging of, the theories and concepts in-becoming; re-engaging with what those theories and concepts might have been, with what they reached towards or were troubled by. This reiterative engagement in particular has allowed me to wander this far and, I contend, invites to wander still.

I begin by re-working the thought and practice of participation. I wish to attune to the interferences that occur when the ontological inseparability discussed in Article IV, and presented in this synopsis, ripples across participation (see Articles I and III). Instead of focusing on how to orchestrate participatory practices, I explore *what matters* in participation and *how* participation matters, pursuing, therefore, a theoretical and practical curiosity about the unimaginable plurality of participation we began to explore in Article III—and which prompted Article IV. I will suggest a notion of *co-constituted companions* so as to shed light on the multiple other spaces, times, and matters that participate, reconfigure participations, and condition response-ability by reconfiguring what participation is *for*.

The second subchapter slows down with non-violence as a co-constituted goal of sustainability. I work to move from elaborating on the caring, empowered self, as part of our pedagogy of non-violence (see Article I), to the mundane partiality of the matters of concern, as outlined in Article III. At the junction of Article III and IV, despite those article’s utterly different manners of “being in touch with” non-violence, I contend that it becomes possible to begin to reconsider that non-violence is no longer singular, but manifold and plural in nature, and that with this understanding, one may no longer view the care that is called for as a virtue but as ambiguous, partial, and contentious.

Such diffractive readings of participation and non-violence offer a window into the ongoing iterative becoming of the world: they shed light on how, in practices of trying to do the right thing and working for better worlds, open ends and indeterminacies always exist. Those practices are, as I come to propose, *ambivalently care-full encounters*. Therefore, in the third subchapter, I pause to reconsider how we can engage with these dynamics and this plurality responsibly. Diffracting a discussion of reflexive engagement (see Articles II and III) with ideas

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\(^{61}\) In this instance, I suggest it important to consider that—for example—the Participatory Design community has not yet discussed new materialist thinking and the ontological turn to wide extent; consequently, the care-full, tentative steps in relation to the dynamic and relationality with reflexive engagement (see Article III) was already considerable in its own way.
of response-ability and affectivity (see Article IV), I propose a think-practice of response-able engagement, towards sustainable change.

The final subchapter weaves the discussions together, asking, “What kinds of understandings of the responsibilities for sustainable change unfold from these accounts of co-constituted companions, of ambivalently care-full encounters, and of response-able engagement?” I discuss responsibilities in and for sustainable change as material-discursively situated and as utterly entangled. In particular, I propose that these thick encounters hold the possibility to enliven and enable an ethically sustainable response, to make issues that matter touchable.

7.1 Crowded encounters and co-constituted companions

Earlier in this synopsis I underlined the relevance of the “with” as pointing to our ontological inseparability from others with whom we are entangled, not as separate beings but by and through intra-action (see Chapter 4). I presented this idea of entangled intra-action as the ontological stance of this synopsis. Nonetheless, the roots of the “with” in my study have been practical rather than theoretical or ontological. “With” has been an acknowledgement of the multitude of relationships that play out in our multiple ordinaries of different kinds; in our participations, engagements, and involvements—see Articles II and III in particular—and as qualities for belonging and becomings in relation—see Article I.

In terms of my research and as a component of sustainability, participation has been considered important and it has gained substantial trust. This trust, as pertaining to my study, was made manifest in relation to ideas of authentic belonging in a gender studies collective and a fight against violence (see Article I) to ideas of mutual learning in a process of participatory social media design (see Articles II and III). A long-standing feminist streak persists, running across the pedagogical and designerly terrains, of the value of “having a voice and a say,” (e.g., Bratteteig, Bødker, Dittrich, Morgensen, & Simonsen, 2013) of emancipation, of breaking and challenging power asymmetries, and of working for change and transformation (Bratteteig et al., 2013, p. 129; Doucet & Mauthner, 2006; Kensing & Greenbaum, 2013; Lykes & Hershberg, 2012; Robertson & Simonsen, 2013; Steen, 2013). In recent years, this virtue of participation (Steen, 2013) has been taken under reconsideration anew in the Participatory Design community and in the wider frames of participatory practices, as detailed in Article III. In the “era of participation” (Smith, Bossen, & Kanstrup, 2017), the question of how one understands, enacts, and maintains responsible and accountable participatory
practices has proven much more demanding than before (e.g., Andersen et al., 2015; Phillips et al., 2013; Vines et al., 2015). In the articles included in this dissertation, this idea of participation became troubled as I became more attuned to the more-than-human crowd and company and as “us” human beings became decentred from the focus of attention (see Articles III and IV).

Participation and any other conceptual figure for connoting the “coming together in and for something”—each with their own degree of sincerity, insincerity, intentionality, and unintentionality—tend to centre on rational individual subjects coming together (see Neidel & Wulf-Andersen, 2013). This participation with its contiguous comrades, including involvement, collaboration, and cooperation, becomes rather problematic and some suggest incompatible (Guttorm, Hohti, & Paakkari, 2015) with the ontological premise discussed earlier in this work. Posthuman and new materialist onto-epistemologies present a serious challenge as to how we consider who and what collaborates or participates and who or what counts as a participant. Prompted by this undeniable ontological challenge emerging through new materialist thinking, prompted by the participatory complexity and trouble animated in my research and design practice as described, I feel compelled to re-engage with participation. How should and could we account for the material-discursive entanglements that, this far, have been summoned under the notion of participation? How might we open up new entries and possibilities for response-able engagement to our participatory practices and how would feminist (new) materialist thinking of ethics and mattering help make sense of and bring us in touch with participation in new ways?

If Article I presented a vision of belonging entangled in participation, Article III’s work on “chipping in” to unpack participatory practices was to “unentangle” those dynamics that engaging in designerly, participatory configurations might entail, shifting focus therefore from an aspired state committed by a community of practice—see Article I—to practices of engagement. Unfurling the dynamics of design and research practice involved the exploration of concerns such as the situatedness, assumptions, understandings, senses, and sense of abilities of the researcher-designer. However, more importantly, attending to the minutia of our design practice, to simple moments of tension in a meeting room, a carefully uttered word, burst of chatter—as entangled in past and parallel places and spaces, with technologies, histories, and affect—allowed us to make a tentative shift towards what else matters within the participatory constellations of participatory design and
research—and towards participation beyond managing and coordination. In so doing, we began to make visible the encounters and participants of unexpected kinds. Discussed in a human-centred manner through these explorations, through curious wanderings and by slowing, we began to gradually move away from the anthropocentric “with” in our accounts of participation. We began to attend to “other-than-human” companions such as social media technology, a YouTube skit, Google Analytics data, and the multiple rhythms and temporalities (see Article III) that participation entails as a “string figure of engagements.” Participations unfolded as plural, overlapping, and intersecting. One might consider this as a tentative thickening of the “with.”

The enriched participation unfolding through the design and research process resonates with the idea that education, too, perhaps, could be valued for its multiple, overlapping participations. The feelings, authenticity, and belonging explored in Article I becomes unsettled by participation that is always in-becoming. One may no longer understand the pedagogical structures or the e-learning platform—guidelines, learning materials, videos, and images—as a context of assembly, nor ignore the materiality and historicity of being entangled with violence (see Article IV) seeping into the e-learning study-programme-entanglement. For Article IV, this prompted a shift from understanding belonging and becoming at the site of a study programme to the intricate entanglements of becomings with and commitments to non-violence in manifold spacetime entanglements. Moreover, the consideration of multiple overlapping and intersecting participations, as suggested in Article III, was reanimated and diffracted in theories and conceptualisations of becoming and affect (Barad, 2007; Stewart, 2007). In Lena’s stories in Article IV, we captured moments and events thick with bodies, things, discourses, affects, and multiple reconfigurations of violence and non-violence. As captured in the plurality of participations in the participatory design practice—and in Lena’s unfolding remembrings of non-violence and violence in her life—one may begin to appreciate how each event and encounter holds an infinity of matters, including histories and futures; and that before and after are already inscribed and inherited in the “thick” co-presences and “thick” times.

62 In recent attempts to rethink participation, Tammi and Hohti (2017) have, for example, unwrapped participation in terms of “striating” and “emergent” participation, inspired by Deleuzian thinking, whereas Andersen et al. (2015) unsettle participation with Latour’s (2004b, 2008) notion of matters of concern. In both cases, participation is not understood as a fact, but as assembled out of fixed and static structures and unfolding from the unexpected.
In relation to both the design terrain and Lena’s stories, what unfolds as important is not, however, the thickness of the “with,” but the potentiality for becoming that this thick with holds. Article III discusses the frictions and fractions afforded through a plurality of participation, avowing and embracing the creative and generative possibilities that plurality holds, in moments of reflexivity incited—as we discuss—in relation to participation with and by publics (Björgvinsson et al., 2012; DiSalvo, 2009; Lindström & Ståhl, 2014). Re-engaging with this plurality challenges us to swerve from participation in the plural to participation as intra-actions, touching multiple others—including times, spaces, and matters. In these touches and in this touching, at stake is not what comes together but what we become (Haraway, 2016). Re-turning to the site and space of the e-learning programme, then, we may start to imagine the student-bodies across Europe; a “distance-closeness” of co-presences online (Beaulieu, 2010); and co-constituted concern pushing and pulling to trust and to share personal histories. Concurrently, the moments, places, and things coming together have the capacity to produce an opening, a line of flight, and to offer an invitation to become moved and to be made move-able, touched and touch-able. In this complexity of the crowd, the enfolded times and spaces matter; they matter through the reiterative reconfiguring they entail, through the what and whom they bring along and make possible; and the conditions of possibilities—or impossibilities—for becomings with which they are threaded (see Article IV).

Participation does not make sense if thought of only in terms of somehow privileged human agencies converging or inviting one another, in a layer cast upon the world that would otherwise evade becoming entangled in participatory choreographies. Rethinking what matters in participation, my “desire line” is, therefore, to shift to a consideration of participation as a material-discursive phenomenon, in a Baradian sense (see Chapter 4)—as co-constituted companions reconfigured and reconfiguring, rather than a context or practice of assembly only. Moreover, it becomes crucial not only to account for that which participates, but to become accountable for what these un/imaginable and un/manageable participants of multiple times, spaces, and matters do; to become accountable for what they co-constitute and how participations are co-constituted in the process. In other words, it is vital to account for the different ways participation itself comes to matter and for what comes to matter through its ongoing reconfiguring. Moreover, I argue that the possibilities of responsible participatory practices are perhaps enlivened also in the motion of mattering discussed here. In such meetings, touches of what and whom, ethical response, and responsibilities are made touchable.
Indeed, if we maintain that the participation we employ in our participatory endeavours is a particular material-discursive, sedimented historicity carved from iterative cycles of matter coming to matter over “thick” times, reconfigured and reconfiguring, then how participation comes to matter as a phenomenon and how we engage with this participation matters. Perhaps participation in particular is even more important than we thought because it is “more-than.” In reconsidering sustainability, to be entangled, as an ontological premise, does not refute participation; rather, entangledness suggests we must rework how we are entangled with the co-constituted companions; that we become-with in participation but also that we become-for. One might address this concern by asking, “What interference patterns do participants and participations generate in our participatory practices, and how we can become response-able in relation to the becomings and not-becomings these reconfigurings entail?” Ultimately, we are entangled, implicated by, and accountable to what emerges, and response-able for and with that which does(n’t).

7.2 Reconfiguring non-violence with unsettled care

In efforts to tackle violence in relationships that take place in manifold everyday and institutional sites—and to cultivate relationships that stand on care, belonging and equality, individual and collective action has been structured, for example, through education and policies for taking action. Such an approach is often based on a humanist subject. Article I also began with the idea of a caring, empowered self, a self who, as part of a community of practice, is fostered to discover opportunities to bring about change and construct political visions of non-violence. The e-learning study programme, as a space for nurturing a caring empowered self, is akin to Davina Cooper’s (2014) conceptualisation of an everyday utopian site at which one can enact visions of non-violence in a promising space and a space of promise. The caring, empowered self we aimed to nurture stands on individual agency but resists the sufficiency of individual agency. Being and becoming a caring, empowered self rests upon the collectivities within and through which possibilities and capacities emerge to enact non-violence. Nevertheless, it is an individual self who is at stake. Moreover, aligning care and non-violence rests on a unitary vision of shared non-violence as an object of concern. One might, I argue, contest such conception and, perhaps, for the sake of sustainable change it should be contested; moreover, it factually becomes contested in the posthuman and new
materialist thinking and, in a way, has begun already to reverberate with and through the designerly terrain.

Non-violence traversed my encounters in the designerly terrain in a very partial, particular manner, a manner touched on only very briefly in Articles II and III. While the work of designing new modes of collaboration for professional work in and around workplace harassment and bullying relates directly to violence prevention, for a long time I maintained my concerns and researcher-designerly engagements involved violence prevention or non-violence only very marginally. I viewed the process as a more design and research focused “story” of responsible, accountable participatory practices in design and research. In my account of the process, one might understand the side-lining of non-violence or violence prevention as an entanglement of many things. Firstly, I felt discomfort at having the designer role in the project, as I did not have such background in the field; to navigate this new terrain of participatory design required that much more effort. Secondly, and not unrelatedly, I felt “clip-winged” when offering my own accounts of bullying to the group of experts in the project. This, in turn, fed my brewing conflict with the partial, particular phenomenon of bullying as figuring in the process—configuring the emerging collaboration as a consequence—and over a more global account of violence prevention—also visible in the e-learning study programme—that I felt the process should have embraced. Nonetheless, from this discomfort unfurled an overspill (Michael, 2012; Millei & Rautio, 2017), an invitation to slow down with the patterns of diffraction and to explore how non-violence comes to matter, and to unsettle the manners in which care matters for non-violence.

The alliance of care and non-violence that emerged in our participatory design and research process unfolded care as partial and particular. Article III touches on this issue; we began to rework the too-often taken-for-granted revolving of design object solely around technology. Instead, connecting with emerging works with publics (DiSalvo, 2009; Lindström & Ståhl, 2014) and Design Things (Bjögvinnsson et al., 2012; Ehn et al., 2014; Telier et al., 2011), we came to suggest that reflexive engagement with an evolving design practice and a plurality of participations

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63 One might view this train of thought as my being pulled by design-storylines. At the same time, a link also exists here to the general tendency of design to become aligned with violence—or violence prevention—as the substance matter of a new technology, attending only marginally to how violence or non-violence pertains in the sites, processes, and surrounding world of design (Brahnam, Karanikas, & Weaver, 2011; Dimond, Fiesler, & Bruckman, 2011; Dombrowski, Harmon, & Fox, 2016). Conversely, one can consider this “pull” as affected by the wider constellation of the larger project and the interdisciplinary dialogue.
creates possibilities for the goals to be collaboratively renegotiated. Therefore, we began to gain insight into the matter of concern as it came to be configured in the user-practitioners practices, relating particularly to the local, situated, and partial work around workplace bullying and harassment. As a matter of concern, non-violence was reconfigured through and as concern and care over the life-altering, prolonged cases of bullying that the participants encountered, prevented, and intervened in as part of their work. The non-violence that reconfigured was not that of a peaceful cosy coexistence, nor of a concern for the universal, but a non-violence of taking and holding a stand with intervention models, bureaucracy, and rulebooks. This, I contend, constitutes laborious work rather than idealised visions, a non-violence that becomes reconfigured with and in the mundane.

Considering the idea of non-violence that reconfigures through Article I, and the non-violences unfolding in Article III, I arrive at a somewhat contentious image of non-violence as a shared, universal vision of relationships resting on care, belonging, and equality one the one hand, and engagements in mundane work practices, on the other. Through Lena’s stories in turn (see Article IV), we gained an utterly different view of non-violence, of events and encounters that vibrate and touch such that the indeterminacy in matter begins to swerve, bend, and diffract space and time, so that non-violence comes to matter. Out of this contentious plurality, diffracted with feminist (new) materialist theories, concepts and methodologies, emerges a possibility to understand the multiple, even conflicting matterings of non-violence as reconfigurations and non-violence as an always relational material-discursive entanglement, as a phenomenon (Barad, 2007).

Therefore, through the stories this research entails, non-violence comes to matter as intricately relational. Non-violence is an object of mutual concern, an intentional address, and an obligation within the everyday struggles with violence (see Article IV). Non-violence is an object of attention in occupational safety legislation and union work (see Article III) and a concern in the continuum of feminist ethics, politics, and practice (see Article I and IV). Non-violence also comes to matter in sites of “affective surges,” sites of reiterations at which violence and non-violence—or rather “non/violence” (see Article IV)—begins to vibrate in a manner inviting response before and beyond commitment, before and beyond

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64 In Article III, illustrating the multiple overlapping and intersecting participations, we offered an example of the organisational boundaries that affected, among others, the groups of professionals that were selected to be included in the established network. These negotiations of the boundaries of participation were affectively charged entanglements of union representatives and professionals, histories, institutions, organisational structures, and everyday work practice.
individual agency. In order to rethink care in relation to non-violence, therefore, and to move towards a think-practice of sustainable non-violence, it may be fruitful and crucial to attend to those local resolutions (Barad, 2007); to the encounters, entanglements, and engagements through which non-violence comes to matter.

At the crux of these stories and encounters, non-violence comes to matter and becomes sustained in manifold ways. Non-violence is enacted as repetitions of a stagnant, monolithic fact and through situated care for a concern that reconfigures and is reconfigured in everyday engagements. Moreover, non-violence also comes to matter and becomes sustained through the responses invited and enabled in always-relational, material-discursive entanglements. The beings and becomings of non-violence occur in a world of conflicting pulls, partial perspectives and undetermined—sometimes undermined—endings. To ask for commitment in this multiplicity and mess demands that we understand non-violence not as a matter of concern and in particular not as a fact but as a matter of care and response (Barad, 2007, 2014b, Haraway, 2008, 2012; Puig de la Bellacasa, 2017).65

The care that patterns non-violence in its multiple becomings, enabling the becomings of non-violence in and over times, is no longer a trait, a quality, of an empowered self, as Article I theorised. Considering care through feminist reworkings of materialities and ethics unfurls for me an emphasis not on what care is but how it matters and materialises in entangled everyday encounters (see Puig de la Bellacasa, 2017). The shift from care as a human disposition and practice to a force circulating material-discursive constellations (Puig de la Bellacasa, 2017), places care as ambiguous, contextual, relational, and perhaps even conflicting (Puig de la Bellacasa, 2011, 2017; Schrader, 2015; Tronto, 1993; Yates-Doerr, 2012; Yates-Doerr & Carney, 2015).

Conversely, non-violence itself is not a fixed fact one might achieve by caring enough. Instead, as a “matter of care” (Puig de la Bellacasa, 2011, 2017), it becomes possible to begin to understand non-violence as a phenomena sustained through distributed webs of affective relations, material doing, and ethico-political obligations (see Puig de la Bellacasa, 2011, p. 90). This allows one to value the situated practices of care; namely, how, for what, and for whom care materialises in practices of collaboration against workplace harassment or figures in e-learning or the everyday relations we maintain. This enables one to value care in a manner

65 As Haraway writes, playing with Puig de la Bellacasa’s (2011) articulation of the matter of care, “Matters of fact, matters of concern and matters of care are knotted in string figures” (2016, p. 41), or to phrase it through Barad: “Matters of fact, matters of concern and matters of care are shot through with one another” (interview in Dolphijn & van der Tuin, 2012, p. 69).
that remains accountable to and response-able with its provisionality. Ultimately, from my perspective, for non-violence as a concern to come to matter (at all) requires that we think of care in a manner that accounts for the different forms care might take and entail. We should, I maintain, not only think about, but to think-practice (Thiele, 2014a) such work. This is particularly important, I contend, because for care to matter in the hopes of achieving sustainable non-violence, it is likely that care must come to matter in multiple, parallel, consecutive, conflicting ways.

If we maintain that non-violence becomes evoked and animated at sites of intention and surprise, it follows that possibilities for sustainable non-violence unfold through such entangled encounters. Those entangled encounters should also, therefore, be co-constructed response-ably. Non-violence—we maintain in Article IV—concerns not only teaching skills and tactics, or passing on knowledge about forms of violence to object or oppression to resist, although these too are important, but becoming response-able, which one must understand as involving both giving and enabling an ethically sustainable response. This is the ethico-onto-epistemological premise in Barad’s (2007, 2014b) work and the “trouble” with which we are called to stay with by Haraway (2008, 2012, 2016), so as to “render each other capable of worlding and reworlding for flourishing” (Haraway, 2016, p. 96).

In order to rethink sustainable non-violence, non-violence must to be evoked, incited, and assembled in a manner in which lines of flight appear, so that connections and commitments may be re-enacted. In hindsight, or as a future trajectory, it is possible that aspirations towards caring, empowered selves capable of individual and collective action should and could be enriched by considering not only how to become caring but how to “unlearn” care as a form of response within the ever-unfolding entanglements that contain the im/possibilities of non-violence. Sustainable non-violence is a tentacular “thing”; in tracing its prerequisites, a distributed, non-essentialising, non-moralistic care might help us see where else and how else non-violence comes to matter and where some form of care must occur for non-violence to be sustained. The manifold ways in which non-violence comes to matter suggests that, in addition to engaging in a way that is accountable and responsible towards non-violence, we must also attend to and care critically.

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66 Feminist STS scholars also suggest the above in their search for the multiple manifestations and patterns of care in the worlds we study and in the workings of our practices, calling for unlearning care so as to care in a new way, particularly in a manner that always asks the questions, “For whom/qui bono?,” “For what?,” and “How?” (Martin et al., 2015; M. Murphy, 2015; Puig de la Bellacasa, 2011).
about what non-violence does in its multiple reconfigurations. Moreover, that non-violence comes to matter demands a nuanced look at the conditions of possibility for an ethically sustainable response, for a response-ability to and with violence and non-violence.

7.3 Response-able engagement

Reading/writing/thinking/engaging with stories—and weaving those stories into other stories—creates patterns of resonance. I began to rethink the engaged practices of change-making as a terrain of intra-active selves and others, not in the sense solely of human selves, but of a topographic map with a sedimented historicity, materialising effects, conditions of possibility, and conditions of the possibilities of possibilities for participation, care, non-violence, and sustainability. Moreover, reading the “captures” with each other, an enriched encounter emerges; firstly, the human and non-human others meet in uncontainable encounters of design and research (see Article III), in pedagogical sites (see Article I and IV), and in affective encounters in the ordinary (see Article IV). Furthermore, through diffractive readings of the captures in the two previous subchapters, I came to broaden and thicken the “with” of engagement with material-discursive never fully sedimented reconfigurations of non-violence and participation, not only as a matter of “with what,” but as a reminder of the ethics of becoming-with and becoming-for. Politics of mattering and liveability are at play; how we engage and what we engage with-for matters, while neither the for or the with will ever be settled and secured. Engaging with the in/determinate is a trouble.

Nonetheless, we engage and are called to engage in a responsible and accountable manner with others and for sustainable futures. We might consider that this participation particularly with, in, and for the flux and flow of the world challenges us to rethink the practices of sustainable change. The posthuman and new materialist bodies of work propose an ethics of vitality (Bennett, 2010), an ethics of becoming that accounts for capacities and potentialities, an affirmative ethics that overcomes negativity rooted in the situated, embodied materialities of the present (Barad, 2007; Bennett, 2010; Braidotti, 2013; see also Fox & Alldred 2016a). My thinking on these ethical reanimations has taken place in the mundane: in terrains of becomings that are topographic, conflicting, ambiguous, spiky, uneven, and treacherous. In such terrains, bodies are damaged, matter “sticks” to flow charts, and things and issues are made, remade, and passed on as obligations and injunctions.
If, in the pedagogical terrains of change-making this study involves, we assigned value to a fostering of belonging and becoming (see Article I), we developed in the designerly terrain (see Articles II and III) a think-practice of reflexive engagement, so as to tap into the ethical and political commitments in Participatory Design and to explore the creative and generative potential of reflexivity in design and research. The figure of the reflexively engaged and engaging designer-researcher emerged as a person who attempts to relate to a world that is already transforming into something else, fumbling, unsure, and uninitiated; it emerged as a figure through which we attempted to become attuned to the situated and dynamic in design and research.

Reflexivity, as it has been applied and debated in, for example, feminist methodologies and ethnography and in qualitative research in general, has involved an attending to questions such as those relating to differences and power asymmetry (Hesse-Biber & Piatelli, 2012; Holland et al., 2010) in research practices, as a manner of critical deconstruction and of seeking new modes for theory and praxis (Graham, Powell, & Taylor, 2015; Guillemin & Gillam, 2004; Holland et al., 2010; N. S. Mauthner & Doucet, 2003; Ramazanoglu & Holland, 2002). In reflexive engagement, we align ourselves in particular with the discomfort of cathartic or confessional reflexivities (Pillow, 2003) and attempt to disrupt the detached deconstructive endeavour that stands on what is known, therefore risking repeating and iterating the same (Barad, 2007; Haraway, 1997, 2008; Pillow, 2003). In effect, I would like to propose that reflexive engagement was and is already moving toward a form of engagement with the unknown, frictious, lingering, and in-becoming. Reflexive engagement, as we capture it in our research and design practice (see Article III), concerns a practice of slowing down at the very edge of our sense of ability in encounters, so as to re-encounter again and again: sensing, as we describe in Article III, how participant bodies, technologies, stories, knowledges, and memories of workplace interventions entangle in such a way that

67 It does not escape me that it is the shortcoming of the optics of reflection in particular, bound to representational thinking, that Haraway (1997) counters via the metaphor of diffraction, and which Barad (2007) later develops further in quantum mode. This casts the idea of reflexive engagement in contentious light. Nonetheless, through diffraction as affirmative engagement, one can consider the potential of reflexive engagement to work as a “thinking technology” (Haraway, 2004, p. 335) in relation to the discussions and practices with and for which it was crafted, particularly to calls for reflexivity in Participatory Design. Instead of replacing old with new, I find more generative to care-fully create knots of connections that offer the possibility to make differences that matter; and to enfold seemingly distant or sometimes even conflicting figurations with one another, in the hope that instead of tripping over their ontological packages, new and valuable interference patterns might be evoked.
a moment, an encounter, is generated that captures and invites one to care for a situated concern. Brought into touch with engagement, reflexivity continues to hold to a sense of accountability—maintaining the designer or the researcher as responsible for differences through self-scrutiny—but in a manner that accounts also for entangledness in unfolding events and encounters here-and-now and in the long term. The tempo and temporality of reflexive engagement refuses to let a mirror image remain: “being reflexively engaged ... is an enacted reflexive stance that is itself relational; it is itself in-becoming” (see Article III, p. 28).

Situating reflexivity in “the middle of things” (Vagle & Hofsess, 2016, p. 337), as we suggest with reflexive engagement in Articles II and III, means that reflexivity refers as an idea to never fully finishing, proposing, instead, an attunement to moments of ethical and creative potentiality. Here, I find a resonance with Lena’s story told in Article IV and with Kathleen Stewart’s assertion (2007) that “everyday life is lived at the level of surging affects” (p. 9). This resonance prompts curiosity. How can a moment in the hallway at home with a vacuum cleaner suddenly invite non-violence to come to matter, as analysed in Article IV? I am prompted, by means of re-turn, to enrich the company of what is known—that with which we are already “in touch”—with the indeterminacy in matter, or indeterminacy as matter (de Freitas, 2017); that is, what we are with in touch and the potentiality that this sense of the touch holds, invites, and obliges us to embrace, towards an ethically sustainable becoming in the processes of change-making.

Re-turning these moments of frictions and fractions in this study allows us to rethink this dynamics and flow of the minute and mundane with touch; to consider such encounters in which the “felt other” (Svedmark, 2016, p. 189) is on the borders of becoming care, non-violence, and responsibility. A rethinking of reflexive engagement with touch makes it possible to attend to the curious play of matter meeting matter, of matter sensing its own in/possibilities. Here, as Eva Svedmark writes—thinking-with Barad—when matter meets matter, touch occurs as a space where “ethics can be felt, understood and lived. It is this touch that enables us to respond, to make choices based on the felt other” (Svedmark, 2016, p. 189). I contend that it becomes possible to reimagine these sites of rupture and friction as sites of attachment, sites at which touching the phenomena-in-becoming creates differences that matter. Pursuing this line of thinking, I re-turn to our discussions on reflexive engagement, which never solely involved attention and attunement, but also encompassed engagement in engaged endeavours. Reflexive engagement concerns the ongoing retying of a knot; it—reflexive engagement—becomes a
practice of slowing down and giving room for attention as emergence\textsuperscript{68} within the situational dynamics of times, spaces, and matters in a reiterative reconfiguring so as to engage with, not simply to be in touch with but to touch—in a manner responsible for sustainable processes and outcomes, for the making of commitments, and working for some, specific worlds with others—a what and whom that is always more than what one thought (Haraway, 2008, 2016; Lykke, Markussen, & Olesen, 2000).

Therefore, to re-enact reflexive engagement anew would be to rethink the moments of reflexive wonder with the ethico-affectivity of touch, amplified by the ethico-politics of response-ability. The above statement contests the sufficiency of reflexive scrutiny from afar, a reflexive scrutiny of a known difference in the moment (see Articles II and III). It also challenges contentment solely in sharing knowledge and constructing spaces in which we can become feeling-learning beings, knowledgeable enough to know how to take action (see Article I). While learning to listen, to sense, and to be-in-touch as a form of response-ability seems imperative for sustainable change, I wonder would not the achievement of a shift in trajectories also require conditions of possibility that enable the murmur, vibrations, and the graze of our “porous skin” (Cielemecka & Revelles-Benavente, 2017) so that, instead of being caught up or being content in touch, we might find ourselves touching and response-ably engaging for specific futures.

I argue that beyond the capacities of reflexivity or reflexive engagement, a think-practice of response-able engagement would make it possible to account for our intricate entangledness within the world in its ongoing reconfiguring, rejecting the compliance with oculocentric witnessing or turning back and finding affinities with mutated and modest modes of witnessing.\textsuperscript{69} Response-able engagement extends the temporalities of the care as suggested in reflexive engagement; it entails pasts, presents, and futures. Response-able engagement operates as a figuration for the reiterative cycles of minute flows and sedimented structures, through which the possibilities and impossibilities of sustainable change are reconfigured. It remains open to the responses enlivened in touch, to the recrafted responsibilities and accountabilities, and to becoming-with differences that come to matter (Barad, 2007; Haraway, 1997).

\textsuperscript{68} By the keynote by Alberto Altés held in Living Ethics seminar in the University of Lapland, September 13–14, 2017, I am reminded that attention concerns a pause, a slowness; attention emerges from the materiality of life, it is not a practice of witnessing of a detached human subject.

\textsuperscript{69} This is an intentional reference to Haraway’s (1997) figure of the “mutated modest witness.”
Re-turning to and with my empirical encounters reminds me how the spaces available for Lena to become response-able—not just to be touched, but to touch—were reconfigured through reiterations; and that these reiterations, in their material and temporal complexity, rendered Lena capable of becoming with-for non-violence. I can reimagine this idea of becoming in terms of our process of participatory design by re-turning to the partial, particular concern—the phenomenon—of workplace bullying and harassment that mattered to the user-practitioners. Through this reimagining it becomes possible to reconsider how one might understand that partial, particular concern, intoned with care, as a matter of non-violence as well as we discussed in Subchapter 7.2. It is a troubling example that accepts care as partial and particular; however, it is perhaps an important example specifically as a reminder that, in a world with pain and suffering such as harassment, as the designer-researcher, through my engaged practices, I am also always already entangled beyond what is easily available for me—and that my practices have materialising effects in those entanglements that craft and re-craft accountabilities. Therefore, as a think-practice for participatory design and other engaged endeavours, I propose that response-able engagement prompts us to consider a need for care in and around our co-constituted concerns and in relation to the entangled ethics and responsibilities inherently involved, with which we are already involved.

Scholars engaged in practices of future-making have called for new modes of address that are more accountable for wickedness and uncertainty when envisioning liveable futures in the social-material conditions of the present. With a responsibility so infinitely indeterminate and whose time is out-of-joint, how are we to know how and for what to respond in a manner benefitting the future? Yet, to relinquish commitments is not an ethically sustainable option. To engage response-ably with concerns and matters that come to matter calls for ethics in the middle of things. Therefore, with Barad (2007, 2014b) and Haraway (2008, 2016), I am tempted to think that, instead of contending with uncertainty as a springboard for the imagination and for hope, we might find a better alliance by engaging with indeterminacy, staying with the trouble, and valuing this trouble for its capacity to touch us and, importantly, to render ethics, responsibility, and care touchable.
7.4 Entangled response-abilities: Becoming with and for sustainable change

In this research, I have contemplated how sustainability comes to matter in ordinary encounters of change-making, in encounters in which futures are made, in the engaged practices of sustainable change. The practices in design and education I have employed as my “thinking with companions” may not—at least, at first glance—seem very central for sustainability, in terms of the structures, policies, and social and socio-technical transitions aligned with ideas of sustainability and with the well-established fields of sustainability in the design and education that have emerged from connection. I chose to create new patternings and sought to consider sustainability “otherwise,” to reconfigure sustainability with unexpected companions. I partnered sustainability with the mundane; more specifically, with participatory practices and non-violence, to gain insight into new think-practice for responsible engagement with the situated dynamics of change-making for specific and—in my case—non-violent futures. Weaving these patternings together unfolds the matters of non-violence maintained and sustained through ambivalently careful encounters and through response-able engagement; reconfiguring non-violence with co-constituted companions, becoming-for by way of becoming-with.

When contemplating the engaged practices for sustainable change, I continue to be troubled by the unapologetically complex entanglements in which goals and targets get contested and sustainability remains uncertain as an outcome. Doing the “right thing” in such context seems almost a moot point. In these times of responsibilisation (Butler & Athanasiou, 2013), in which sustainability is a proliferating figure, regardless of everything claimed in terms of the right to environmental and social justice, equality, and non-violence, unsustainabilitys such as violence persist. Numbness and paralysis (Alaimo, 2012; Colebrook, 2011; Malone & Truong, 2017; Rogowska-Stangret, 2017), and the unsuccessful efforts to generate sustainable change, continue to make it crucial to ask, “What then would we need to recraft responsibilities in a sustainable manner?” How might we better consider and account for the ways in which we are woven into the fabrics of sustainable change in our future-making endeavours and to account for this entangledness beyond bounded individualism, without losing sight of how we are responsible? As Barad (2007) contends, “Responsibility is not ours alone. And yet our responsibility is greater than it would be if it were ours alone” (p. 394).

Tim Ingold and Caroline Gatt (2013) note that sustainability “is not about projection and targets, or about the achievement of a steady state; it is about keeping
life going” (p. 144). This form of affirmative, vibrant sustainability (Bennett, 2010; Braidotti, 2006) is care-fully speculative, to think with Puig de la Bellacasa (2017) and Haraway (2013, 2016). This sustainability refrains from managerial fixes and embraces ambivalence in relation to the times called “the future” without becoming reduced to sentimental indifference in the present. In other words, we cannot know what will matter as sustainable; we are working on a mode of indeterminacy. Aligned with this thinking on indeterminacy, Haraway (2010, 2016) argues compellingly that we should “stay with the trouble.” This argument prompts me to consider sustainable change as requiring an ethics of committing to specific goals and taking risks. Therefore, before sustainable change becomes void of meaning, trapped in “encounters-as-spaces” between a past that was already and a future we cannot really predict, dislocated from everyone and everything, I find myself returning to “thick” spacetimematterings and to the ambivalences of engagement. It is, I maintain, in the troubles, partialities, and ambiguities of change-making in particular that attachment sites, touches, meaningful for sustainable change occur.

Sustainable change, as an engaged practice, promise, and as call for justice, demands accountability for things and issues but also for their ongoing, iterative becomings. To explore this responsibility in relation to the indeterminate, I have wandered and wondered with the frictions and fractions, unfolding dynamics, and in-betweens in the engaged practices of change, patterning them with feminist (new) materialist reanimations of ethics. Such in-betweens matter for the approaches to responsibilities as discussed here. Moreover, I suggest that one might rethink these in-between with touch, which I have come to understand, thinking with Barad (2014b) and Haraway (2008), as the ethico-affective sense of the motion of mattering. Thinking with Barad (2014b), I understand touch as the “between” in “cutting together-apart”; or rather as the sense of the between, the sense of the “hold” at which the hyphen gestures. In a speculative mode of care-full thinking, I maintain my research encounters rich with such holds, in tiny bits of the world, in an ongoing iterative reconfiguring of care, participations, non-violences, and responsibilities. These tiny bits of becoming invite me to consider how touch occurs in the motion of matter becoming together, without ever having been apart, within the phenomena. Sensing the possibility of such phenomena-in-matterings, of participations, non-violences, care, and responsibility, invites and enlivens an ethically sustainable response. Touch matters in and for sustainable change as the ethico-affective sense of spacetimemattering of issues that matter.

Rethinking sustainability in the practices of change-making, and in reconsidering responsibilities for sustainable change, I maintain that sustainability
does not come to matter solely through commitment to what we know, through attending to matters that find their form in situated practices. Acknowledging this plurality of concerns is important when considering sustainable change. However, I continue to consider as important the question about the beyond and after, question of how that which is beyond the encounter and determinate matters and how it matters that, in our understandings of responsibility, we look beyond individual or collective responsibility. I re-turn to consider the webs of care—in their triptychial sense of “ethics-work-affect” (Puig de la Bellacasa, 2017, p. 13)—that are necessary to sustain life or non-violence as I have explored, and find myself wondering if touch is sufficient either. Therefore, I contend, it seem vital to not only come into contact with, contend with, be touched by, or touch by evoking affects, but to make ethico-affective pulls of touch touch-able beyond the here-and-now, beyond ourselves.

I seek, therefore, to amplify the “tentacularity” in response-ability and to consider touch-able with entangledness. Responsibilities for the touch-able exist beyond the here-and-now and are woven into the infrastructures of mattering (see Honkela & Irni, 2014). They are also beyond ourselves. By this I mean that a shared or even distributed mode-of-care and responsibility does not perhaps push us sufficiently far in grasping the prerequisites of sustainable change. Following Haraway’s (2016) compelling call to construct conditions for flourishing, Carpintero proposes that, in order to engage with the crisis of responsibility, we must “create space and time for care to foster the availability of the processes of response and response-ability” (2017, p. 50). This is my contention also in thinking about the responsibilities in sustainable change as entangled. To acknowledge entangled response-abilities as a matter of sustainable change accounts for the differences we enact through our inseparability from and implicatedness and complicity in the world, and for the commitments we make and the conditions of possibilities for response and reiterations we co-constitute. It is perhaps particularly sustainability, in relation to which our complicity in a compromised world (e.g., Shotwell, 2016) is called out relentlessly, that prompts me to wonder if there is generative potential also in re-membering our “complicity” in care.

Touchable matters, I state in the title of this research; to be and become touchable is a matter of entangled response-abilities. The practices of sustainable change are engaged practices that seek to make differences that matter. Those practices unfold as sustainable beyond the sustainable “things” and “issues” they help to assemble, promote, teach, or design. With feminist (new) materialist thinking, the engaged practices of change-making begin to look crowded. In that
crowd, in that motion of pushes and pulls when becoming-with, it is the co-constituted conditions of possibilities for response-ability that reconfigure sustainable change.
8 Wondering

I don’t intend to capture an idea but to evoke further thought. (Barad, 2007, p. 439)

Writing this doctoral dissertation, I have slowed down with the almost-odd coincidences that assemble things and through which things have moved and affected me. By way of this wonder, my thinking with touch and response-ability figured. In the following subchapters I will make a pause to ponder the becoming of this research and to offer an account of my choices and their unavoidable limitations. In Subchapter 8.2, by way of seeking alignments with and for future research, I will consider response-ability as an ethico-affective touch and the ethico-politics of touching, as I have proposed them in this synopsis, as a matter of think-practice and a companion for sustainable change. What kinds of companions would such touches make for empirical inquiry, participatory design practice, or collaboration—and what kinds of challenges do such touches cast upon the thoughts-yet-to-be-thought and engagements-yet-to-be-engaged?

8.1 On doing (this) research

The setting of this research rests on a disparate terrain of trails and theoretical and conceptual companions of feminist (new) materialist onto-epistemologies, threaded within a post-qualitatively inspired, theoretical-methodological apparatus. My aim in combining this constellation of heterogeneous material-discursive matters was to generate new forms of understanding-becoming (Barad, 2014a, p. 187) for the engaged practices of sustainable change.

Basing my research on this experimental, propositional composition certainly invites questions and being questioned—both in the sense of curiosity and evaluation. On the other hand, I have not been as propositional as I would have liked to be. Pulls and pushes exist that make it so. Certain openings would have enabled more courageous wanderings—others less so. Navigating such restraints and lines of flight mattered when conducting this research, because, ultimately, I would like this work to matter; and for it to matter, it must be (trust)worthy.

“Nowhere can the controversies about paradigm differences be more fertile than in the extended controversy about validity,” write Lincoln, Lynham and Guba (2017, p. 137) in the latest edition of the SAGE Handbook of Qualitative Research, offering a fertile beginning to an inevitable section of a doctoral dissertation. In
evaluating qualitative research, the researcher’s gaze has often turned to questions such as “authenticity, credibility, confirmability, internal coherence, transferability, reliability, and significance” (Koro-Ljungberg, 2010, p. 603 [italics in original]) maintained as established principles of research that have guided practices for conducting research. Conversely, feminist scholars among others have called for more tentative, beyond-looking, and boundary-breaking negotiations for validity in qualitative research (Lincoln et al., 2017; Olesen, 2017; Richardson, 1993). The latter suggests the feminist praxis of transgressive validity wherein trustworthiness (Olesen, 2017) unfolds by the affordance of becoming-visible of the interwoven, or rather entangled, processes of “discovery, seeing, telling, storying, representation” in research (Lincoln et al., 2017, p. 141)—both for the researcher in the process of reiterative engagement and for the reader invited to trail-with and trail-off. Koro-Ljungberg (2010) maintains that it is this impossibility in particular that characterises validity in the processes of qualitative research. In other words, validity is “in the making,” is in-becoming, is surging through the unexpected rather than being covered by meticulous procedures. Subsequently, one might argue, the responses to such trouble, to the unexpected, make a difference. Haraway’s proposal of “staying with the trouble” (2016) would be alike “aporia” suggested by Koro-Ljungberg (2010); both making visible how the possibilities for response tease themselves out of the frictions and fractions in our comfortabilities and sense-of-abilities, frictions and fractions that may also cultivate response-ability.

Adopting this tentative, fluid validity as a starting point, I re-turn to my inquiry with wonder and to wonder. My methodological choices have rested on an understanding of the research process in terms of intricate entanglements of spacetime manifold encounters. With the ambivalently ordered figuration of reading/writing/thinking/engaging in the middle part of this work, I sought to amplify the embodied entangledness of being and becoming neck-deep in research. In this synopsis, such entanglements are manifested as re-engagements all the way down, from the pages of a book to participants of all kinds, from designerly interventions to managed goals and to unintended affects and effects. In order to offer the reader access to these nuances without claiming a definite end-point for their becoming, I have opted to “story” these engagements with companions that “do something” and to make visible how these ways of “storying” converge as a “hot compost pile” (Haraway, 2016, p. 4) of all manner of matters.

In my research, I have found myself grappling with the challenges of conducting research in and in-between disciplines. One might find such uncomfortable “in-betweens” in interdisciplinary research or merely research that
is concerned with things and issues that evade being bound by disciplines. These terrains of research invite—sometimes push—the disruption of theoretical lineages and conceptual comfort zones. Engaging in such interdisciplinary terrains is challenging, requiring that one not only discover but actively seek new manners of making and re-making commitments and connections, not simply to maintain or strengthen manners that already exist. I contend that these interdisciplinary terrains require perhaps a different mode of engagement. In engaging with my conceptual and theoretical companions—and working with them within the in-betweens described—I aimed to think with (theory) amplified with care, an aim I understand as affirmative engagement; as more care than critique—in multiple senses (Barad, 2014a, p. 187; see also Grosz, 2005; Lykke et al., 2000; Puig de la Bellacasa, 2012; van der Tuin, 2011). This mode of engagement is not all warm cosy sentiment; one may certainly think-with even with those one does not agree with (see Puig de la Bellacasa, 2011). Indeed, the engagement I commit to is a different mode of thinking-with that rests on response-ability and touch, on contagion and indebtedness rather than separation and detachment. For me, this form of engagement has also generated knots of citations with unexpected sires (Haraway, 2010).70 Thinking now—and again—with Ahmed (2017) and Haraway (2008; 2016), it matters what knots of citation we tie, what dwellings are built. Here too, we—including me—are “caught up” in care and commitment. I agree with Ahmed’s (2017) proposition about living a feminist life: we are indeed living lives, enacting and entangled in the stories with which we tell other stories; in other words, paraphrasing Haraway (2013),71 it does matter what stories we tell other stories with.

Care in the companionships we seek and nurture is a point of scrutiny in the terrains of validity also (Lincoln et al., 2017, p. 142), meaning that pressure exists for a researcher to offer an account of research practice. This responsibility may manifest, for example, in exploring and explicating the positionalities of the researcher so as to “cover” for unintended influences entailed in efforts to “capture” the empirical world (Hesse-Biber & Piatelli, 2012). Another approach to

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70 As Haraway writes, “Knots of citation for me are ways of insisting on messy genealogies—lateral, vertical, and patterned in other sorts of cats cradle games—that might include canonical philosophers in the ties, but do not usually originate in their texts, or even know their terms until after the engagement from somewhere else makes me need to read them too” (2010, p. 53). Here, I am tempted to return to the idea of trajectories entangled in spacetime, which hold the capacity for wonder to remain.

71 “It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what ties tie ties. It matters what stories make worlds, what worlds make stories” (Haraway, 2013, para. 4).
responsibility has been sought by turning to the study participants, by scrutinising researcher’s empirical engagement and relations of trust—or rapport (Hesse-Biber & Piatelli, 2012)—with the people with whom one works with, and by investigating issues of voice and polyvocality, representation, authority, and power (Olesen, 2017; Pillow & Mayo, 2012). My objective in this, my own study, was not to uncover truths, but to allow the question of sustainable change to unfold through reiterative, diffractive engagement in the terrains of this research; in other words, through wandering and wonderings. “Through” is an important preposition in terms of this claim; it affects in particular how I approach and understand the empirical. “Through” entails, firstly, that I seek not to cover a terrain or map a domain (Mol, 2014), but to generate new modes of thought. It means, secondly, that I refrain from claiming to represent empirical others or their voices as awaiting to be unpacked from the data. Instead, I engage with those voices, and, as such, maintain that my response-abilities are crafted with them.

When compiling this synopsis, as I contended in the beginning, I have wondered about how the articles which, with their empirical tentacles, reach back over ten years, could be compiled, and how the resonances between those articles could be given room in and as part of this work. In weaving the four articles and in particular the two empirical terrains together and in building my methodological approach—method/ology-now—I have attempted to engage with the process, with the full ecology of reading, writing, thinking, and engaging, in all their temporal, material, and spatial complexity. I maintain this engagement with the process has been an important task, and one that has enriched the understanding of the nuances of the engaged practices that my empirical terrains involved.

In a traditional canon, my task would be to map out the limitations of this research, which I have done in part. Ultimately, research always contains partialities and particularities. However, by wandering thereabouts and slowing down to engage with the in-betweens, this study emerged as a very particular “story” of sustainability. Other stories exist that might have provoked a different response; the researcherly composition proposed by this research is particular in that sense. My plan in compiling this synopsis was neither to shy away from the above particularities nor to “clean them out” via strategically placed statements and disclaimers. Rather, my plan, resting on affirmative engagement rather than on constructed and constructing distances, was to engage with the potentiality of affirmative engagement by “storying” again and again, not for the sake of clarity of vision but to hold to the ambivalence of “and then” as a question and anticipation.
Nonetheless, with or because of limitations and partialities, I hope this dissertation has elicited further thought, offering an account of the “otherwise” and of the possibility for the wonder to remain. The quote from Barad that began this chapter has been a provocation for me. Certainly, to provoke further thought is a vague, uncertain objective to pursue and is one impossible to evaluate. Nevertheless, I contend that, from the corner of the world in which this is written, this work (too) has the capacity to provoke further thought on how we—scholars, citizens, human beings, and, ultimately, participants in a more-than-human world—understand sustainability and what concepts-as-companions we pattern sustainability with. I hope it may provoke further thought on how sustainability matters beyond the outcomes we envision or the ones we enact; sustainability matters in the practices of change-making in participatory design, education, and everyday engagements as finely woven strings and threads that co-constitute response-ability.

8.2 Provocation for sustainable change: Openings for engaged practices in research, design, and education

My research has not engaged with the terrain of ecological sustainability, in which the need to “come into connection with” and to make changes to how we live is needed heavily—nor have I engaged with global vulnerabilities in social spheres of life such as poverty, forced migration, conflicts, and war. I have wandered with sustainability to the mundane makings of change and to the mundane in which non-violences are in-becoming and in-the-making. Inviting feminist (new) materialist thinking for my companion, in a sense of curious marvel, I wonder how the challenge of being and becoming response-able with the non/contemporaneous and in/determinate traverses our multiple ordinaries of different kinds in their scalar complexity (Barad, 2007; see also de Freitas, 2017; Haraway, 2010). In my research, these were entangled ordinaries in participatory design; entangled ordinaries in teaching and learning; entangled ordinaries of making changes to our lives, raising children, caring, hoping, failing. By taking as my starting points these multiple ordinaries of different kinds and showing how they are occupied by touches of response-abilities, I have aimed to situate us human beings in the middle of sustainable change in entangled encounters where matter meets matter—and in which care, commitment, and response are not possessed but distributed and unyieldingly entangled in time, space, and matter. When I took up the challenge of wandering with sustainability, I discovered very few articulations for sustainability
that would encompass the complexity and level of mundane I sought. The ideas of sustainability articulated, just did not seem to me to fit the encounters in which sustainability seemed to matter immensely. Ultimately, therefore, I reconfigured a different way of thinking about sustainability within and for the engaged practices of change-making.

If this inquiry has done its work, it will have provoked further thought. For me, working on this study has provoked a conceptual and theoretical-methodological curiosity as to how one might conduct interdisciplinary research that wanders in and between the engaged practices of change-making. It has also provoked a careful curiosity about touch and the touchable and about the potentialities of touch and touchable, towards understanding the materialities and relationality of care and response. As concepts are practical matters, my curiosity lies in bringing this notion of touch to “touch practice.” Thinking with this ontologically queered touch could bring about new modes of thinking beyond human senses, as a source of wonder and transformation.

This research allows and invites the pursuit of further work on the potentialities held by these “concepts-as-companions” and “partners-as-patternings” for design, research, and pedagogical practice. It provides an account of research driven by concerns that traverse disciplinary boundaries, but converge in an attempt to address engaged practices. I argue that, due to this inter- and transdisciplinary approach in particular, I was able to extend from participation exclusively to an examination of the wider range of ways in which we, as designer, researchers, and educators, are weaving and woven in the fabrics of sustainable change.

Increasing number of those engaged in design and research are calling for sensitivities and sensibilities in designing and accounting for situated, embodied entanglements involved in design practices (Akama et al., 2015; DiSalvo et al., 2014; Ehn et al., 2014; Light, 2015; Light, Shklovski, & Powell, 2017; Lindström & Ståhl, 2016b). Moreover, participatory design practice—when taken to new terrains and in reaching for contested goals—must find ways of engaging with this complexity. In my research, I have opened up to consider touch as a form of affective in-between, suggesting the possibilities of touch as a think-practice of slowing down so as to become attuned to the ongoing dynamics of the world; its idiots, ghosts and __________s 72 (Michael, 2012; Popplow & Duque-H, 2017; Popplow & Duque-H, 2017).

Stengers, 2005; Stewart, 2011); slowing down enough to sense, feel, and touch the im/possibility imminent in “every morsel of finitude” (Barad, 2012b, p. 17). What all and what else are we in touch with? What all and what else do we become-with? Design(ing) with (more-than-human) touch introduces the possibility of pairing the ethical and political with the ethico-affective in a generative manner. To explore this “affective” otherwise for design73 could enrich the ethical, political, and generative practices of design. Such explorations also connect to the efforts in this work to diffract reflexivity. I maintain that pursuing this line of thinking might offer important insights into how change-making emerges as sustainable change and, most importantly, might allow us to rethink how response-abilities cut across and traverse, in uncontained manner, the envisioned futures, communities, publics, and practices of designer-researchers’ in the dynamics of designing, participating, and engaging.

I have also brought sustainability into contact with matters of violence and non-violence. Often, non-violence as a concept holds a place as a condition of a community in the discussion on sustainability—or is viewed in the context of global sustainabilities. Non-violence traverses discussion as an abstracted vision or virtue or as an end-point to a process of change. As a feminist pedagogical and ethico-political challenge, it is more common to understand non-violence via violence, setting non-violence in dyadic relation with violence, hardly ever as something felt, enabled, or maintained in its own right. Aligning with important contributions of feminist posthuman and new materialist theories, in order to unsettle the dyadic and individual-centred understandings of violence (Bansel et al., 2009; Huuki & Renold, 2016; Huuki & Sunnari, 2015; Renold, 2018; Søndergaard, 2012, 2016; Zabrodska et al., 2011), this research began to address the challenge of gender-related violence by unfolding the manifold ways non-violence matters within the complexities of everyday and institutional sites where non-violence is enacted and maintained (see also Pihkala et al., 2017). This unexplored approach to the matter of violence and non-violence holds great potentialities to inform both theory and practice. Integrating nuanced understandings of how non-violence is imagined, animated, and enacted offers the capacity to support practical engagements, in efforts to tackle violence and foster our abilities to account in a more sustainable manner for the conditions through which non-violence comes to matter in our everyday relationships. This is also, centrally, a pedagogical challenge.

73 For discussion on the other roles played by affect, particularly in human computer interaction (HCI), see, for example, Boehner, DePaula, Dourish, & Sengers (2005).
Therefore, it is important to continue to probe the pedagogical possibilities of this thinking, a challenge I welcome as I construct spaces for learning (but also unlearning) about violence and non-violence in my work in Gender Studies. It is a pressing matter of justice and sustainability to approach the question of how violence and non-violence come to matter as ethico-political objects of care and concern—through concern and care—in the lived, lively already-ethical everyday practices.
9 And then

I began this synopsis with my ordinary engaged encounters which, in all their nitty-gritty ordinariness, are still the heart of this study. They matter, because, to think with Barad (2007), every encounter, each meeting, every touch is both ordinary and particular as it is never just a meeting—it is the universe inviting us along.

Sustainability as a form of address is a non/contemporaneous and in/determinate matter; in so being, sustainability asks us to “be in touch” with times other than our own, to always lean a little forward while re-turning the pasts, our feet still firmly in the present. Sustainability has come to stand for a normative “should be” that envelopes us in a sense of responsibility. We have begun to rethink our role in the shapes the world has taken, worrying ourselves with changes occurring and changes in which we are ourselves invested, working to steer change by creating conditions for sustainability through education, innovation, and collective action. Sustainability as a concern may seem inescapable, yet its practices, standing on neoliberal crisis management (Butler & Athanasiou, 2013) make sustainability a project, make it something to be injected into, for example, pedagogical and design practices.

In this study, I have aimed to contribute to rethinking how we are woven into the fabrics of sustainable change, beyond tasks, competencies, or ethical add-ons in pedagogical and design practices, or in any “project-as-provocation” in general. My research setting has allowed—and challenged—me to wander-with-wonder, exploring the ways our goals for should-be and could-be-futures come to matter in the everyday social-material constellations of engaged practices of change-making. Considerable hope—and commitment—is at play, with considerable trouble, mess, and muddle. I have proposed taking a reconfigured account of responsibilities in and for the engaged practices of sustainable change, an account that takes serious note of these hopes, commitments, messes and muddles. Those hopes, commitments, messes, and muddles are, after all, co-constituencies of the whats, whoms, hows and for whats of sustainable change.

I will end therefore with a thought, a sense, a touch. I end with the thought that those practices with which and through which we engage in making better, more liveable worlds—no matter their scale or object of concern—are sites and spaces in which a “sustainable this or that” is not only accomplished, but in which conditions for an ethically sustainable response are reconfigured.
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Original publications are not included in the electronic version of the dissertation.


166. Sulkakoski, Marjut (2016) ”Ihan vaan perusasiat pitää osata hyvin”: ammattikorkeakoulujen insinööriopiskelijoille lukuisen kokemusten pohjalta rakentunut matematiikkakuva


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Suvi Pihkala

TOUCHABLE MATTERS
RECONFIGURING SUSTAINABLE CHANGE
THROUGH PARTICIPATORY DESIGN, EDUCATION, AND EVERYDAY ENGAGEMENT FOR NON-VIOLENCE

UNIVERSITY OF OULU GRADUATE SCHOOL;
UNIVERSITY OF OULU,
FACULTY OF EDUCATION