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I LOVE PLASTICS

A diffractive material-cultural analysis of human-plastic relationships in Finnish cultural landscape based on Yle's plastic awareness campaign

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ABSTRACT

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As plastics have reached both the deepest oceanic corners and orbits in space, as sea creatures choke on plastic bags and plastic particles of different sizes accumulate around the globe, it has been acknowledged that we are living amongst a "plastic crisis". However, a life without plastics does not seem to be possible anymore. Thus, something in the relationship between human beings and plastics needs to change.

This study analyses human-plastic relationships in a Finnish cultural context. My data consists of multimodal media content produced for the Finnish public broadcaster Yle in spring 2019 under the plastic awareness campaign called *I Love Plastics*. I approach this data through new materialist and posthumanist theories, in order to explore the ways how plastics and human beings and materially and culturally entangled. These theoretical and philosophical fields answer scholarly to the ecological crises of contemporary times through rethinking the concept of human and attuning to the affective, intra-active becomings in assemblages that consist of human and more-than-human actants. The method used is a diffractive material-cultural analysis, which follows a rhizomatic way of producing knowledge. Diffractive reading is an interpretive methodology that sees research as a "practice of entanglement", where different texts, theories and concepts are read through each other. This methodology does not only apply for the analysis in this work, but it is a research practice and a tool for thinking that runs through the whole thesis.

The first aim of this study is to produce new insights on the complexity of human-plastic phenomena and conceptualize different kinds of modes of becoming-with plastics in the situated context of Finnish culture and society, and even touch upon the ethico-political aspects of these becomings. The idea is to observe what kind of human beings emerge from plastic entanglements, and how and why are these processes unfolding in our society. The second objective is to contribute to the methodological development of new materialist and posthumanist studies and to explore the empirical possibilities of these theories.

The analysis starts with a critical observation of the hegemonic consumer-subject. After that, I move on to map out historical, cultural and affective becomings related to specific plastic artefacts, such as plastic buckets, nylon stockings and film material. My analysis is culminated in the last chapter, where I present my figuration of becoming-sober, which is a conceptual ethical subjectivity that is inspired by plastics. This becoming hints towards a new, collective subjectivity, that is committed to dealing with plastic troubles in an ethical, creative, affirmative and compassionate way. Altogether, my analysis shows that our relationship with plastics is by no means rational or straight, and thus our plastic relations are not simply stories of capitalistic malice or greedy laziness, but they are also stories of affirmative action, desire, and joyous encounters

I propose that a more deeper and nuanced, culturally and materially complex understanding of plastic relations is needed in order to cultivate curiosity and thus, inspire change. My conclusion is that when we think actively with plastics and become aware of their affective materiality, a window for change through affirmative becomings opens up. These changes are not big or radical, but as they accumulate, the results can be crucial for the future of this planet.

Keywords: Plastics, new materialism, posthumanism, affective becoming, assemblage, entanglement, diffractive analysis, subjectivity

Tampereen yliopisto

TIIVISTELMÄ

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Muovi on vaikuttanut merkittävästi ihmiskunnan edistykseen ja hyvinvointiin 1950-luvulta lähtien, mutta tämä utooppinen materiaali on valloittanut maailman kovalla hinnalla. Luontoa ilman muovia ei enää ole, sillä muovia löytyy niin syvänmeren haudoista kuin myös maata kiertävältä radalta avaruudesta. Ympäri maapalloa kasaantuvat erikokoiset muovipartikkelit ja niihin tukehtuvat merieläimet ovat havahduttaneet ihmiset ”muovikriisiin”. Samalla elämä ilman muovia ei tunnu enää mahdolliselta. Tästä syystä ihmisen ja muovin suhteen on muututtava.

Tämä tutkimus analysoi ihmisen ja muovin suhdetta Suomen kulttuurisessa kontekstissa uusmaterialistisesta ja posthumanistisesta näkökulmasta. Nämä teoriasuuntaukset etsivät vastauksia filosofisiin kysymyksiin ihmisyydestä ja suhteisuudesta antroposeenin ja lukuisten ympäristökriisien aikakaudella. Valitsemani teoriasuuntaukset pyrkivät ajattelemaan uudestaan ihmisyyden määritelmää ja merkitystä tässä keskinäisriippuvuuksien ajassa. Uusmaterialistiset ja posthumanistiset teoriat ottavat huomioon ei-inhimillisen materiaalisuuden osallisuuden affektiivisissa kokoumissa. Tässä työssä keskityn erityisesti intra-aktiivisen, materiaalis-kulttuurisen olevaksi tulemisen tutkimiseen. Olevaksi tuleminen (becoming) on avoin tapahtuma, jossa subjektit ja subjektiviteetit muuttuvat ja saavuttavat kykyjä ja ominaisuuksia suhteessa muihin olioihin.

Kysyn tutkimuksessa 1) kuinka ja miksi ihmiset tulevat oleviksi suhteessa muoviin ja 2) millaisia eettis-poliittisia vaikutuksia näillä prosesseilla on. Aineistoni koostuu multimodaalisesta mediamateriaalista, jota on tuotettu Ylen keväällä 2019 julkistettuun *I love muovi* -kampanjaan. Analysoin aineistoa itse kehittämälläni metodilla, jota kutsun diffraktiiviseksi materiaalis-kulttuuriseksi analyysiksi. Metodi seuraa rihmastomaista tiedontuotannon tapaa, joka sallii epähierarkkisen ja yllättäviin suuntiin kurottuvan ajattelun. Diffraktiivinen luenta on tulkinnallinen menetelmä, jossa erilaisia teorioita, tekstejä ja käsitteitä luetaan toistensa läpi yhteenkietovalla ja sommitelmallisella tavalla. Täten tässä tutkielmassa metodologinen otteeni ei päde ainoastaan analyysiosuuteen, vaan se ohjaa ajattelua ja kirjoittamista koko tutkielman läpi.

Tutkielmallani on kaksi päämäärää. Ensimmäinen päämäärä on tuottaa uusia näkökulmia ihmisen ja muovin kompleksisesta suhteesta ja käsitteellistää erilaisia muoviin kytkeytyviä, suomalaiseen kulttuuriin ja yhteiskuntaan paikantuvia olevaksi tulemisen tapoja, ja lisäksi tarkastella näiden prosessien eettis-poliittisia ulottuvuuksia. Toinen päämäärä on osallistua uusmaterialististen ja posthumanististen teorioiden metodologiseen kehitykseen, ja tutkia näiden teorioiden soveltuvuutta empiiriseen tutkimukseen.

Analyysini alkaa hegemonisen muoviin kytkeytyvän subjektiposition, eli kuluttajuuden kriittisellä tarkastelulla. Seuraavaksi siirryn kartoittamaan tiettyihin muoviesineisiin, kuten ämpäreihin, sukkahousuihin ja filmimateriaaliin liittyviä historiallisia, kulttuurisia, materiaalisia ja affektiivisia olevaksi tulemisia. Analyysini viimeisessä osassa esittelen oman figuraationi, jota kutsun raittiiksi tulevaksi. Raittiiksi tuleva on muovisuhteiden innoittama käsitteellinen eettinen ja kollektiivinen subjektiviteetti, joka on sitoutunut toimimaan muovin kanssa myönteisesti, luovasti ja myötätuntoisesti sen ongelmallisuudesta huolimatta.

Analyysini osoittaa, että suhteemme muoviin ei ole rationaalinen tai yksiselitteinen, vaan se on rykelmä suhteisesti rakentuvia haluja, iloja ja kauhuja. Tutkielmani pohjalta väitän, että materiaalis-kulttuurisen muutoksen aikaansaaminen vaatii syvällistä ja vivahteikasta ymmärrystä muovisuhteiden monimutkaisesta ja affektiivisesta luonteesta. Nämä muutokset eivät välttämättä ole suuria tai radikaaleja, mutta niiden kasaantuessa, tulokset voivat olla merkityksellisiä yhteisen, ei-ihmiskeskeisen elämän järjestämiseksi tällä planeetalla.

Avainsanat: Uusmaterialismi, posthumanismi, muovi, affektikokouma, subjektiviteetti

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1 INTRODUCTION

A small black-and-white clownfish swims across the TV screen. The fish is looking for a shelter for an alfa female clownfish to lay her eggs in. The oceanic landscape is relatively barren, so finding a suitable object is not an easy task. First, the fish finds a shell, but it is too heavy and already occupied by a hermit crab. Next, a plastic bottle enters the stage. It is already covered in organic growth, something oceanic plastic researchers call a "plastisphere", which means an inseparable entanglement of synthetics and life, organic matter growing from synthetic stuff (see Kim De Wolff 2014). The clownfish tries to push the bottle with his nose. The bottle, however, is too light to become a shelter for the fish. In the end, the little hero picks a coconut shell as an adequate nest for the female clownfish to lay her eggs in. The plastic bottle continues its drift across the ocean floor.

When I saw the fish pushing the plastic bottle for the first time, my head started to spin. In a Sir David Attenborough documentary, always so intent to show the marvels and mysteries of our great planet, a plastic bottle, a sign of human activity, appears as if it was a part of the natural habitat of the clownfish. Plastics have not normally been a part of natural documentaries, but today they need to be since there is no place on this planet without plastics. They have become an integral part of landscapes. Plastics problematize the contested boundary between nature and culture, as they defy belonging to either of these realms. Yet plastics do exist and thus they become a bridge that crosses matter and meaning, nature and culture, human and nonhuman, and raises questions of complex entanglements in times of environmental disasters, climate change and the Sixth Exctinction.

Similar to other viewers in the spring of 2018, I too became one of those who were swiped away with the so-called "Blue Planet effect". Even though plastics have caused worry and suspicion for decades already, the pivotal moment in awareness and readiness for action is very recent, and this has been partially attributed to the mentioned documentary series, Blue Planet II. The series was published at the end of 2017 and was shown across the world. In Britain it was the fourth most watched TV programme of all times. Besides presenting oceanic wonders, it also took a clear stance to environmental problems. The series evoked outrage with its footage of animals suffering from plastics and other human-inflicted reasons. Suddenly, plastics were all over the media space: in massive ocean swirls, forming islands, in the bellies of marine animals, in our own bodily circulation systems as microplastics. Media coverage of the issue was booming and people were promising to take action on all levels of the society, and some in the field of studying plastics begun to talk about the Blue Planet effect. Professor Richard Thompson who studies microplastic ocean

pollution, wrote in BBC:s Science Focus magazine in April 2019 that "a few minutes of coverage by Blue Planet II has done more to raise awareness than the decades of underlying research could ever have done alone" (Thompson 2019). In addition, I also anticipate that plastic worry has to do with the rising alarm of climate change and other Earth system disruptions. The workings of climate change are, however, relatively slow and hard to observe in one's daily life. Instead, plastic waste is a very visible and tangible material phenomenon that can be experienced in households, in lived environments as well as in dramatic news pictures of choking animals. It is easier to rebel against plastic straws than multinational fossil companies. Our planetary anxiety unravels in small bites.

Existing research recognises that plastics have changed human and nonhuman cultures in a revolutionary way, and plastics are commonly accepted as a powerful material symbol of the twentieth century and consumer capitalism. French philosopher and literary theorist Roland Barthes marvelled plastic already in the 1950's. In his book Mythologies, Barthes calls plastic a "miracle" due to its ability of transformation. Barthes writes "a miracle is always a sudden transformation of nature" and continues that "[p]lastic remains impregnated throughout with this wonder: it is less a thing than the trace of a movement" (Barthes 1957, 97). But even Barthes despised plastic for its un-Naturalness, calling its sound "hollow and flat" and its colours "chemical-looking" or "aggressive". Barthes foresees the plastic future, when he writes that nature is bound to be forever transformed by plastic, since "it is about to replace her" (ibid. 98).

> "The hierarchy of substances is abolished: a single one replaces them all: the whole world can be plasticized, and even life itself since, we are told, they are beginning to make plastic aortas." (Barthes 1957, 99).

Barthes was quite right in his prediction. Plastics became ubiquitous, but as is apparent, appreciation did not follow hand in hand. Plastics have been used as a metaphor for inauthenticity, shallowness and consumption culture (Bensaude Vincent 2013, 24). Plastic bears the connotations of fake, light, artificial, disposable and cheap. As the matter became easily accessible for everyone, it also lost its value. Barthes (1957, 98) put it well: "[t]he price to be paid for this success is that plastic, sublimated as movement, hardly exists as a substance".

Yet the past years have proven that plastics should not be taken lightly. It may be exactly the strong discursive contempt towards plastic that has produced the very material crisis at hand. The materiality of plastics is causing troubles to both human and nonhuman beings. Plastic pollution is one of the biggest environmental threats. Plastics are also a marking substance of the Anthropocene, the age of Man. Together with mass-produced animal bones, plastics can be found in the planet's

geological memory as a reminder of the species that turned the Holocene around. Plastics keep accumulating to the sediments at this very moment. In Timothy Morton's (2013) terms, plastics have become a hyperobject which resists traditional boundaries of matter in the sheer volume of their existence in relation to humans.

Despite the troubles that accompany plastics, the mainstream opinion is that a life without plastics is not possible anymore. If we can't live without plastics, then something in that relationship has to change, since keeping up with current style means more of the same troubles. Now, it is important to notice that my interest is not to demonize plastic any further but to seek conceptualizations that would help us to understand better the complex relations we have with plastics and also demystify the workings of plastics in a world, where nature and culture are so intertwined that separating them is artificial and even counterproductive. Plastics are an inseparable part of our daily lives and as such, would deserve much more nuanced attention than they currently receive. While plastics are accused for pollution, killing sea creatures and accumulating in the fringes of our societies, they also make lives so much more comfortable and easier today for human and sometimes nonhuman actants as well. Plastics can both save lives and take lives.

In order to turn the focus to the materiality of plastics and explore the ways how plastics and human beings are materially and culturally entangled, this study takes a new materialist and posthumanist approach to research human-plastic relationships. Both of these fields answer scholarly to the ecological crises of contemporary times through rethinking the concept of human, analysing how our societies are material, social, cultural, technological and discursive at the same time, and attuning to the *affective*, *intra-active becomings* in *assemblages* that consist of human and more-than-human actants (see Coole & Frost 2010; Fox & Alldred 2016; Braidotti 2019; Coleman & Ringrose 2013, Barad 2003). Many of these theories take a normative approach, which mean they aim for a social process of change towards a more sustainable future for all (see e.g. Coole & Frost 2010; Alaimo & Hekman 2008).

New materialism in this study is understood as a field that moves beyond representationalism and social constructionism, broadening the vision to the doings of the material world (see e.g. Coole & Frost 2010, Alaimo & Hekman 2008). For new materialist studies, matter and meaning are co-constitutive, and matter and material practices should thus be taken into account when performing political or cultural analysis. In addition, new materialists offer a robust account of how matter itself should be perceived as an active and lively participant in different assemblages.

Posthumanism in this study is understood in Rosi Braidotti's (2019) terms as the critique of the Enlightenment or humanistic subject, which has portrayed the white, rational Man as the only capable subject, and as a critique of Anthropocentrism, which refers to a worldview where environment and natural resources have been perceived as subject to Man, and where Man has been the measure of all things. Posthumanist theory de-centres the human, making space for a more equal and compassionate way of non-hierarchical existence across species and modes of being, while at the same time asking questions about the direction where the concept of human is heading. The relationship that human beings have to plastics reveals a lot about ourselves, and the conflictual relationship we have now is something that stands on the verge of what we, as a species, have been and what we want to become (Braidotti 2019). We do not want to live with it, but we can't live without it. I propose, that while in the beginning it was the human being who shaped plastics, it is now plastics that shapes us in posthuman times. As Pyyhtinen (2015, 78) writes, "[i]nstead of humans standing as the sole creators of things, the materials and objects with which we are entangled significantly shape our capabilities and what we are". The strange lust and contempt towards plastics produces interesting openings for thinking about subjectivity, humanity, capitalism, desire, ethics, responsibility, accountability and politics, just to mention a few.

New materialist and posthumanist theories are a great way to approach plastics also because they resonate well with the ambiguous, disruptive and uncomfortable nature of plastics. The ethico-political questions that come up with plastics are not easy ones, and thus plastics invite us to "stay with the trouble", as Donna Haraway (2016, 2) would say. These theories are a good tool to tackle the complexity of plastic relations, as they are open for surprises and new thoughts, ready to take on new figurations and boldly conceptualize further the complex phenomena that take place in our hyperconnected and risky societies.

Previous research in these fields has pointed out that plastics is a harmful matter that should be investigated in all its complexity (see e.g. Giraud 2019, 2–3; Alaimo 2016). However, much of the research has remained either descriptive in nature or the focus has been limited to the harmful effects of plastics. While the negative impacts of plastics have been robustly accounted and the links between plastics and consumer culture and advanced capitalism have been critically examined, I have not seen many accounts of *how* exactly we affectively engage with plastics and what does this mean when it comes to rethinking our plastic policies, especially from an affirmative viewpoint. The angry discursive buzz against plastics almost hinders us from looking at plastics in a sober way. I anticipate that there are a lot more to plastics than the negative discourse lets us understand.

Hence, my task is to look at plastic entanglements without judging them as good or evil. As Braidotti (2019, 9) writes, "[d]espair is not a project; affirmation is". I argue that thinking about plastic entanglements in a nuanced manner can make human subjects more aware of their actions and that thinking-with and becoming-with-plastic can lead to positive change in what is commonly called as the "plastic crisis". Gay Hawkins (2010) argues that a politics that pays closer attention to the materiality of plastics could "participate in generating new associations and ethics", and this is what I want to take part in with this work. Gabrys, Hawkins and Michaels (2013, 2) argue that the "vitality, complexity and irony of plastics" should be taken into account in contemporary cultural and social research on plastics. I stand with these scholars when they say:

> " Rather than argue for the simple elimination of plastics, we suggest that the material politics of plastics require that we attend to these unfolding relationalities and responsibilities in order to ask: to which material and political futures are we committing ourselves, and in what ways might an inattention to the material politics of plastic foreclose opportunities for inventing different material futures?" (Gabrys, Hawkins & Michaels 2013, 5)

The writers argue that "recognition of the material force of plastics prompts new forms of politics, environmental responsibility and citizenship" (2013, 4). My research sits in the continuum of the work that Hawkins et al. started in their book. Whereas Hawkins et al. do not specifically refer to new materialist theories as their starting point, they do hint towards the vital materiality of plastics and as such, they suggest more than traditional material cultural studies. However, the focus point of my study is slightly different: as Hawkins et al. focus on "when and how plastics as materials become political" (2013, 5), I intend to look at how these becomings affect human beings, the concept of humanity and questions of responsibility. However, there is a lot that we have in common, since in both cases "we begin to think about the new relationalities that plastic is generating, and how these relationalities become sites of responsibility". (ibid.)

There are two gaps that I would like to contribute to with this thesis. The first gap is a theoretical issue. Many of the studies done under new materialist and posthumanist tags have aptly shown the interconnectedness of human and nonhuman entities both in harm and good. In the last couple of decades, these approaches have offered a robust account of mutual becomings, outlined material agency and argued for a new version of human subjectivity instead of the irresponsible Anthropos (Braidotti 2019). Human hubris has been duly criticized, human mastery over nature has been called into question. The division between nature and culture has been banished, as several scholars have shown how old dichotomies do not work in a world that takes material-cultural becomings seriously

(see e.g. Alaimo & Hekman 2008). And they have to be taken seriously, if a more equal, safe and sustainable world is to be achieved.

However, one of the greatest challenges of new materialist and posthumanist studies is in their lack of empirical advances. My path with these theories has moved from exhilarated inspiration to a sort of frustration: *so what*? While theorization of assemblages, actor networks and agencies has thrived, not many studies have yet looked at the actual implications of such theorizations. Methodology-building for new materialisms is still a work in process. The field has been criticized for its lack of implementation (see e.g. Abrahamson et al. 2015). Converting high theory into tools to understand mundane, everyday practices has proven to be a difficult task (see Coleman & Ringrose 2013).

Thus, the gap that still somewhat exists in these fields is the gap between theory and empirical studies. By reading media products through posthumanist and new materialist theory I want to bring these levels closer to each other and contribute to the methodological work in the field.

Secondly, as was already stated earlier, I am interested in understanding our plastic relationships in a more nuanced way and contributing new insights on plastic entanglements, the subjectivities that become with plastics and their ethico-political consequences. I do not think that our relationship with plastics is in any way simple, and I do think that plastics matter greatly in our everyday lives, affecting how we live and how, through these mundane practices, we perceive ourselves and others.

Furthermore, I have not seen such research done in Finland. According to new materialist thought, subjectivities are particular and situated, and that is why also plastic-related subjectivities should be investigated in their culturally-specific contexts. I am interested to see how the global scale of plastic crisis informs local everyday practices in Finland. Coole and Frost (2010, 36) derive from Foucault's and Althusser's work when they emphasize that it is important to critically examine our ordinary material practices, to recognize the mundane and seemingly obvious and take a second look at it, and through that explore "the complex ways in which such familiar practices are effects of more distant power relations that they also help to produce". Even the most mundane ethical domestic practices are tied to massive political and economic abstractions with material consequences, such as global capitalism, social injustices, climate change, pollution and extinction (Alaimo 2016, 10). As Blaise (2013, 189) writes, "micropolitics considers the small, everyday encounters as significant to the processes of change".

It is important to note that in the end this thesis is not that much about plastic and its agency. Rather I am interested in what plastic reveals about human existence and how this current condition informs possibility or rather, a need for change. The notion on "becoming-plastic" has been thrown

out in a couple of studies (see e.g. Roberts 2013), but I want to look more closer to this concept of *becoming-with* plastic, which would look at the ways in which plastics affect the ways how human beings orient themselves. I want to ask questions of the current human-plastic condition, how we got here and what are the consequences, and then map out the possible new ways to be an ethical subject on this planet. As Eva Giraud asks in her aptly named book, the next big question for the field is what comes after entanglement. According to Giraud, "simply acknowledging that human and more-than-human worlds are entangled is not enough in itself to respond to problems born of anthropogenic activity" (Giraud 2019, 7). My aim is exactly to look beyond entanglements to the subjectivities that are born out of these relations and their ethico-political implications.

As the matter is complex, it entails a methodology that suits the task. For the sake of this study, I have developed a method that fits the problem. I call it a diffractive material-cultural content analysis, which follows a rhizomatic way of producing knowledge. Rhizomatic thinking is a term coined by Gilles Deleuze and Felix Guattari, which envisions thinking and writing in a similar way in which an organic rhizome system would grow underground, sending shoots here and there, without hierarchy or clear lines of descent, without a start or an end (Adkins 2015, 23). As rhizomes entangle and spread, so can thinking spread and grow in new directions and make new links with other rhizomes. A rhizomatic approach helps to make interdisciplinary research, move between different discursive fields, avoid fixed and passive points, and see connections where they before were unseen. Diffractive reading is an interpretive methodology that sees research as a "practice of entanglement" (Iovino & Oppermann 2014, 9), where different texts, theories and concepts are read through each other. Again, texts are not in a hierarchical position against each other, but they are interpreted and taken further through each other. Reading diffractively "allows us to actively participate in a creative process in which material levels and levels of meanings emerge together, contributing to the world's becoming a web teeming with collective stories" (Iovino & Oppermann 2014, 10).

The methodology for this study thus does not apply only to the analysis, but it is a guideline, a red strand, a practice of entanglement that follows throughout the whole thesis. It is an invitation to become a part of the research-assemblage. The assemblatic and accumulative nature of this study is metaphorical to the nature of plastics: plastics accumulate, they are here and there, they seep to unimaginable places and pile up on top of each other. In the same manner theories, concepts, empirical material and new insights accumulate and build on top of each other in this work, resulting in a sweeping current that defies traditional modes of academic writing. The text is robust, rhizomatic, sometimes slippery, which is metaphorical to the nature of the matter that we are

dealing with. In this tradition of writing I owe to such material feminists as Donna Haraway, Jane Bennett, Anna Lowenhaupt Tsing and Stacy Alaimo. This thesis is a rhizome, inspired by inorganic matter and flesh-and-blood thinking.

Thus, my objectives for this study are firstly, to explore the empirical possibilities of new materialist theories, secondly, to analyse human-plastic relationships creatively via diffractively reading data and theory through each other to produce new insights on the complexity of these phenomena and thirdly, conceptualize different kinds of modes of becoming-with plastics and touch upon the ethico-political aspects of these becomings in the situated context of Finnish culture and society.

In order to achieve my objectives, the research questions that I pose for my material are:

1) How and why are human beings becoming-with plastics in this data?
2) What kind of ethico-political consequences can be mapped out from these becomings?

The research questions are not only relevant in relation to the analysis section, but they are an important reading advice for this whole assemblatic, accumulative thesis. The literature review in itself is already built in the direction of these questions. Important concepts, such as assemblage, becoming, intra-activity and relationality that are discussed in the literature review are also inscribed in these questions. The open formulation of the questions is deliberate, as it leaves a lot of space for rhizomatic exploring. Because of the same reason, the answers to the questions are not either definite and exhaustive, but the whole analysis section is more like a compilation of open-ended discussions which have been inspired by these questions.

My data for this thesis dates to spring 2019, when Finnish public broadcasting company Yle published a plastic awareness campaign called *I Love Plastics*. The slogan of the campaign was "sorting is the solution", and it aimed to inspire individuals and household to recycle their plastic waste. The material dives into the cultural history of plastics, to stories of people who in a way or another deal with plastics in their everyday lives and to expert interviews to explain the different solutions that are on their way to solve the plastic crisis. I think it is no coincidence that this campaign took place in the wake of the "year of plastics" 2018. The campaign took a very unorthodox parting point for its campaign; their objective was to renegotiate the status of plastics in our society, encouraging people to care about it as a valuable raw material instead of loathing it as dangerous waste.

The next section of this paper is an extensive literature review, where I'll bring new materialist and posthumanist theories to discuss with each other, while at the same time running plastics as a concept and as a material phenomenon through them in order to explore the nature of plastics in relation to these theories and concepts. After outlining the general basics of these theories, I'll take a look to how matter and meaning are perceived in new materialist theories, moving on to how relationality and intra-activity are understood in these fields, which then prompts a discussion on collective ethics. These provide a foundation for further observing the concept of becoming and its affective production, ending up with a discussion on posthuman and ethical subjectivity and how plastics might participate in the becoming of such subjectivities.

The third chapter is the methodology section, where I present feminist and fluid methodologies and move further to explain the specific method that I have constructed for the purpose of this study. In the method chapter I will once more state out the research questions and outline more specifically how I have conducted the study. After that, I briefly introduce the data I have chosen for this thesis along with arguments for the choice of studying journalistic products.

The analysis section is divided into three chapters. The first part critically observes the most obvious and commonly provided subject position that could become in relation to plastics: the consumer position. However, as I will argue, the consumer position is a generalized and universalized position, which overlooks the situatedness and relationality of plastic relationships. Thus, the second part looks at becomings that are grounded in material practices and relations around specific plastic artefacts in a Finnish cultural landscape. In this section I go deeper into the different ways in which plastics invite human beings to assemblages and processes of subjectification and how these becomings are material, social, discursive and cultural at the same time. The aim in this part is to conceptualize and understand better why we are so deeply entangled with plastics. My argument is that our relationship with plastics is by no means rational or straight, and thus the answers to our plastic relations are not simply stories of capitalistic malice or sinful laziness, but they are also stories of affirmative action, desire, and joyous encounters. In the third and last analysis chapter I shall formulate my figuration of *becoming-sober* as an ethical subjectivity that is inspired by plastics. This becoming hints towards a new, collective subjectivity, that is committed to dealing with plastic troubles in an ethical, affirmative and compassionate way. I will elaborate the concept through examples from my data, which speak towards such a subjectivity.

Finally, the paper ends with a conclusion which discusses the findings of this thesis, reflects the methodological approach and contemplates on the further implications of this work.

2 HOW PLASTICS MATTER: A LITERATURE REVIEW

In spring 2018 media outlets throughout the world spread the news: a plastic bag had been found in the bottom of the Mariana trench. This meant that plastics had reached the deepest oceanic corner of Earth. The message was clear. There is no nature without plastics. There is even no space without plastics: spacecrafts have carried plastics along with them to the orbit around the Earth and to Moon and Mars (Zalasiewicz & Waters 2016). Furthermore, most of the plastics produced through history are still present today (Zalasiewicz & Waters 2016). A Twitter account called *Lego lost at sea* is part of a project that investigates what happened to nearly 5 million bits of legos that fell into the ocean in 1997. Much of the stuff that ended up in the ocean was sea themed. These plastic toys now wash up on Cornish beaches, featuring Lego sea grass, octopuses, life vests and scuba divers, just to mention a few. The Twitter account presents not just legos, but also other plastic artefacts found on beaches. On 1st or November 2020, they posted a picture of a washing up liquid bottle that they thought could be dated somewhere between 1955 and 1959. This means the bottle has been wandering about for over 60 years, and it was still intact.

For a couple of decades already it has been argued that the humankind has become a geological force, a species that has altered its environment in such a scale that it has prompted climatologists and environmental scientists and geologists to come up with a new name for this age of human, the Anthropocene, which is a proposed epoch to substitute the current one, which is the Holocene (Frost 2016, 2). The starting point for the Anthropocene has been a heated debate among scholars and scientists, but the most convincing start date would be in the beginning of the Great Acceleration that refers to the "phenomenal growth of the global socio-economical system" and fundamental changes in Earth System functioning from the mid-20th century onwards (Steffen et al. 2015). These changes are "beyond the range of variability of the Holocene" and "driven by human activities and not by natural variability" (Steffen et al. 2015). The Great Acceleration sits very tightly in the same time frame as the Plastic Age, the starting point of which could be also dated to the mid-20th century. Among other stratigraphic indicators that could be analysed as proofs of the Anthropocene, such as radionuclides or aluminium metal, it has been argued that plastics could be interpreted as one of the major signs of the Anthropocene (Zalasiewicz & Waters 2016). As plastics are ubiquitous and can be found in the deepest and highest points of the Earth, they become a part of the sedimentary deposits and could thus be used to investigate and date strata (Zalasiewicz & Waters 2016). However, it needs to be noted that scientists have not come into agreement whether

the Anthropocene is an apt word to use or even an actual epoch. As a conceptual tool, however, it has inspired many writers to use it to describe the specific issues of contemporary times.

Looking at the Twitter account and its colourful collections of plastic items found on beaches, it is impossible not to wonder what we as a species have become in the past 70 years or so. As the Twitter account says, the plastic trinkets they've collected is "a museum of us all". It tells so much of our contemporary culture, when tiny, colourful plastic artefacts shaped as sea creatures wash up on shores across the world, at the same time cute and uncanny. It has been estimated that in 2050 there might be more plastics than fish in the oceans. This is a common meme that is also mentioned in my study data a few times. At least some of the plastics will be shaped like fish. The temporality of plastics spans out to both past and present, as plastics are a result of organic matter that has been packed into Earth's sediments millions of years ago, and their accumulation will affect human and nonhuman generations for unpredictable years forward. As Bensaude Vincent (2013, 24) eloquently puts it, "[w]hile the manufacture of plastics destroys the archives of life on the earth, its waste will constitute the archives of the twentieth century and beyond". If the Sixth Extinction would eventually wipe us all away and one day some distant Homo species would find these plastic fish, these technofossils (Zalasiewicz & Waters 2016) tucked away in the sediments of the Earth, what would they think of us?

I want to think with plastics, since thinking with plastics opens portals for thinking about what it means to be human. This study is an assemblage of different approaches to research human-nonhuman relationships, ranging from more-than-human sociology, material feminisms, new materialist and posthumanist approaches. As Arthur Asa Berger (2009, 23) writes, "[s]ingle-disclipinary approaches are too narrow and often neglect important aspects of whatever it is that is being investigated". All of these theories aim for complex, nuanced takes of our material-cultural world, where matter is not anything fixed or stable and where the discursive always materializes in practices.

2.1 New materialist and posthumanist studies

New materialist studies emerged approximately in 1990's as a critique of the so called linguistic or cultural turn. These theories derive from many different perspectives, ranging from environmental studies, feminist studies, cultural studies, queer theory, quantum physics, science and technology studies, neuroscience, biophilosophy and artificial intelligence, just to mention a few (see e.g. Fox & Alldred 2016). Today, different strands of posthumanities and new materialities bloom across Western universities under different fields and names (see Braidotti 2019). It seems that there truly

is a need to develop a new understanding of our mutual existence on this planet, so popular have new materialist and posthumanist studies in contemporary humanities and social sciences become (see e.g. Leppänen & Tiainen 2016, Fox & Alldred 2016).

New materialist approaches are varied, but here I focus on a couple of strands that speak to me. I attune especially to material feminisms, material ecocriticism and more-than-human sociology. The aim of new materialist and posthumanist theories is to answer scholarly to the ecological crises of contemporary times through rethinking the concept of human and their relations with nonhuman entities (see Coole & Frost 2010, Braidotti 2019, Leppänen & Tiainen 2016). The question is about responsibility and accountability in times, where human industrial, agricultural, and consumer practices reshape and alter the planet in a way that no other species has done before (Frost 2016). The political aim of both new materialist theories and posthumanism is to seek new, more sustainable and equal ways to coexist in this world (See Coole & Frost 2010, Bennett 2010). They also derive from the assumption that the future is not inevitable, but it can be changed through informed political action (Coole & Frost 2010, 36).

> "What is at stake here is nothing less than a challenge to some of the most basic assumptions that have underpinned the modern world, including its normative sense of the human and its beliefs about human agency, but also regarding its material practices such as the ways we labor on, exploit, and interact with nature." (Coole & Frost 2010, 4).

New materialist and posthumanist scholars argue that after the linguistic turn, matter became a mere background or object for theorizing without any agency or role in the meaning-making and reality-building processes. The so-called cultural turn or linguistic turn set language, discourse and meaning in a superior position in the construction of reality, pushing matter and nonhuman agency to the side (Coole & Frost 2010, 3). To new materialists, "language has been granted too much power" (Barad 2003, 801). By focusing only on language and representations, the workings of the stuff of the world have been pushed aside. Focus on language and representations also inevitably puts the human agent in the centre as knower and knowledge producer. Taking language as the only possible way to perceive reality overlooks how matter itself takes part in the processes of becoming. Bruno Latour criticized the linguistic turn in an essay in 2004, where he stated that the linguistic turn was a mistake, "that it led us to a place where we cannot say anything about the real, much less the true" (Latour 2004, in Hekman 2008, 88). While feminist theorists in the past decades did all they could to deconstruct dichotomies such as culture/nature, rational/emotional, subject/object, the one that persevered, was the dichotomy language/reality (Alaimo & Hekman 2008, 2). The aim of

the new materialist and posthumanist thinkers that I follow in this study is to further break down dichotomies between nature and culture, material and discursive, theoretical and empirical and human and nonhuman (Leppänen & Tiainen 2016, 28).

Having said that, new materialist scholars do appreciate the groundbreaking work that postmodern and poststructuralist scholars have done in deconstructing gendered dichotomies and power relations in our societies. However, this has happened at the expense of the material (Alaimo & Hekman 2008). While not completely abandoning the work of social deconstructionists, material feminisms demand that bodies and matter should be given their due in processes of becoming. The task is not an easy one, as Susan Hekman states, since the social constructionist paradigm lies deeply rooted in the contemporary intellectual sphere (2008, 91). Hekman hits the point when she writes that "[f]or those of us trained in postmodernism, the journey is a scary one. We have been so convinced that the world, and especially the social world, is a linguistic construction that discussions of the "real" seem like heresy" (Hekman 2008, 116). However, Coole and Frost (2010, 27) write that social constructionist arguments can be accepted while at the same time one would insist that materiality is not reducible only to culture or discourse.

Posthumanist thinking goes often hand in hand with new materialist approaches. Posthumanism seeks novel ways to think about what it means to be human in the age of Anthropocene, and the aim is to update the concepts of humanity and the human to the 21st century in light of both scientific and ethical developments (see e.g. Braidotti 2019). New materialist and posthumanist theories align in the critique of the anthropocentered humanism, which privileges human beings (Fox & Alldred 2016, 25), as they call into question human beings as the exceptional producers and controllers of the social world. Using human beings as the measure of all ethical concerns has led to a world where "no matter how messy ethical decisions are, as long as they benefit humans in the last instance, then the problems caused for nonhumans are a necessary (if sad) sacrifice" (Giraud 2019, 6).

According to Braidotti, the posthuman condition or convergence entails two understandings: it includes a critique of European Humanism and a critique of anthropocentrism. As Rosi Braidotti argues, Western thought inspired by Cartesianism and forged in the Enligthenment era has produced binary oppositions such as man/woman, culture/nature, human/animal and mind/matter, which have since worked in the benefit of the White, western Man, promoting this figure as the most rational and capable subject (Braidotti 2019). While good deeds have been done in the name of Humanism, the very same line of thinking has also helped colonialism, sexism, patriarchy, racism and

capitalism to flourish. It has been in the name of Humanism that forests have been destroyed, natural resources overused, indigenous people dislocated and white privilege distributed.

Braidotti writes that the double shift needed for posthuman knowledge is a hard one for traditional humanists. First, we have to acknowledge humankind also in terms of species, not just culture or polity. Secondly, the posthuman position demands accountability. We have to be aware and acknowledge the impact of human as a species. (15, 2019).

> "The primary task of posthuman critical thought is to track and analyse the shifting grounds on which new, diverse and even contradictory understandings of the human are currently being generated, from a variety of sources, cultures and traditions." (Braidotti 2019, 15)

Braidotti argues that her vital materialist account is the key to overcome the ethical challenges of posthuman times. "The posthuman convergence is an analytical tool for understanding the grounded, perspectival and accountable nature of the affective, social and epistemic processes we are currently involved in, and the role of non-human agents in co-producing them". (Braidotti 2019, 20).

> "[M]y vital materialist account of posthuman affirmation provides a remedy to the political fractures and the ethical challenges of posthuman times, while avoiding a return to falsely universalist notions of the 'human'. The posthuman convergence is an analytic tool for understanding the grounded, perspectival and accountable nature of the affective, social and epistemic processes we are currently involved in, and the role of non-human agents in co-producing them". (Braidotti 2019, 19).

De-centering the human means letting go of the false idea of human mastery and exceptionalism, that many scholars argue has caused the crises that the planet faces today (Frost 2016, 3). A new way to take matter into account calls to question the traditional notion of human beings being the only ones who possess capability to affect things. This notion has been based on intentionality, cognitive abilities or some divine right (Coole & Frost 2010, 10), but whereas the humanist subject was a "rational" one, but the posthuman subject is primarily moved by affects, desire and the imagination (Braidotti 2002, 20).

Performance studies scholar Tuija Kokkonen describes her understanding of posthumanism as a new approach to human beings and to their relations with the non-human world. It is about questioning and re-evaluating the position human beings have claimed in the world, and to meet the

limits of the Humanist condition and tradition of knowing in front of new companions and relations (Kokkonen 2014, 179). According to Kokkonen, it is especially the multiple ecological crises of our time, such as the sixth extinction or climate change, that forces the human kind to rethink their position and the relationships they have with other earthlings, and how human beings should treat them. Kokkonen criticizes the anthropocentrism of subjectivity and agency (2014, 185). In her performance studies she explores the ways in which the borders between human and non-human can be opened through performances. From a new materialist perspective, human bodies are porous, constantly intra-acting and interacting with their surroundings, other bodies and non-human entities. Non-human entities make us live but they can also make us fall sick and die.

> "We are dependent on non-human hospitality, in the end they form the condition that makes our lives possible." (Kokkonen 2014, 202).

The way I understand posthumanism in this study is exactly in the sense how Braidotti and other material feminists understand it: posthumanism refers to a new philosophy of the human since the old way got us into trouble. Posthumanisms and new materialisms mean unlearning in a radical, feminist way, Stacy Alaimo argues. Alaimo states that if the things we have learned before have led to such disaster, ranging from environmental and climate disaster to violent manifestations of racism and ethnonationalism across the globe, growing compassion fatigue and decline of intellectual life and academic autonomy, we have to strive to unlearn the past and find new, radical ways to be (2016, 6). As Samantha Frost writes, "a fundamental reconceptualization of what humans are, of what the human might be, could provide resources for cogent, creative, and robust engagement with the difficult question of how we should transform the ways we live" (2016, 3).

I am aware of the criticism towards the term posthumanism. Even though Haraway has often been named as the pioneer of posthumanism, she has later taken to criticize the term. In her book *Staying with the Trouble* (2016) she repeatedly disavows posthumanism: "[w]e are humus, not Homo, not Anthropos: we are compost, not posthuman" (Haraway 2016, 55). My take on posthumanism is in accordance with how Rosi Braidotti understands the term. For me, posthumanism quite simply means a new way to be human that does not conform to the old destructive habits of the rational Enlightenment subject. I am not a fan of transhumanist dreams, for me they seem to be irresponsible escape fantasies.

De-centering the human without losing sight of issues of accountability and responsibility is a delicate task. As Samantha Frost writes, "[t]he conviction that the idea of the human is not much more than a hollow fantasy coexists uneasily with the claim that humans as a species are a

geological force" (2016, 2). Since the focus of my study is in the human that becomes-with plastics, I can't scrap the human subject altogether. To abandon the category of human altogether would be running away from a collective responsibility. However, the study is post-anthropocentric as such since it takes into account also other-than-human agencies and the intricate entanglements that shape our mutual existence. This study acknowledges the power of nonhuman modes of doing as something that affects and gets affected in co-relation. Through illuminating the more-than-human entanglements where the human subject is only one part of the becoming assemblage, the human is not anymore the centre of all things, even though the human is the focus of the study.

In my study, the de-centering happens through looking at the specific relations between humans and plastics and how they affect each other. The final locus of analysis still is in human existence and how it is shaped by plastics, but the idea is to not look for answers from human action only. As Bennett says, "[h]umanity and nonhumanity have always performed an intricate dance with each other" (2010, 31). One way to de-centre the human is to emphasis already the plurality of individuals. My body is not an "I", I am always in the company of nonhuman lively matter that teems inside and outside of my bodily being. Realizing the colons of bacteria that live in our bodies is waking up an "alien" world (Bennett 2010, 112). Acknowledging the strange actants, the odd kin in our bodies could be a potential source of ethico-political action. As Bennett (2010, 113) wonders, "if we were more attentive to the indispensable foreignness that we are, would we continue to produce and consume in the same violently reckless ways". Thus, we also have become what we are partly because of our intimate relations with plastics. To be posthuman is to acknowledge our porous nature, both in a material and a cultural sense.

2.2 Lively matter

For new materialist thinkers, the buzzword is *matter*, which shifts away from theories that emphasize language, discourse and systems of thought as main study points or the only ways to gain knowledge of the world. For new materialist thinkers there is need for a theory that takes the material agency of the world into account, that gives credit to both discursive and material sides of phenomena, and that resists the pitfalls of absolute relativism and essentialism. As Coole and Frost (2010, 27) write, "the challenge here is to give materiality its due while recognizing its plural dimensions and its complex, contingent modes of appearing".

Depending from the scholar and the approach, new materialist thinkers see matter as vital, emergent, agential or lively, detaching matter "from its long history of attachment to automatism or mechanism" (Bennett 2010, 3). This goes radically against the cornerstones of Western thought,

where matter has been regarded as a dead resource ready for the use of Man. The thought of matter as inert, dead and passive is often credited to Cartesian dualism, created by the early philosopher René Descartes, who in his meditations in the 17th century came to the conclusion that mind and body must be separate from each other. Descartes regarded matter as a mathematical, mechanical substance or object, that can be perceived only by a thinking subject who exercises a correct, deductive method (Coole 2010, 94). As opposed to matter, Cartesian philosophy recognized human reason, *cogito*. Whereas matter was dead and passive, human agency was free, rational and self-aware (Coole & Frost 2010, 8). Cartesian philosophy has greatly influenced Western philosophy and science, which further cemented the inertia of matter: according to traditional physics, matter (or nature) is measurable and quantifiable stuff, that obeys only rules of cause and effect and follows predictable and controllable paths (Coole & Frost 2010, 7-8). According to new materialist scholars, this belief (sometimes combined with religious beliefs) led to a worldview where humankind was perceived as the master of nature, and nature something that needs to be tamed, controlled and utilized. Jane Bennett (2010, 91) argues that the mechanistic view of matter still prevails, "perhaps because the scientific community tends to emphasize how human ingenuity can result in greater control over nature more than the element of freedom in matter".

To let go of thinking of matter as fixed and stable entities is difficult. As Coole and Frost write, "it seems hard to imagine how we might think about matter differently since its brute 'thereness' seems so self-evident and unassailable" (2010, 7). Elizabeth Grosz (2010, 151) writes that the material universe does appear predictable, regular and determinate when looked at as an isolatable system that contains fixed entities with clear relations to each other. However, she argues, the universe "exhibits hesitation, uncertainty, and the openness to evolutionary emergence", which means that the world is at the same time both regular and reborn at each moment, but also in a flow of potential and possibility (ibid.).

However, the question of the nature of matter itself is complex (see Fox & Alldred 2016, Coole & Frost 2010). As Coole and Frost (2010, 12) mention, the advances of theoretical physics have taken the understanding of matter quite far from the way we perceive it in our everyday lives. Coole and Frost argue that while advanced new ontology that consists of "forces, charges, waves, virtual particles, and empty space" does not easily fit into the sphere of philosophy, this new ontology can still have power to change theoretical discourses (2010, 12–13). Theories of material agencies are varied, ranging from traditional philosophical understandings to atomism to Karen Barad's theory of intra-activity that relies on quantum physics. Coole and Frost (2010, 9) give a robust introduction to new understandings of matter that goes beyond early technological assumptions of matter as inert

substance that follows predictable patterns of causality. For Coole and Frost, matter is more than just its "brute thereness", it is "an excess, force, vitality, relationality, or difference that renders matter active, self-creative, productive, unpredictable" (2010, 9). Findings of chaos and complexity theory reveal environments that are more fragile and fluid than what was previously thought (ibid. 13).

One of the most influential theorizations of agential matter is presented by Jane Bennett (2010) in her book *Vibrant Matter.* For Bennett, matter is *vital*, which means that certain phenomena would not be possible without the certain material parts that act in assemblages. Vital matter is self-directing and can cause surprising events outside human action (2010, 27). Bennett uses such material entities as worms, electricity, fats, metals and stem cells to illustrate how they are actants that, "when in the right confederation with other physical and physiological bodies, can make big things happen" (2010, 94). An actant, as Bennett (2010, 9) explains, "is neither an object nor a subject but an "intervener," akin to the Deleuzean "quasi-causal operator." An operator is that which, by virtue of its particular location in an assemblage and the fortuity of being in the right place at the right time, makes the difference, makes things happen, becomes the decisive force catalyzing an event". In my analysis, I will look at the ways in which plastics may act as the intervener, that nudges the human being in new directions.

Vitality is easily attached to organic life. In the case of plastics the division of organic/inorganic or life/death is usually very apparent. Inorganic plastics protect organic foodstuffs from their processes. Inorganic plastics destroy the organic systems of sea birds and mammals who eat these synthetic materials. Common sense tells us that plastics are dead. More-than-human animals are easily described as "lively" and "agential". After these sentient organisms, it is still easy to talk about the liveliness and agential capacities of plants and other organic creatures. As opposed to organic matter such as mushrooms (Tsing 2015), plastics would perhaps not easily be described as "lively". However, as is apparent from news and documentaries, plastic-nonhuman assemblages tell a story of a "wild" substance that has escaped human control and is now doing things as it pleases, since "thing-power arises from bodies inorganic as well as organic" (Bennett 2010, 6).

New materialist scholars contest the division between organic and inorganic matter. For example for Bennett, even inorganic matter has "a life" which she describes as impersonal vitality, based on Deleuze and Guattari's thinking (Bennett 2010). This impersonal liveliness is "a restless activeness, a destructive-creative forcepresence that does not coincide fully with any specific body" (Bennett 2010, 54). Bennett gives an example on the liveliness of metals on their atomic level, where free atoms quiver at the edge of metal crystal grains, determining the emergent properties of particular

metals and making them porous (2010, 59). While metal might seem to be eternal, passive and dead, it is actually filled with this quivering, where crystal grains, homeless atoms and vacant spaces between crystallines produce emergent effects. This notion of indeterminate vitality is different from the earlier vitalist accounts, that have attributed agency to a spirit-like "life" or a "soul" that exists outside the material realm, giving "life" to dead matter (Bennett 2010, 92–93). Bennett criticizes these kinds of forms of vitalism, since they still perceive matter as something that needs enlightening from the outside. For Bennett, a vital materialist acknowledges matter as "an active principle" without a need to explain this vitality with purposiveness, divinity or some other transcendential cause. Matter is in itself heterogenous, a site of differential intensities, quivering with tendencies and virtuality.

Let us take an example of lively matter that is in a state of constant becoming without conscious capacities and is still a very countable part of the future of this planet. Stacy Alaimo writes about Ladelle McWorther, who in her writing from 1999 goes through a process of "becoming dirt". In her philosophical ponderings, McWorther embraces the complex systems how dirt makes more of itself with the help of water and air filtration systems, living and dead organic matter and space. Dirt isn't just there, it is constantly becoming. However, it is hard to distinguish separate particles that make the dirt. Dirt is an assemblage of different entangled entities, to borrow the Deleuzian concept. For McWorther, dirt thus demonstrates agency without individual agents (Alaimo 2008, 247). Instead of an attribute, agency is formed in doing or being in the world, in the intra-active relations. And to try to avoid wholly the concept of agency, it could just be said that the phenomenon of "dirt" becomes in an assemblage.

> "Acknowledging the agency of more-than-human world is crucial for environmental ethics because it challenges the prevalent practice of "thingification" (in Barad's terms), which, in this case, means the reduction of lively, emergent, intra-acting phenomena into passive, distinct resources for human use and control." (Alaimo 2008, 249).

Dirt is such a good example to show the importance of understanding matter as lively and agential instead of being just some dead base for other things to grow on. Human beings have just now begun to realize the importance of a healthy, lively soil, especially in the midst of climate change. Soil is not just something that is there, it is something that has a possible role in mitigating climate change, if just treated and understood correctly. The possibilities to sequester carbon into soil's organic matter is a big beacon of hope in this man-made catastrophical progress of global warming. The becoming-dirt process sequesters carbon from the atmosphere to the ground, fertilizing it at the

same time, when the organic matter in the mix increases. However, the sequestration of carbon into soil is still quite understudied, and there are a lot of uncertainty factors involved. For example, overfeeding the microbes in the fertile mix can lead into even more carbon emissions than before. Soil's actions are not straightforward, they are tricky and unpredicted. Soil can kick back.

When it comes to plastics, the most obvious environmental problem is how plastic artefacts become waste and how this discarded materiality continues its doings. Waste is lively matter, and humans have lost the ability to completely manage this lively system (Hird 2013, 107). Hird argues that this lack of control and the assemblage of non-human lively matter that forms out on landfills makes human beings vulnerable. Unknowability is characteristic to waste: leakages and new chemical and bacterial compositions are possible and unpredictable. Hird reminds us that waste doesn't disappear, but it flows (2013, 107). As Bennett (2010, 6) writes, "vital materiality can never really be thrown "away," for it continues its activities even as a discarded or unwanted commodity".

Gay Hawkins argues that topologically, a normal plastic bottle is designed to become waste. Its role as waste is present in the whole lifespan of the bottle. Thinking topologically means disrupting the traditional way to see time and space as a linear continuum and thinking of events as emerging in an open way (Hawkins 2013, 51). Thinking topologically brings together the production, the consumption and the disposal of the bottle. While these different moments are kept apart for the convenience and peace of mind of the consumer, waste is already there, present in the moments that come before its actual emerging.

> "In this way, waste – together with the negative value it represents – does not emerge at the end of the product's 'life-cycle'. Instead, it has to be understood as topologically interconnected with the enactment of disposability as the ultimate expression of the convenience of plastic. In other words, the afterlife of the bottle is anticipated before exchange, connecting the value of convenience to the ease with which the bottle is discarded." (Hawkins 2013, 51)

Waste itself avoids definition, Myra J. Hird (2013, 106) writes. It avoids the division to either nature or culture, thus challenging the Western traditional ontological binary. According to Hird, waste is "associated with excess", and coping with excess is a phenomenon of our post-modern era. Waste is a resource wasted or a resource "out of place". For Hird, landfills are places of forgetting and also places of remembrance, since "[w]aste is a monument to all that we once wanted and now do not want, once valued and no longer valued. […] Waste is an ironic testimony to a desire to forget." (ibid. 106.) Hird suggests that studying landfills tells us human beings a great deal about

ourselves and our relations, be it within communities, the way we interact with our environments or global society (Hird 2013, 106).

> "Landfills are a particularly vigorous assemblage: bacteria relentlessly metabolize matter into leachate, which in turn percolates into soil and groundwater, where it moves into and through plants, trees, animals, fungi, insects, and the atmosphere." (Hird 2013, 114).

One of the most visible and media-sexy parts of what constitutes the "plastic crisis" are the oceanic entanglements of plastics and marine creatures. The nature of the crisis is global: Finnish coastlines are not visibly littered with plastics, but even creatures that live in the Baltic sea an in inland lakes have been proven to eat plastics. Environmental feminist and cultural studies scholar Stacy Alaimo has delved into oceanic connections that involve plastics, human and nonhuman bodies (Alaimo 2016). Through poems, art pieces, research and activist campaigns Alaimo maps out the oceanic origins of the evolutionary past of human beings, then moving to harmful agencies of radiation, mercury and plastics and how they has been depicted in environmental literature. In their oceanic afterlife, ordinary consumer objects such as bottle caps become "the stuff of horror and destruction" (2016, 131) that continue to haunt marine creatures across hundreds or even thousands of years.

In a 2017 article Kim de Wolff critically observes the tensions between dead plastics and marine life. As de Wolff argues, thinking of plastic as only 'bad' is neglecting its full capacities in mutual becomings. The many ways plastics entangle should be taken into account, also the ways that are usually neglected, that do not fit the story. For example, a ball of stray fishnets may give a habitat to marine species that then drifts across the ocean, bringing the species it carries to places where they would not end up otherwise. Taking this plastic ball away from the ocean would mean that these marine creatures would lose their habitat. Trying to remove plastic shards from a jellyfish that has incorporated them in its flesh would entail cutting its flesh. These entanglements are naturalcultural, beyond ideas of pristine seas.

The want to separate plastics from organic matter comes through in de Wolff's description of laboratory volunteers trying to separate 'plastic' matter from 'natural' matter. There, a stark distinction is made: plastic does not belong here, it is a cultural artefact in a natural habitat and they should be separated. A question of "is this plastic or is this real?" is often heard in the laboratory. This question reveals how plastic, in its all in-your-face-materiality is still not conceived as "real" because of its origins.

Of course, as de Wolff explains, maintaining rigorous categories for plastic and nature is essential for anti-pollution campaigns, marine scientists and policy makers alike. By maintaining the separation between plastic and other matter, a track record can be kept of the plastic situation in our environments. However, as plastics have already become such an inseparable part of ecosystems, she does not find this separation always necessary:

> "Taking inspiration from the halobates and jellyfish that manage to live and even thrive with plastic, I suggest scientists and humanists alike approach the plastisphere in all its indeterminacies, without trying to disentangle it into material types that deny plastic its agency and its place in the ocean. […] It is only by embracing rather than warning against or trying to undo entanglements already tangled that synthetic materials can be understood to have lives in relationships we cannot sever because we are part of them." (de Wolff 2017)

For Bennett, the liveliness of matter is also a matter of perception. Humans cannot understand the becomings of "objects" since "their becoming proceeds at a speed or a level below the threshold of human discernment" (2010, 58). We have existed with plastics just about long enough to step over a threshold of awakening to its accumulation, but many other things still remain a mystery. The actual degrading time of plastics is still a contested issue, since we have lived with that material only roughly 70 years. The timespan of plastics still is a lot longer than that of humans. The temporality of plastics is very controversial: plastics are perceived as indestructible, but they might also release toxins while remaining relatively stable to the human eye.

Anthropologist Igor Kopytoff suggests that things might have biographies just as human beings do too (Valkonen et al. 2019). This biography tells what the thing has been through, from its production to its different stages of uses and how it has reached its end-point. I do think this could also be looked at collectively, from a larger scale, as the biography of plastics in general. As Hawkins writes, new materials present "new associations and ways of relating" (2013, 54), and this leads to a co-evolution on a molecular but also on a sociocultural level.

For Bennett, nonhuman matter is a participant in politics as well, since politics happens in assemblages. The result of a seriously taken material-cultural theory would be a politics that takes into account material agencies in practice. As Bennett writes, there is a need to "devise new procedures, technologies, and regimes of perception that enable us to consult nonhumans more closely, or to listen and respond more carefully to their outbreaks, objections, testimonies, and propositions" (2010, 108). Ethics are of course entangled to the process, and questions of justice

come along with more ethical subjectivities. Hence, "[a] vital materialist theory of democracy seeks to transform the divide between speaking subjects and mute objects into a set of differential tendencies and variable capacities" (Bennett 2010, 108).

The term "material agency" has also been contested in cultural and sociological studies. Tim Ingold (2015, 153) provides quite a sobering critique of material agency, saying that "there is no agent apart from the action set in train". Ingold reminds that Karen Barad comes to the same conclusion as she emphasizes that agency becomes in relation, it does not exist as an attribute of someone or something. According to Ingold, this notion then undermines the need for the concept of agency altogether: "Why not just stick with action?" (ibid.).

Bennett argues for using the term "material agency" since for her it forms a stronger counter to human exceptionalism (2010, 34). Bennett also notes that understanding agency as distributed in assemblages does not scrap for example human intentionality altogether, but it lessens the weight that is given to intentionality as a causal reason, it "loosens the connections between efficacy and the moral subject, bringing efficacy closer to the idea of the power to make a difference that calls for response" (Bennett 2010, 32). While I do think that the concept of material agency has its place in new materialist theory, I think that focusing too much on attributing agency to something would feel like fixing its properties or turning towards such mystical vitalism that Bennett criticizes in her theory of vibrant matter. For me it seems as well that looking for *agency* as such would again be looking for what matter *is,* not what matter *does.* Somehow agency also leads thoughts to some kind of external force, intention or energy in the manner of early vitalist or animalist accounts. As Pyyhtinen (2015, 70) writes:

> "[A]ttending to the concrete occasions in which non-humans, objects and materials are active and produce effects provides us a way of reconsidering action and activity. Instead of attributing action causally to 'agency' (resulting, e.g., from the faculties of the mind) of which it would be the effect, rhizomatic, more-than-human sociology looks at action in terms of relations, assemblages, confederations and flows. This is not to deprive human agents of intentionality or cognition, nor is it to deny the existence of several crucial differences between humans and non-humans." (Pyyhtinen 2015, 70)

Plastics are of course capable of producing effects on their own, without a human mediator in the specific encounters. Myra J. Hird emphasizes that most of the encounters and relations that take place on earth happen outside of human awareness (Hird 2013, 109). Plastics intra-act with other

materialities in ways that can produce harmful effects to living creatures. It is exactly this capacity of plastics that makes them so hated and dangerous.

So how to talk of plastic materialities? Plastics have many names, depending on the context: there is no one plastic. Plastics are plural, always changing. From a natural scientific viewpoint, or chemical viewpoint, plastics could be described as "malleable solids made of high molecular weight organic polymers" (Zalasiewicz & Waters 2016). They are usually entirely synthetic, made from petrochemicals, or more bluntly, oil. The connection with fossil fuels is one of the major attributes that makes plastics today problematic. However, it was noted already decades ago, that plastics could also substitute other organic materials, such as tortoise shells and ivory, thus making it a somewhat ethical alternative for such materials (Bensaude Vincent 2013, 26). Oil is not the only option for plastics, even though it is still the most popular one. Companies are striving to search for new resources to make plastics. For example, while doing this thesis I received an e-mail from Technical Research Centre of Finland (VTT) where they announced a new plastic material they have developed. It is made of citrus peels. In the press release, a professor of VTT rejoiced of the possibility to "drink orange juice from a bottle that is made of orange peels" (VTT, 2020).

As was said before, some new materialist theorizations derive from quantum physics and the molecular nature of being. In this study, it would be very hard to talk about plastics only in their molecular nature, since the various material-cultural entanglements of plastics and human beings could not be explained only through the chemical compositions of these precise objects. This is also a question of my research apparatus: since I work on the cultural level of becomings, my methods are also such that do not give access to the molecular level of plastics. That doesn't mean that the molecular level should be completely neglected or abandoned. The vicious part of plastic objects is that they do not disappear or dissolve, but grind into smaller pieces or through time, go through some chemical transformations. It has been researched that plastics give out chemicals that accumulate in porous bodies, all the way from the tiniest oceanic creatures to human beings. Plasticizers that make plastic materials more versatile are shaped like hormones and can work as endocrine disruptors in living bodies (Liboiron 2013, 140). The effects of endocrine disruptors have been correlated with fertility issues, diabetes, cancer and many others. How dangerous these chemicals that come out from microplastics really are for human and nonhuman beings is still uncertain, but their potential dangerousness is a remarkable part of the phenomenon called "plastic crisis".

My way into plastics in this study goes mainly through the artefacts that are made from plastics, through studying what kind of relations are becoming-with these plastic artefacts. Generally,

plastics are perceived as “things”, of a specific shape and purpose. However, plastics tend to evade a certain “thisness”, since mass produced plastic products are hard to distinguish from each other. As philosopher Tere Vadén explains in my data, plastic artefacts are standardized and they don’t usually have and identity as specific artefacts, since they resemble each other so closely and can be exchanged to another without being noticed.

> “Any plastic pen is any plastic pen, you don’t form a personal relationship to it, and you might even not recognize if it is your pen or is it the same pen that you used yesterday. In general, plastics have this strange abstractness or universality to them, so it is hard to form a personal connection to them. They are similar to each other and interchangeable, and when it breaks, it is better to throw it away and take a new one in”. (Tere Vadén)[1]

The “strange abstractness” of plastics has made the accumulation of plastic garbage possible for decades. Plastics paved way for an ephemeral dream world, where things are designed to be thrown away, out of sight and into oblivion after use. In a consumer society, plastics had to be perceived more on a metaphorical level than on the material level. The contradictory nature of plastics is evident, as the production of these light and cheap materials is “inextricably linked to the accumulation of huge quantities of matter and energy” (Bensaude Vincent 2013, 24).

> “Plastics are shapeless; they have pure potential for change and movement. They connote the magic of indefinite metamorphoses to such a degree that they lose their substance, their materiality, to become virtual reality. Plastics have thus encouraged the utopia of an economy of abundance that could consume less and less matter by using cheap, light, high-tech plastics.” (Bensaude Vincent 2013, 23)

However, it is clear that plastics are all but ephemeral. They are very material, and *lively* as well. For me, plastics are lively matter that have the capability to affect and be affected as participants in material-cultural assemblages. Plastics can make life easier, but they can also disturb processes, cause anxiety and fear.

Thus, my first aim is to take into account both the material and very tangible aspect of plastics, while also attending to the cultural and metaphorical. I think these both levels are first of all inextricably intertwined, but also needed in this analysis in order to understand the material-cultural nature of plastics. Furthermore, my intention is not to stay only on the object-level, but to

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investigate the various affective flows of those assemblages that these objects participate in. My intention is to focus on actions (or intra-actions) and their open-ended consequences as becomings. As per Barad's (2003, 2007) theory, the nature of the relata that take part in these becomings are mapped out at the same time as well. My aim is to show how plastics take part in multiple different relations where properties and capacities are differentially distributed. These properties are not fixed or stable, but always situated and derived from context. Taking the relational nature of plastic materialities into account brings out new political and ethical questions.

2.3 Matter in relation and intra-activity

A common way to understand material agency is to see it as "emergent and distributed" (Bergthaller 2014, 37), as a flow of affects and capacities in specific assemblages. Instead of being a fixed property of concrete, isolated entities, agency is played out in different phenomena within larger economic, political and environmental systems (Alaimo 2014, 195). Bennett as well emphasizes the nature of agency as a result of various relata, saying that "there is not so much a doer (an agent) behind the deed (the blackout) as a doing and an effecting by a human-nonhuman assemblage" (2010, 28).

Thus, the focus of new materialist approaches is not just matter but rather *matter in relation*. As Abrahamson et al. argue, "[…] rather than getting enthusiastic about the liveliness of 'matter itself', it might be more relevant to face the complexities, frictions, intractabilities, and conundrums of 'matter in relation'. For it is in their relations that matters become political, whether those politics are loudly contested or silently endured" (Abrahamsson et al. 2015, 13). These relations can be called assemblages, actor-networks, mangles or entanglements, depending from the author. In general, an assemblage could be understood as a "temporary grouping of relations" (Coleman and Ringrose 2013, 9) or as an "open-ended gathering" (Tsing 2015, 23). Relationality as a starting point of all enquiries thrives among cultural studies, sociology, feminist studies, science and technology studies, just to mention a few.

The concept of assemblages is usually attributed to the work by Gilles Deleuze and Felix Guattari. In their theories, assemblages describe all the different kind of relations that in the end constitute an event. Deleuze and Guattari formulated a concept of the "assemblage" to illuminate the connections between previously separate entities, such as semiotic, material and social flows. Assemblages are a mix-and-match of forces, that interact and intertwine with each other. According to Deleuze, the realm of practice and experience changes when the elements in the assemblage change (Hekman, in Alaimo & Hekman 2008, 100).

Assemblages have proven fruitful for new materialist studies to explain how everything happens in relation. Actions, affects and agency flows in assemblages, and "[a]n assemblage owes its agentic capacity to the vitality of the materialities that constitute it." (Bennett 2010, 34). Being human could thus be described as a "particularly rich and complex collection of materials" (Bennett 2010, 11). When talking of the contemporary human being, plastics are definitely a very significant material that takes part in our becomings. As Pyyhtinen (2015, 16) says, "[t]here simply is no relation without them [materials and things] and no 'human' that would exist in and by itself, outside and irrespective of the world of materials". More specifically, Gabrys, Hawkins and Michael argue that "plastics (along with myriad other elements) enable particular sorts of humans to emerge" (2013, 6).

In new materialist thinking, an argument towards possible change comes from the notion that even *power* is something that is a part of these assemblages of agencies instead of something that is outside or beyond these assemblages (Fox & Alldred 2016, 27). If we take capitalism or patriarchy as such ethereal things that exist independently from material relations, it can be quite difficult to try to imagine something else. But as soon as these phenomena are understood as products of material assemblages or flows of relation that seem to accumulate or follow the same pattern, it is much easier also to imagine a disruption or change in this flow. As Fox and Alldred write, "power has continuity only as long as it is replicated in the next event, and the one after that." (2016, 27).

> "So power, in new materialist ontology, is a transient, fluctuating phenomenon – a momentary exercise of affectivity by one relation over another. Any apparent regularities or continuities in power (for instance, patriarchal power of one gender over another, or the dominance of market models of social interaction in areas of contemporary society such as education) depend upon continued replication of particular affects between assembled relations" (Fox & Alldred 2016, 179-180).

While in a world of constant becoming everything is in motion, it does not mean that things would not remain in being. It is through constant repetition, taking the well-trodden path again and again, when things seem to be set in stone. As Sara Ahmed writes, it could be said that "history "happens" in the very repetition of gestures, which is what gives bodies their dispositions or tendencies" (2010, 246). The possibility to choose otherwise starts to look like it is impossible. These well-trodden paths are cultural and discursive, both hegemonic and minoritarian. Exclusion is an important part of these entanglements. Someone becomes a vegan through a repeated habit to exclude animal products from their diet. In vegan discourse, meat is rendered impossible as food stuff.

I also like the concept of "entanglement", that emphasizes the messy relations between material, social, cultural and natural. Entanglement for me describes well the ways in which things that first seem separate are actually deeply intertwined. Eva Giraud (2019, 103) derives from Bruno Latour, when she writes that theoretical work should aim to map out the "messy 'web of associations' that create particular realities" and develop theory towards a more relational way of understanding phenomena, mapping out "the relations that lie behind particular realities and enable them to exist".

For Giraud, it is not enough to just look at the currently unfolding encounters, but it is important to look at the historicity of the entanglements and the exclusions that the history of the current encounter might inhibit (2019). Braidotti (2002, 131) would agree, as she writes that "[h]istory does matter, as do the historical manifestations of any locations, positions, meaning or beliefs. A materialist philosophy would not have it any other way". Giraud uses as an example laboratory beagles, that have been tamed and bred to be easily manageable in research encounters. Thus, the bodily encounter with a peaceful beagle does not necessarily mean that the bodily encounter goes into the sphere of ethical care, since through breeding out unruly specimen, the option for surprising agency has been ruled out. It is, in fact, another form of human mastery.

That is why when talking about plastics, it is also important to look at the cultural and political history of plastics. As Bensaude Vincent (2013, 17) writes, "[p]lastics are more than just ubiquitous manufactured products", since "the materials used for making artefacts shape civilizations" and through plastics, we also entered a new age, the Plastic Age. Bensaude Vincent argues that the specific properties of actual materialities matter, since they dictate how technological advances and artistic innovations take shape. Thus, with plastics, a new mass culture arrived with new aesthetic and societal values, new ways of doing business (ibid. 18).

A major contributor to the theorization of *matter in relation* is physicist turned feminist scholar Karen Barad, whose theory of agential realism and posthumanist performativity has fed the new materialist academical landscape with a robust notion of how matter becomes in various intra-actions. For Barad, performativity provides for a methodology that "allows matter its due as an active participant in the world's becoming, in its ongoing "intra-activity" (2003, 803). For Barad, agency is not an attribute but the dynamism, the movement, the relations that manifest themselves in this world (2003, 818). Agential realism in a nutshell means that there are intra-actions between human and nonhuman actors, and that these intra-actions are the basis of ontology, they are the primary phenomena. There are no things as such before these intra-actions, but they are shaped and realized in these connections. These connections, or phenomena, affect other phenomena actively, and thus transform each other (Lykke 2010, 121). For Barad, different phenomena are forged in

intra-action, which means that the material, social, cultural and discursive are co-constitutive of each other. This notion changes radically the concept of an individual agent, since agency or the capability to do something is not an inherent property of a being but a consequence of matter in relation.

Barad draws her theory from physicist Niels Bohr's findings in quantum physics. A Nobel winner who radically challenged Newtonian physics and Cartesian epistemology with his contributions to quantum theory (2003, 813), Bohr concluded that on quantum-level, the act of observation actually defines and changes the outcome of the study. On quantum level, particles behave differently depending on the apparatus used to study them. For Barad, this means that "things" do not have properties in themselves, but everything folds out and takes shape in relation.

Barad explains that Bohr's findings mean that such concepts as "position" are always a follow-up of an event, where an apparatus is used to measure something, but this does not mean that the "position" that follows the measurement could "be attributed to some abstract independently existing "object"", but rather describes the phenomenon (2003, 814). The observed object gains the attributes through the relation, but the attributes do not exist outside the relation. Therefore, "the primary epistemological unit is not independent objects with inherent boundaries and properties but rather *phenomena*" (Barad 2003, 815). For Barad, phenomena – relations without pre-existing relata – are ontologically primary units.

From this Barad derives the term "intra-action" that shifts the ontological focus away from the usual "interaction", which means action between independent entities/relata that exist prior the relation. Barad explains that when a specific intra-action takes place, it performs an *agential cut*, which produces a separation between "subject" and "object". These separations are always local and temporary that happen within the phenomenon. Thus Barad comes to the conclusion that "relata do not preexist relations; rather, relata-within-phenomena emerge through specific intra-actions." (Barad 2003, 815.)

In this way, subject and object are always formed in place. No entity is subject or object in its own right but gains that position through the intra-action. Agential cut produces a local separability, so that for a moment the "component parts" of a phenomenon can be separated into "the cause" and "the effect" (2003, 824).

Barad argues that apparatuses that produce phenomena are not mere laboratory devices or observational practices used by human subjects (2003, 816). Barad understands apparatuses as "open-ended practices" rather than neutral probes or structures that always produce a particular

outcome (2003, 816). As is inherent to the concept of intra-actions, apparatuses are not set in place before the action happens, since they also actualize themselves only in relation. Apparatuses are phenomena in themselves (Barad 2003, 816).

> "Phenomena are produced through agential intra-actions of multiple apparatuses of bodily production. Agential intra-actions are specific causal material enactments that may or may not involve "humans". Indeed, it is through such practices that the differential boundaries between "humans" and "nonhumans", "culture" and "nature," the "social" and the "scientific" are constituted." (Barad 2003, 817).

According to Barad, reality is composed of "things"-in-phenomena. Phenomena come to matter through specific intra-actions, and boundaries, properties and meanings are constantly refigured in dynamic processes of ever-flowing intra-actions. Thus, the basis of understanding matter in relation is the notion that nothing really springs or pulses out from itself, but everything is always formed in relation. There is no independent phenomenon that would exist without some kind of synergy between participants.

Barad's theory of intra-activity has been influential to cultural studies as well. As Haraway explains, Barad's notion might change the way life is lead on this planet.

> "If it is true that neither biology nor philosophy any longer supports the notion of independent organisms in environments, that is, interacting units plus contexts/rules, then sympoiesis is the name of the game in spades. Bounded (or neoliberal) individualism amended by autopoiesis is not good enough figurally or scientifically; it misleads us down deadly paths. Barad's agential realism and intra-action become common sense, and perhaps a lifeline for Terran wayfarers." (Haraway 2016, 33–34)

Somehow plastics in themselves already confirm the idea that everything becomes in relation. The very nature of plastics is in its utopian capacity to become "anything", but it is also its curse, since especially in the early times of the Plastic Age, "[m]aterials meeting all demands, purposes and tastes were not regarded as dignified" (Bensaude Vincent 2013, 19). The ability become "anything" means that before this becoming, plastics in a way are "nothing". Barad's theory of intra-action underlines this notion. It is decided in various intra-actions whether plastics are regarded as uncontrollable waste, a toxic pollutant, a useful tool in the form of an artefact or a cool, nostalgic object. Depending on the agential cuts made in these various phenomena, plastics are either subjects or objects, waste or a valued resource, not to mention what kind of material-discursive manifestations plastics get in relations that exclude humans.

In this study I refer constantly to material-cultural or material-discursive phenomena. Through these terms I want to emphasize the entangled nature of matter and meaning. The aim is not to hold materiality and discursivity or material and semiotics or material and cultural as binaries or opposites. It is impossible to separate materiality from such concepts as discourse or culture. As Pyyhtinen (2015, 7) reminds us, "matter and discourse are ontologically interrelated; any divide between them is a product of boundary-making practices". For the sake of my analysis, material and discursive can be separated to deconstruct material-discursive constructions. The aim is not to bring these completely apart, but rather show how deeply intertwined these processes are.

Recognizing the multiple materialities that take part in various becomings, human and nonhuman alike, dissolves the stark binaries such as human/animal or mind/matter. These notions also bridge the gap between humanist sciences and natural sciences, traditionally regarded as fields that have to do with only the other side of the binary (such as cultural/natural), since all such things and events that have been read as belonging to the other in fact have material consequences. As Fox and Alldred (2016, 26) explain, if according to a new materialist perspective such things as thoughts, ideas, memories and desires have the ability to affect and be affected by other materialities in assemblages, they can be treated on the same level as other, perhaps more "concrete" material relations. This doesn't take meaning out of the equation, but rather includes matter into it. In a way, this understanding of even those things that traditionally have belonged to the realm of cultural or social actually belong to the same material level. This scraps the basic epistemological problem of social constructionism and language-based theories, which claim that reality can only be achieved through language and that language always stands in the way of getting to the true bottom of things. But if even language, feelings or interpretations are understood as actions that affect and are affected and can have material consequences, we come to the conclusion that all of it, be it "natural" or "cultural", is a part of the same reality that is constantly becoming.

Karen Barad uses the term material-discursivity in her work to emphasize the onto-epistemological nature of being. As was explained before, according to Barad, "things" do not pre-exist the relations in which they get their meanings, thus reality is composed of "things"-in-phenomena. Phenomena come to matter through specific intra-actions, and boundaries, properties and meanings are constantly refigured in dynamic processes of ever-flowing intra-actions (see Barad 2003). Barad reminds us that discourse does not refer to linguistic or signifying systems, speech acts or conversations, but rather describes "that which constrains and enables what can be said" (Barad 2003, 819).

Barad talks about discourse in a Foucaultian way, where discursive practices are historical and bound to local material and social conditions. Further deriving from both Bohr and Foucault, she argues that meaning making is material and that the connection between concepts and materiality is more intimate and material than what the cultural turn offers (2003, 820). As Barad further explains, "discursive practices are specific material (re)configurings of the world through which local determinations of boundaries, properties and meanings are differentially enacted" (2003, 820–821). Discursive practices make one part of the world meaningful to another in a dynamic way.

Discursive practices for Barad are a different thing from linguistic expression, and she wants to draw out a new way to think about discursive practices as not only available for human beings (2003, 818). She argues that "humans" are also phenomena, beings in their process of becoming instead of independent entities, and if this is true, then discursivity is also something that cannot exclude nonhuman becoming from itself. According to Barad, such categories as "human" and "nonhuman" are always forged in analysis, thus they do not pre-exist the relations where these categories are formed.

Material and discursive in Barad's thinking are usually interpreted as co-constitutive, which means that discourses do not exist in some pre-existing form before their materialization, and material becomings get their shape through discursive practices (Orlikowski & Scott 2015, 699).

> "The material, as it invites particular discourses to become part of the discursive-material assemblage, also frustrates some discourses and assists others to emerge and be further developed. The material can disrupt or strengthen discursive orders; however, it is also possible that its invitation could be ignored and an alternative meaning attached to it." (Baysha 2018)

Material and cultural are also co-constitutive in non-separable ways. In this study, I understand culture as lived practices in a "particular historical and moral context" that conveys what it "felt like to be alive at a certain time and place" (Grossberg 2010, 13). Thus, culture is situational, relational and affective, and also more-than-human. Bennett (2010) argues that to say that humans make culture would be a gross understatement of the ways in which matter also guides us in our cultural becomings. She refers to Latour, writing that "we are much better at admitting that humans infect nature than we are at admitting that nonhumanity infects culture, for the latter entails the blasphemous idea that nonhumans— trash, bacteria, stem cells, food, metal, technologies, weather— are actants more than objects" (Bennett 2010, 115). Because of this, it is very difficult to say which parts of our cultural existence stem from human and which from the nonhuman.

> "Give up the futile attempt to disentangle the human from the nonhuman. Seek instead to engage more civilly, strategically, and subtly with the nonhumans in the assemblages in which you, too, participate." (Bennett 2010, 116)

Writing concretely about material-discursive becomings and applying new materialist concepts to practical examples has proven to be a difficult task, especially since Barad has not given any guidelines how to use her theory for empirical research, but several examples exist of this kind of work. One example is a material-discursive analysis on bullying by Jessica Ringrose and Victoria Rawlings. In their Barad-inspired analysis, Ringrose and Rawlings observe how non-human agentic matter is co-constitutive in bullying situations through intra-action. They argue that only concentrating on such words as 'slut' do not fully explain how bullying is constituted: the discourse of 'slut' is informed by historically discursive material stuff, such as skirts, hair or makeup.

> "Without a material lens we miss the embodied and reduce dynamics to the purely psychological. Reviewing this and many other data on the skirt we want to argue through a feminist material and posthuman performativity lens that many objects (in this case skirts) are typically dismissed or reduced in importance as material force agents in contemporary feminist research. If these objects continue to be dismissed, their agential intra-action in spacetimematterings – in this case material practices that produce the phenomena of a slut are not recognized." (Ringrose & Rawlings 2015, 98)

Ringrose and Rawlings argue that in order to change unwanted behaviour, more attention should be paid to the material boundaries that are constitutive of the phenomenon. They also remind of the importance to think of material and discursive as co-constitutive, not as two sides of the same coin or binary opposites.

2.4 Collective ethics

A new materialist understanding of matter brings with itself a whole new set of ethics. Scholars like Bennett or Anna Tsing believe that participants of an assemblage do not need to show any kind of intentionality, capability to suffer or free will in order to be part of ethico-political entanglements. I do agree with Anna Tsing in her nuanced critique of human-nonhuman relation studies. In her book *Mushroom at the End of the World,* Tsing follows the material, cultural, economical and political traces of matsutake mushrooms. She writes that she is not "limited to tracking human relations with their favored allies, as in most animal studies. Organisms don't have to show their human equivalence (as conscious agents, intentional communicators, or ethical subjects) to count" (Tsing 2015, 158).

This also shifts human away from the ethical centre. Bennett argues that human responsibility or accountability has been over-emphasized, since human beings are only one part of the assemblages that produce harm and vulnerability. According to Bennett, "the locus of political responsibility is a human-nonhuman assemblage" (Bennett 2010, 36). Bennett emphasizes that her theory of vibrant matter "presents individuals as simply incapable of bearing *full* responsibility for their effects" (2010, 37), since there are so many agents in assemblages that claiming full responsibility would be to altogether neglect and oversee the vitality of nonhuman existence. As Gay Hawkins puts it, "it is necessary to see ethics as sensibilities and interfaces that foreground modes of entanglement with the world." (Hawkins 2017, 19). Ethics are not a one-way road, but a negotiation in entanglements, where different agencies and flows of power and affects shape human actions. This means that plastics, too, are a part of an ethical constituency:

> "In this understanding of ethics plastic is not merely instrumental or functional, the passive object of virtuous human attention, it is a participant in shaping ethical actions." (Hawkins 2017, 19)

However, responsibility is an attribute that is very human, and when human-nonhuman assemblages are also sites of pain, misery and death, some responsibility should be required. Hence Bennett suggests that individuals, rather than mulling over their own full responsibility, should consider their response to un-ethical assemblages they are participating in. This is also behind Braidotti's figuration of posthuman subjectivity, where responsibility and ethics is shared in an assemblage. An individual human being can to some extent choose what kind of assemblage they take part in. Pyyhtinen (2015, 54) arrives to the same spot, suggesting in line with Bennett that an individual's ethical responsibility means "disentangling oneself from assemblages that possibly do harm to animals or the environment or exploit other human beings, for example, and attaching oneself to assemblages that one may judge as tending toward noble ends." Also Haraway speaks of a spread response-ability that takes differences into account:

> "We are all responsible to and for shaping conditions for multispecies flourishing in the face of terrible histories, but not in the same ways. The differences matter— in ecologies, economies, species, lives." (Haraway 2016, 116)

Quite simply put, new materialist ethics mean "taking responsibility for the fact that our practices matter" (Barad 2007, 89). Material feminism advocates for an ethico-political movement that recognizes the material consequences of discourses and vice versa. This ethical approach should move beyond cultural relativism and should be able to say that different practices produce different

material consequences to different beings (Alaimo & Hekman 2008, 7). Shifting focus to the material means also a shift from ethical principles to ethical practices that are situated actions in particular contexts (Alaimo & Hekman 2008, 8). Material feminists and environmentally informed new materialists would agree that the material relations between bodies, both human and nonhuman, consumer goods and substances as well as technologies all merge into sites of ethico-political entanglements and interventions (Alaimo 2016, 9). Even the most mundane ethical domestic practices are tied to massive political and economic abstractions with material consequences, such as global capitalism, social injustices, climate change, pollution and extinction (Alaimo 2016, 10). All the work that we do, be it anti-oil, anti-plastics or anti-animal production, is still happening in some collaboration with the very things we want to get rid of.

Response-ability is a concept used for example by Donna Haraway (2016) and Karen Barad (2007). It means the ability or capacity to respond to something (Bozalek & Zembylas 2017, 63). If entities in a Baradian sense do not pre-exist their relations, then response-ability is also something that is cultivated in relations. As Pyyhtinen (2015, 20) writes, "[w]e act only in and through relations in that we are not able to make anything just by ourselves, but our action is dependent on the efforts and contributions of several others". This is apparent when looking at the ways how for example recycling practices need many different assemblages to co-work together in order to establish a functioning system.

Bennett admits that her position does not provide a fully horizontal view on material ethics. There are differences between bodies, differences between levels of harm, differences in affected realities.

> "Of course, to acknowledge nonhuman materialities as participants in a political ecology is not to claim that everything is always a participant, or that all participants are alike. Persons, worms, leaves, bacteria, metals, and hurricanes have different types and degrees of power, just as different persons have different types and degrees of power, different worms have different types and degrees of power, and so on, depending on the time, place, composition, and density of the formation." (Bennett 2010, 109)

The question of individual versus collective action, single entity versus assemblage is interesting when observing climate change discourses today. Climate action or environmental action tends to turn into referring singular blame on individuals or specific companies. Blame is perhaps not the best way towards action. A feeling of deeper connectedness, care and empathy could be another way to tackle the issue. Blame makes people turn inwards and point elsewhere, whereas care and

empathy invite to take part, to be part of something greater than yourself. Bennett insists that condemnation of singular agents who "must pay for their sins" leads to legitimation of vengeance and unethical, violent politics. As Bennett says, "[o]utrage will not and should not disappear, but a politics devoted too exclusively to moral condemnation and not enough to a cultivated discernment of the web of agentic capacities can do little good." (2010, 38.)

In new materialist thinking, ethics is a collective business. These times of environmental catastrophes prompt questions about Earthly survival. In our contemporary society survival is commonly figured as an individual interest, as the survival-of-the-fittest in advanced capitalism, the survival of the *homo economicus* (Tsing 2015, 28). However, as Tsing argues, survival in a precarious society always entails help from others, both human and nonhuman. Through these indeterminate encounters, transformation happens. The encounters are messy and complex, the "self" that takes part in the encounters was never contained:

> "The evolution of our "selves" is already polluted by histories of encounter; we are mixed up with others before we even begin any new collaboration. Worse yet, we are mixed up in the projects that do us the most harm. The diversity that allows us to enter collaborations emerges from histories of extermination, imperialism, and all the rest. Contamination makes diversity." (Tsing 2015, 29).

Haraway (2016, 37–38) writes that the ethical, political or theoretical points that can be derived from stories of "collaborative survival", such as Anna Tsing's analysis of matsutake mushroom assemblages and the interconnectedness of capitalism, organisms and people, are by no means simple: "[t]his is not a longing for salvation or some other sort of optimistic politics; neither is it a cynical quietism in the face of the depth of the trouble". It is about "living and dying with response-ability in unexpected company. Such living and dying have the best chance of cultivating conditions for ongoingness". (ibid.)

Plastics are the unexpected company I think with here. The "depth of the trouble" should by no means be undermined in the process, but through closely examining these strange relations there is a possibility to rethink the ways we want to exist and survive collectively. Plastics may as well be a part of these processes.

> "Questions regarding the definition, the ethical value, and the moral and political culpability of the human, the nonhuman, and the virtually human become especially vexed as concerns about environmental degradation and dwindling natural resources acquire an urgency unimaginable just a generation ago. Such questions not only

> prompt reflection upon who or what should be taken as the subjects and objects of ethical, legal, or political action; they also suggest a need for new ways of theorizing risk and accountability as humans meddle more vigorously in natural processes and thus become more materially, if not yet ethically, responsible for outcomes. ” (Coole & Frost 2010, 16).

Bennett (2010, 111) ponders whether changing the discourse of environmentalism to that of vital materialism produce more sustainability-oriented action and recognition, since for her, these two approaches have different sets of affects, different histories, and thus also different possible publics. How I understand Bennett's ponderings between environmentalism and vital materialism is in the way how vital materialists (according to Bennett) acknowledge the surprising capacities of the material and are more aware of the assemblages that they themselves are too part of. For vital materialists, "environment" is not something that "surrounds" us with separate entities, but it is a lived reality where intensities pulsate and flow from events to another. Materiality horizontalizes relations, since we are all matter, it draws attention to the complexity of entanglements rather than top-down hierarchies.

2.5 Affective becomings

One could say that *matter becomes* rather than *matter is* (Coole & Frost 2010, 10). Becoming is an open-ended process where subjects and subjectivities gain properties and capacities through relations with others, and as Michael says, "plastics, like all entities, is perhaps more fruitfully regarded in terms of process: it is something that emerges in events" (Michael 2013, 35).

A Deleuzian take on becoming understands it as the process of being as entailing a possibility for change, it is the "crossing of thresholds that change the essence of a thing" (Goodchild 1996, 41). Combining Barad and Deleuze, it could be said that becoming happens when forces intra-act, and "the relation that they construct affects their own nature and changes them in the process" (Goodchild 1996, 40). As Michael explains, "there is always an element of uncertainty or openness about the event as the elements become together – what the event 'is' is immanent, it is open to the virtual, subject to de-territorialization – at least in principle" (2013, 35). For Deleuze, becomings are what happen "in-between" relations.

However, becoming does not mean that anything can become anything: rather, the temporary assemblages and their components, different flows of power or discourses limit the scope of becomings. Sara Ahmed (2010) writes of tables to illustrate how bodies and matter affect each

other. Following Heidegger, Ahmed writes that the significance of a thing is not reducible to it but is a result of "what the table allows us to do" (2010, 244). This means that those who are at the table "are also part of what makes the table itself", since as we approach the table, the table also approaches us (2010, 244–245). Thus the specific circumstances dictate the becomings, while at the same time retaining some possibility for surprise as well.

> "Doing things "at" the table is what makes the table what it is and not some other thing. So while bodies do things, things might also "do bodies." […] Bodies as well as objects take shape through being orientated toward each other, an orientation that may be experienced as the cohabitation or sharing of space." (Ahmed 2010, 245)

As Coleman and Ringrose write, studying deleuzian becomings is "as much a mapping of what is impossible, what becomes stuck or fixed, as it is of flux and flow" (2013, 9). Furthermore, it is important to notice that becoming is not a clear and linear process or a transformation from one thing to another. Deleuze and Guattari point out that becoming has no origin point nor destination as such, but only middle, the "in-between", the relation (Coleman & Ringrose 2013, 9). Since becoming is something that happens "in-between", the subjectivities that become have multiplicity that goes beyond the individual. It is an "expanded subject produced always 'in relation' to other bodies and things" (Renold & Mellor 2013, 36). Flows of power might become more apparent when focusing on how subjects extend over themselves, toward nonhuman and material others.

> "By entering into relations, nomadic becomings engender possible futures, they construct the world by making possible a web of sustainable interconnections. This is the point of becoming: a collective assemblage of forces that coalesce around commonly shared elements and empower them to grow and to last." (Braidotti 2002, 135)

Anna Hickey-Moody (2013) gives an example of the becoming of an art-assemblage that Deleuze and Guattari have portrayed in their writings. In this human-brush-canvas assemblage the art and the artist become together. In this assemblage, the artist is not creating something purely from itself, but art is created in intra-action with nonhuman matter. Hickey-Moody writes:

> "Such nonhuman becomings extend subjectivity and connect subjects to society in new ways. They are 'nonhuman' because, although an affect is an embodied change, a readjustment of personal 'limit' or capacity, it is not produced in relation to another person but rather in relation to the material product, the work, an artist has been involved in creating." (Hickey-Moody 2013, 88)

Becoming-with plastics is something that happens in multiple contexts. Plastics are a troublesome matter to become-with, but "relations of competition, struggle and conflict are also forms of being-with" (Pyyhtinen 2015, 32). Furthermore, plastics can also take part in affirmative and positive becomings. Becoming is embodied and sensible, and it involves flows of affect and desires. Despite all the troubles that plastic relations bring forth, they are not devoid of joy, love and desire.

Affectivity is an important part of becoming in assemblages. Affect is a popular concept that has many different meanings. A Spinoza-inspired deleuzian ontology understands affect as the change of state or capacities of an entity. According to Deleuze and Guattari, assemblages and becomings rely on the capacity to affect or to be affected, since affectivity is a "force that structures subjectivity" (Braidotti 2002, 125). By affects, matter comes into relation with other matter. The nature of the change can be either physical, emotional, social or something else, and this change is understood as becoming. (Fox & Alldred 2016, 24.)

For philosopher Spinoza, affects guide body's power of acting by increasing, diminishing, aiding or restraining these actions (Hickey-Moody 2013, 80). From this, Deleuze and Guattari have conceptualized affects as "changes in bodily capacities", both in human and non-human bodies or assemblages. Drawing from Deleuze's Spinozist notion, Anna Hickey-Moody understands affects as a "confused idea" that "moves us", and researching affects means for example examining "aesthetic influences on human emotions and understand how they change bodily capacities" (2013, 81).

In this line of thought, affects are not the same as feelings, although they are a part of the mixture. Hickey-Moody differentiates affectus and affection from each other, where affectus is the "virtual and material change that prompts affection or the 'feeling of affect' in consciousness" (2013, 81). So affectus is the change that happens in the bodily sphere, and affection is the feeling that this change provokes. Together, they produce affects that direct bodily capacities. Affects build up the way we react to our surroundings, they leave marks in memory that guide us through our everyday encounters.

> "How we feel about things impacts on how we can think about them. Emotions are confused ideas. They are a registration of affectus and they make coordinates for thought: our capacities to affect and be affected are set up by experience." (Hickey-Moody 2013, 83).

The problem with studying affects, that are beyond language and discourse and are understood as "pre-interpreted, the non-subjective and the pre-personal" (Wetherell 2013, 356) is that when they

are brought to the level of analysis, they are already interpreted and turned into emotions and discourses. According to Wetherell, "dividing affect from discourse creates a straitjacket for empirical work and renders it virtually impossible" (2013, 357). However, I do think that it is possible to look for traces of affects, and that is my intention to do. As Wetherell argues, the aim might not be to understand affects apart from the discursive, but to accept that these are inextricably entangled and should be also regarded as co-constitutive.

Affects are significant as they make possible different kinds of becomings. Thus affects cannot be understood through black-and-white terms of good and bad, rather the question is "where they might go and what potential modes of knowing, relating, and attending to things are already somehow present in them in a state of potentiality and resonance" (Stewart 2007, 3). I am inspired by Kathleen Stewart's (2007, 2) understanding of ordinary affects, which she describes "can be experienced as a pleasure and a shock, as an empty pause or a dragging undertow, as a sensibility that snaps into place or a profound disorientation. They can be funny, perturbing, or traumatic".

> "The politics of ordinary affect can be anything from the split second when police decide to shoot someone because he's black and standing in a dark doorway and has something in his hand, to a moment when someone falls in love with someone else who's just come into view. Obviously, the differences matter. The politics of any surge depends on where it might go. What happens. How it plays itself out and in whose hands." (Stewart 2007, 15)

Affective encounters can lead to ethico-political changes in the world. Jody A. Roberts writes of her fear of plastics and how she had to endure it when her daughter needed intensive care. Despite all of her plastic hate, she had to accept that her daughter was treated and eventually got better with the help of plastic materialities in a hospital environment. These encounters also changed the way she perceived plastics and gave her a vision of a possible way to coexist in a benign manner.

> "The plastics are not simply life saving or a threat: they are both. At the same time, my lack of knowledge is not a sign of deficit, but a sign of the shifting relationships of my life and world. More importantly, we can shape the direction the plastics take. We can redesign them to be more benign. We can protect vulnerable populations from exposure. We can decide how and when and why we use these materials. Their future is as much unwritten as our own. Together, we are becoming plastic." (Roberts 2013, 130)

Affects can also be guided and changed. For Hickey-Moody, texts can be used affectively to bring about new kind of subjectivities (2013, 93). This includes aesthetic products such as films, games and online practices of creativity, but also research. Taking affectivity into account means "thinking about how it is that popular culture and high art teaches people to feel and respond, but it might be as general as designing research that pays attention to embodied responses and the ways in which contexts make feelings" (2013, 94). Research that uses affect as a method "recognises that processes of making meaning, crafting emotional responses and producing images in thought are practical and political acts. These acts inform the possible in social imaginings" (Hickey-Moody 2013, 85).

In a way, the data that I use in this study and even this study in itself are a part of this project to take affects into account. The campaign *I love muovi* aims to bring out new affective connections to the audience, presenting surprising and nuanced takes of plastics and their role in our society. My study takes these ideas forward, conceptualizes them further through new materialist theories that look into how affects work in assemblages. While I intend to pay attention to the affective becomings that are related to plastic materialities, I also produce texts and insights that hopefully could provide some new affective turns to readers as well.

In my study, I aim to conceptualize and analyse how we are becoming-with-plastic in different instances and how these intra-actions might open up possibilities for transformation and change. How I understand becoming is in a quite concrete way: it is about being affected in relation to others, human and non-human alike. New kinds of affective connections can change and shape the course of future intra-actions, or as Bennett puts it, "[w]hen a member-actant, in the midst of a process of self-alteration, becomes out of sync with its (previous) self, when, if you like, it is in a reactive-power state, it can form new sets of relations in the assemblage and be drawn toward a different set of allies." (Bennett 2010, 35). These multiple small encounters shape the existences that are involved in them, guiding their paths. In becoming-with-plastic, I argue that being in relation to plastics changes also the existence of both human beings and plastics, the perception of both is shifted in affective, intensive encounters.

2.6 Posthuman subjectivity

Subject position is a contested notion in social sciences and cultural studies, and it was especially a trend in poststructuralist approaches to announce the "death of the subject". However, many feminist scholars are not too keen to drop the concept, and for example Rosi Braidotti speaks for a new kind of subject. Braidotti dismisses the anti-humanist, transhumanist or object-oriented

ontologist call to scrap subjects and subjectivity altogether, since it would do no good for those who have been denied the right for subjectivity so long: "[b]y claiming there is no need for a vision of the subject, they ignore and dismiss feminism, post-colonialism, race and ecological thinking" (Braidotti 2019, 49). A new concept of subjectivity is needed, Braidotti writes, and her answer to that need is in posthuman subjectivity. As Braidotti says, "[w]e have to learn to think differently about what kind of relational subjects 'we' are in the process of becoming, in a multitude of different perspectives." (2019, 98). How I see the need for concepts of subjectivity is indeed in enhancing ways to participate for those who have been neglected of such privilege and to widen the perspective for those whose subjectivities have been narrowed too long. To conceptualize new subjectivities is to create a more diverse and hopefully equal space for different creatures to exist. Instead of one stable Subject, there are many situated subjectivities.

Braidotti makes it clear that the posthuman condition is not indifferent towards human beings per se. The point is not to get rid of the humankind as a species, but to develop an ethical future for it. Braidotti is not alone in her call to keep human beings aboard the posthuman train. The key according to feminist political scholar Samantha Frost is to figure out a human existence that does not trip to old bad habits but "also does not conceptually dissolve humans as identifiable agents and thereby absolve them of the crises that mark the Anthropocene" (2016, 13). Frost implies that human beings are in some way accountable for the crises that their actions have caused, and this accountability should not be lost in the process of rethinking humanity. As Frost puts it, "humans have to own up to and take collective responsibility for their role in precipitating crises of global proportion" (Frost 2016, 2). Also Haraway (2016, 55) says that "actual human beings matter" in this multispecies world, since the ways we choose to exist "matters not just to human beings, but also to those many critters across taxa which and whom we have subjected to exterminations, extinctions, genocides, and prospects of futurelessness." Abandoning some categories just to make room to new, perhaps even more fleeting ones is not serving the point, but we need to rethink the "patterns of relationality" (Haraway 2007, 17). Even Bennett, whose theory of vibrant matter brings forth the liveliness of all kinds of materialities, acknowledges that the human as a category is still relevant:

> "I also identify with members of my species, insofar as they are bodies most similar to mine. I so identify even as I seek to extend awareness of our inter-involvements and interdependencies. The political goal of a vital materialism is not the perfect equality of actants, but a polity with more channels of communication between members." (Bennett 2010, 104)

The birth of a posthuman subject for Braidotti is not a question of *if* but rather, *how.* New subjects have been figured out before, Braidotti argues, for example in the sphere of feminist, anti-racist and post-colonial studies. The others who marked the negative difference from Man have become strong subjects. As Braidotti (2019, 80) writes, "sexualized, racialized and naturalized differences, far from being the categorical boundary-keepers of the subject of Humanism, have evolved into fully-fledged alternative models of the human subject, on the ruins of the human as defined by Eurocentric Humanism". For Braidotti, the posthuman condition is not a utopian notion but already emerging (2019, 37). The change is inspired or driven by the Fourth Industrial Revolution and the Sixth Extinction, Braidotti says, but understanding how these phenomena affect us needs more research of material relations.

> "We are indeed becoming posthuman ethical subjects. We do so by overcoming hierarchical dichotomies and cultivating instead our multiple capacities for relations and modes of communication in a multi-directional manner. […] This means that the ethical imagination is alive and well in posthuman subjects, which stresses an enlarged sense of interconnection between self and others, including the non-human others, by removing the obstacle of self-centred individualism and the barriers of negativity on the other." (Braidotti 2019, 50)

What I find inspirational in Braidotti's thinking is her critique of the catastrophe discourse. Braidotti argues that the capitalist system is milking us with anxious stories of apocalypse and destruction. In these stories, hope is not present, and survival is an individual task in a world filled with suspicion, inequality and common immorality. Braidotti is warning against relying only on visions of a "'humanity' bonded in fear and vulnerability", and she prefers to "work affirmatively and defend grounded locations, complexity and a praxis-oriented, differential vision of what binds us together" (2019, 32). Stacy Alaimo may not be as hopeful as Braidotti in where the world is going, but both of their conceptualizations of a new subject rely on joy and micro-practices of everyday life. "If we cannot laugh, we will not desire this revolution", Alaimo states (2016, 3).

While not neglecting feelings of pain, suffering and vulnerability, Braidotti argues against some kind of pan-humanity that is connected through negativity and proposes instead posthuman subjectivity that does not demolish the subject position as a whole but creates a space for accountable agency. The key is to "find balance between the acknowledgement of the damages and the pursuit of an ethics of joyful affirmation" (Braidotti 2019, 56). For Braidotti, ethics are about acknowledging the complex networks of different actions and actions not taken:

> "Within a posthuman framework, the subjects' ethical core should not be defined in terms of intentionality, but as its forces and affects. Ethics is defined as the pursuit of affirmative values and relations, and politics as the pragmatic practice of implementing them" (Braidotti 2019, 101).

In critical posthumanities, the knowing subject is not a singular entity, it is not the universal Man or Anthropos, but an ensemble of "*zoe*/geo/techno-related factors, which includes humans" that is in connection with a network of other human and nonhuman agents on both a local and a cosmic scale (Braidotti 2019, 77). Braidotti writes that posthuman subjectivity is "post-personal and pre-individual" (2019, 36) which means that the knowing subject is not centralized, but power shifts through the assemblage, creating different openings for action and change, for power and resistance. However, the posthuman subject is not some universal concept, since the ways of being a human are not the same everywhere. The notion of 'human' itself is already always multiple, situated, embodied, affective and relational. This means for Braidotti an approach that turns away from universalism and instead turns towards recognizing the situational instances how human beings become. This, Braidotti argues, "enhances the singular and collective capacity for both ethical accountability and alternative ways of producing knowledge" (Braidotti 2019, 16).

Now, it is important to understand that Braidotti's posthuman is more a "theoretically-powered cartographic tool that aims at achieving adequate understanding of on-going processes of dealing with the human in our fast-changing times" (Braidotti 2019, 16) rather than an actual persona. Braidotti's posthuman "functions less as a substantive entity than as a figuration or conceptual persona" (2019, 181). Figurations are a feminist tool to configure new paths for ethical being.

Situatedness is an important aspect of subjectivity since despite the global injustices, the everyday encounters still materialize in different ways, in specific local intra-actions: "[t]he singularity of interspecies gatherings matters; that's why the world remains ecologically heterogeneous despite globe-spanning powers. The intricacies of global coordination also matter; not all connections have the same effects. To write a history of ruin, we need to follow broken bits of many stories and to move in and out of many patches. In the play of global power, indeterminate encounters are still important." (Tsing 2015, 213). As Tsing demonstrates through comparing the reception of matsutake mushrooms between Japanese matsutake lovers and White mushroom foragers who find the smell quite repulsive, even the material aspects of different encounters can be culturally specific and thus have different ends. This is why human-plastic relationships in Finland can come out in different shapes and forms than elsewhere.

The plurality of the subject is emphasized throughout these writings that I call under the new materialist and posthumanist umbrella. Already for Deleuze, there was no fixed and stable "self" that would exist in an individual body. Rather, subjects are "characterised by flows of forces, intensities and desires, and individuals are continually being formed through a process of 'dynamic individuation' (Deleuze and Parnet 1987: 93) from which the changing 'self' as an assemblage, a connective multiplicity, emerges" (Taylor 2013, 46). For many posthumanist and new materialist theorists deriving from Deleuze as well, subjectivity is plural. That means, subjectivity is not an individual asset but something that is formed in relation. Like Anna Hickey-Moody writes, "[o]ur subjectivity is the embodied accumulation of our actions", and that bodies are "consistently re-making themselves through their actions, relations, interests, the contexts in which they live" (2013, 82).

Donna Haraway (2016, 60) calls these plural subjectivities or beings *holoents* that come together in *holobionts,* that refer to "polytemporal" and "polyspatial" assemblages. Haraway (ibid.) derives from Barad, when she writes the following:

> "Critters do not precede their relatings; they make each other through semiotic material involution, out of the beings of previous such entanglements. Lynn Margulis knew a great deal about "the intimacy of strangers," a phrase she proposed to describe the most fundamental practices of critters becoming-with each other at every node of intra-action in earth history." (Haraway 2016, 60)

How I understand this call for a pre-individual subjectivity is how any entity is never exhausted in itself or existing in a vacuum. I understand subjectivity in its relationality: even though a specific subjectivity might locate itself across specific bodies, it never is a clearly-bordered entity. We are porous. Therefore, an *I* or *you* or *they* is never just one. It is a plural being, still becoming as different systems try to capture it in its unfolding. I like the formulation of Højgaard and Søndergaard (2011) on the relationality of even individual subjects, but also plural subjectivities:

> "We are interested in processes of subjectification and agency—in the forces and kinds of power that produce and constitute situated individuals and subjectivities. This interest includes a focus on how normativities of socio-cultural categories work on, in, and through human beings; as well as how matter or materialities and technologies enact and are enacted in these processes." (Højgaard & Søndergaard 2011, 339–340)

And how I understand Braidotti's posthuman subjectivity is a process where one becomes aware of local, situated ways of being human that are informed by global injustices. To become a posthuman

ethical subject means taking into account the critical connections and positions that take part in the processes of knowledge production and becoming, giving space to other agencies and recognizing their capacities to affect and be affected, accepting one's own position as part of the assemblages and thus realizing one's ability to also take action in an affirmative way that goes against the exhaustion and cynicism of our times. The idea of posthuman subjectivity is to recognize that an entities ability to act is forged in relation.

But how does subjectivity relate to plastics? According to Højgaard and Søndergaard (2011, 339), in a posthumanist framework "the subject cannot be understood apart from technologies and other material-discursive phenomena that both intervene in and extend subjectivity". Thus plastics also affect the subjectivities that become in assemblages, even though the thought of having plastics affecting the way we identify and position ourselves in the world might sound a bit uncomfortable. The key is to understand that through human-plastic relationships, the properties and doings of plastics in different assemblages contribute greatly to the becomings of subjectivities.

3 METHODOLOGY FOR NEW MATERIALIST STUDIES

The underlying hypothesis is that we are, as a species, becoming-with-plastic. These becomings are not universal, however, but situated, relational, affective and different, depending from the context, and they have ethico-political consequences to our material-discursive existence. My task in this study is to dig deeper into what becoming-with plastics actually means in different contexts, how is it happening and what are the consequences of these becomings. I argue that different modes of being in touch with plastic produce different subjectivities, and the urgency of the multiple ruptures caused by the Anthropocene also requires new understandings on how subjectivities become-with matter.

In order to stay true to new materialist and posthumanist thinking, and to appreciate the ambivalent nature of plastics and the robustness of my multimodal data, I was directed towards unconventional, fluid methodologies. The argument of new materialist scholars is that thinking more deeply about the material relations and agencies that constitute our lived realities and mapping out the possibilities for differential becomings can ignite political action and responsibility. Thus, to catch the many nuances of plastic relations, a methodology that gives space for open-ended discussions, free associations and rhizomatic thinking was needed.

3.1 Fluid methodologies and situated knowledge

Methodology is usually described as the "rules, principles and procedures for the production of knowledge" (Lykke 2010, 144). However, in general, there is no one standard feminist methodology to follow (see Ackerly, Stern & True 2006, Lykke 2010), neither is there a standard methodology to follow in new materialist studies. As Jamie Lorimer (2013, 63) writes, the field of materialist and posthumanist studies needs methodological innovations and development of methods that are better suited for the theoretical advances. What is common in feminist studies though, is the commitment to explore new ways to achieve knowledge, to combine different methods and tools in an interdisciplinary way, and to describe the research project as an ongoing process. Feminist thinking is something that advocates plurality, multidisciplinarity, a diversity of voices, overlapping and interconnectedness, which is open to surprises and new thoughts. To conduct scientific study from a feminist perspective is a "cross-cutting type of knowledge production" (Lykke 2010, 8), that invites for innovative and new ways of thinking. Therefore, in feminist studies, methodologies and methods used are usually each time forged anew to fit the challenge at hands. As Coleman and Ringrose (2013, 2–3) say about deleuzian-inspired feminist

methodologies, “one of the things that we think Deleuze’s work encourages is the development of concepts and methodologies that are specific, relevant or appropriate to the problem at stake”.

Hence, a very rigid and hierarchical methodology and method would not seem suitable for this thesis. Methodologies that aim to produce something coherent and precise are bound to miss out on the complexity of the world, John Law argues (2004). Instead of stable and rigid methodological structures, Mirka Koro-Ljunberg suggests using fluid methodologies as a way to be true to the complexity of study objects. She does not, however, give specific answers to how to do it:

> “One might ask what it takes to implement and practice fluid methodologies. How to do it? (Un)fortunately I do not have an answer. I do not know how to do it or what to recommend, since this type of methodology is unanticipated and becoming. Readers can borrow ideas, read about different examples, experiment with existing methodological configurations, but in the end each scholar is responsible for creating her or his own flexible and continuously changing methodologies. Methodologies as such are experimentations and projects without an end.” (Koro-Ljungberg 2016, 19 of 22)

According to Braidotti (2002, 173), a research process should be regarded as a nomadic and rhizomatic process. This means fluidity and motion in the used concepts, which results in making new, unexpected and more egalitarian connections between phenomena. Like rhizomes entangle and spread underground, so can thinking spread and grow in new directions and make new links with other rhizomes. Rhizomatic thinking doesn’t make a hierarchical difference between each root or stem. Rhizomatic thinking helps to make interdisciplinary research, move between different discursive fields, avoid fixed and passive points, and see connections there where they before were unseen. Rhizomatic knowledge-creating practices are open to new ideas and carried not only by logic and ratio, but also by passion and affectivity (Lykke 2010, 139).

Thinking with new materialist and posthumanist concepts means dealing with uncertainties, haziness, figurations and surprises, since “unless one is at ease with multi-dimensional complexity, one cannot feel at home in the twenty-first century” (Braidotti 2019, 9). For Beetz and Schwab (2017, 42), doing new materialist studies means “being open to surprises, unexpected turns, leaving the comfort zone of abstract analysis and static methodology for a critical and collective reflection on how we are bound up with the horrors of late capitalism”. The theories are like the times that have birthed them. As Stacy Alaimo puts it, the Anthropocene “is no time for transcendent, definitive mappings, transparent knowledge system, or confident epistemologies” (2016, 3). In her

own research, Alaimo happily puts together “several decades of engagement with high theory” and “many modest and mundane sites, texts, and performances” and “everyday encounters and practices” (2016, 7).

With all this being said, I should say also something definite about this study. The type of this research is correlational and explanatory, since I am observing the nature of human-plastic assemblages and investigating the impacts and consequences of these relationships. My job is to map the ways “mixtures or assemblages change, effecting alterations of subjectivities” (Hickey-Moody 2013, 80).

My figuration of a fluid methodology for this particular study would be something I call a rhizomatic and diffractive material-cultural content analysis. Diffractive reading has been theorized by Donna Haraway, Karen Barad and Iris Van der Tuin, just to mention a few. Diffraction is a physical phenomenon that describes the situation when waves hit an obstacle which causes a bending of waves, which further results in interference where the “broken” parts of the wave either amplify or weaken each other. Barad uses diffraction as a metaphor for “reading insights through one another in attending to and responding to the details and specificities of relations of difference and how they matter” (Barad 2007, 71). Diffraction is different from reflection, that Barad argues produces a representational view of the world (2007, 88). According to Paula Saukko (2003, 34 – 35), diffraction refers also the research practices: doing research diffractively turns it into a “force that alters or creates reality in both symbolic and material terms”.

According to Iovino and Oppermann (2014, 9), diffractive reading is an interpretive methodology that sees research as a “practice of entanglement”, where different texts, theories and concepts are read through each other. Reading diffractively “allows us to actively participate in a creative process in which material levels and levels of meanings emerge together, contributing to the world’s becoming a web teeming with collective stories” (Iovino & Oppermann 2014, 10). This is why the literature review section of this thesis is so extensive: it is as important as my data in constructing a diffractive analysis of becoming-with plastics in an interdisclipinary manner.

Hence, I will abandon my earlier research methods that have focused only on how language builds reality, and instead widen my gaze and aim to read the data diffractively. This approach does not overlook the power or representations and language, but rather could be described as a ‘more-than-representational’ approach. Through this stance, “the power and provenance of representation is enhanced by attending to its material, practical and affective dimensions” (Lorimer 2013, 63). The challenge is to see beyond texts and take Baradian material-discursivity seriously. If I were to

follow the representationalist tradition, I could never take my data as anything else but mediated, representational production of a reality that is out of our ability to comprehend. As a formed media and communication studies student, turning my back to representations and understandings of journalistic productions as composed constructions of reality is a hard task. I am fully aware of the fact that journalism is very much human-based, language-based activity, but I can't really deny my own human-ness in this process. If this is the way we make meanings, I think it is important to also look at it from new perspectives.

To shift away from representationalism, I shall look into matters of practices, doings and action. Intra-activity is both a theory and a methodology for this study. Representations, the way how journalists make the world intelligible, are also an active doing that is material and has material consequences. Discourses that materialize through journalistic work are actually something that are made at the same time as they work to enable and restrict the becomings around them. At the same time, matter does influence discourses as well. That is why Barad calls her theory *intra-action*, which means the ways how matter and discourse both constitute each other in processes of knowing (2003). As Fox and Alldred (2016) remind us, "matter is to be studied not in terms of what it is, but in terms of what it does: what associations it makes, what capacities it has to affect its relations or to be affected by them, what consequences derive from these interactions" (2016, 24). Since my data deals with both past and present in plastic relationships, I think it is important to take the historical aspect of cultural becomings into account. Through a spatiotemporal analysis it becomes clear how deeply plastics are interwoven to our existence.

The easiest way to tackle material agency in empirical research according to Böschen et al. (2015, 259) would be to study it through the accounts of the actors, found in actions, interviews and societal discourse, in other words, looking at materiality through the domain of the social. Jamie Lorimer (2013, 63) has noticed that "there has been a flurry of recent experiments which aim to stretch existing textual methods so that they might witness, analyse and evoke the affective and performative dimensions of imagery and writing". There may not be a method that would give direct access to materiality, but new materialists argue that this is not the point: the point is to look at the ways in which we might gain knowledge that acknowledges the mutual interrelation of meaning and materiality (Böschen et al 2015, 262).

Since my aim is to work diffractively, I mostly choose those parts from the data that resonate with the theoretical premises I have set for the study. This does not mean they would have to conform to the theory, rather I am interested in sections that seem to some way interestingly engage with the theoretical premise. As MacLure (2013, 75) writes, "[d]uring the process of coding, some things

gradually grow, or glow, into greater significance than others, and become the preoccupations around which thought and writing cluster". While the theory-base is an important informant in this process, I could not describe this study as a fully theory-oriented study. The data also guides the analysis. I expect to engage in a lively and fruitful discussion with my data, read both theory and data through each other, making new connections and cultivations that bring some ends to meet. As Haraway (2016, 31) very heart-warmingly writes, "I want to make a critical and joyful fuss about these matters. I want to stay with the trouble, and the only way I know to do that is in generative joy, terror, and collective thinking". My task is to think collectively with those who have thought before. The theme of the study is one of terror, but as comes forth through my analysis, there are also possibilities for joys and affirmative intra-actions.

Barad's agential realism creates an ethical standpoint for research, since she argues that if this world is not inhabited by pre-existing subjects or objects or *relata*, then these relata are always forged in an analysis, through agential cuts made to the complex entanglements that constitute our lives. If this is true, then it is true also for research practices. This means that the positions and subjectivities that I interpret emerge from the very research assemblage that I form with theory and data. In a way, the studied phenomena are constructed in the research process, thus subjects and objects do not exist before my analysis. Lykke argues that this differs from traditional scientific practice because also the subject becomes defined and contextualized, the boundary between these is defined, and it is understood as a momentary cut for the sake of the research (Lykke 2010, 151.)

On a more concrete level, Barad concludes that scientific research is not neutral but always situated and dependent on the research designs and methods used (Barad 2007). In Barad's interpretation of Bohr, a phenomenon (the ontological unit) is at the same time both constructed and an objectively existing reality (Lykke 2010, 141). The phenomenon is constructed, because knowledge production always includes using experimental apparatuses (be they microscopes or theories), and through their material-discursive design, a certain result is derived. However, this result can be called objective reality at the same time, since the process can be repeated and observed through the same research design, coming to somewhat similar results. Knowledge is thus both constructed and both real, but only in the specific frame and context of the particular research design (Lykke 2010, 141).

Agential realism makes the research process an intricate part of the whole phenomenon that is studied, since "in agential realism, our analyses do not just reflect the world, they are active interventions: the making of difference" (Orlikowski & Scott 2015, 698). As my research is the apparatus that I build to investigate phenomena, I at the same time take part in the building of these phenomena. As Karen Barad (2007, 91) writes, "[m]aking knowledge is not simply about making

facts but about making worlds, or rather, it is about making specific worldly configurations". This means that the researcher also has to be aware of the kinds of claims they make in their studies, since "[a] materialist approach always entails taking sides, accounting for our own positionality, and reflecting on how the very results of our analysis can ambivalently feed back into the discursive and ideological formations we are confronted with" (Beetz & Schwab 2017, 41). My results are inseparably bound with my interpretations and the shoulders I stand on, forged in the intra-active relationship. The data and results produced in this paper are co-constitutive, in a Baradian onto-epistem-ological relationship. This means that the things that are studied are formed at the same time as I engage with them. This doesn't mean they wouldn't exist before me or the research; it just means that the phenomenon that is going to happen between me and the 'object' creates the phenomenon at the same time. The phenomenon here, which is an assemblage of me, the 'object' of my study and the forces that entangle with the research process, is "both constructed and an objectively existing reality" (Lykke 2010, 141). Thus, it is onto-epistem-ological.

Paula Saukko reminds researchers of the consequences and importance of picking a lens through which to look at the chosen reality. According to Saukko, research always opens up a "partial and political perspective on reality" (2003, 9). Therefore Saukko demands for a more critical awareness of the reasons and passions the researcher has behind the research (2003, 18). To save objectivity, objectivity has to be defined in a new way. In this, 'situated knowledges' helps the researcher.

The concept of 'situated knowledge' by feminist scholar and theorist Donna Haraway is perhaps the most widely known concept to describe this located knowledge production in science. Donna Haraway's thinking and her concept of situated knowledge has begun to gain ground also in other fields of study than just the feminist strand. Producing knowledge from nowhere, dislocated and unseen, is to build one's work upon an illusion. A gaze without a body can represent without being represented, which leads to unfair power relations and politics without a solid ground. This kind of research leads to false objectivity. Social sciences, humanities and even natural sciences have taken heed of the warning (see Koskinen 2013).

Haraway's 'situated knowledge' is her attempt to bring objectivity back to sciences. It is a clever tool to avoid both God-trick, relativism and 'death of truth' (Lykke 2010, 5). Relativism, which means all interpretations are equally good or bad, is avoided thanks to the authoritative voice the talker gets from their partial location, where from they can state something about that partial reality that can be seen through that position. That commitment to that partial location makes the talker a responsible, ethico-political actor (Lykke 2010, 6). The talker/researcher can take a clear moral and political stance, without saying that their approach is neutral or objective.

However, Haraway plants a warning in her essay. There lies a “serious danger of romanticizing and/or appropriating the vision of the less powerful while claiming to see from their positions” (1988, 584). Especially when dealing with the non-human sphere, it is important to be aware of the limits of human ways of knowing things. We can’t know what the non-human thinks or feels, not to say we would even know it when it comes to members of our own species.

So who is the “I” presented in this particular text? First and foremost I want to present myself as part of the generation that lives among climate change and the Sixth Extinction. In addition to my own body I am concerned of the bodies that coexist with me at the same time on this planet, and those that will exist after me. As Haraway puts it, “[s]ituated knowledges are about communities, not about isolated individuals” (1988, 590). I am devoted to searching for more egalitarian and sustainable ways to live, know and prosper on this harassed planet which is teeming with interconnected life forms of all kinds. At the same time, I would like to position the “us” or “we” that I talk about in this thesis. With these pronouns I refer specifically to people living in the Finnish welfare state, but it could also be broadened to mean other Western well-off people who mostly enjoy the benefits of plastic relations, while the biggest toll of our comfort is paid usually somewhere else.

Secondly, I am committed to the legacy of material feminist insights. My thinking is standing on the shoulders of these scholars who attune to the affirmative, yet sober accounts of coexistence on this planet.

Thirdly, I am a journalist and my task is to ask questions and tell stories in these strange times. I have a background in environmental and climate journalism, which has also affected my choice to cover plastics in this thesis as well. My profession has profoundly affected the way I write and perceive information, hence this part of me is also present in this study.

3.2 Method: Doing a diffractive material-cultural qualitative content analysis

I will approach my data through diffractive material-cultural qualitative content analysis, which is of my own creation. In line with cultural studies, my method of analysis is an open and creative process. I believe that reading the data through the theories and thoughts of posthumanist and new materialist thinkers gives way to new interpretations and new calibrations. More concretely, my method is a creative reading process where I will read, watch and listen through my material several times, while at the same time carrying my research questions with me. Since the study is not

completely dictated by theory, I also expect new questions and insights to rise from the data that challenge or converse with theory, making it a two-way process. The interdisclipinary nature of my study is present in the method, since some theories speak better with other parts of the data than others. Reading diffractively may result even in conflicting trajectories, but in this case, I take it as a confirmation of the validity of the results, not as a fault.

I do not want to restrict myself to a rigid methodology, such as a discourse analysis, in order to keep myself open to the data and how it speaks for itself. I follow the creative processes of such writers as Anna Lowenhaupt Tsing, Stacy Alaimo and Jane Bennett. I want to be true to my own affective reactions to the data and to theory since "affectivity and intellectuality grow together in such a way as to make it difficult to separate reason from the imagination." (Braidotti 2002, 71).

> "Pains and pleasures, hopes and horrors, intuitions and apprehensions, losses and redemptions, mundanities and visions, angels and demons, things that slip and slide, or appear and disappear, change shape or don't have much form at all, unpredictabilities, these are just a few of the phenomena that are hardly caught by social science methods." (John Law 2004, 2)

Tuomi & Sarajärvi (2018) write, that content analysis is a way to analyse documents systematically and objectively. I might differ from this notion a bit, since I believe that my analysis of the documents is highly dependent on my personal understandings and interpretations of the theories I have read. However, from a situated standpoint, I will be able to produce *a* systematic and objective study, but which can hardly be completely repeatable. Obviously there will be loose ends as well, but in the name of feminist theorization, I guess that is in line with the tradition.

Since Yle's campaign is planned to encourage people to care or "love" their plastic waste and learn how to recycle it better, the campaign in itself already tries to respond to the plastic crisis. My task is to interpret the data in theoretical terms, seek connections that sing with new materialist and posthumanist theories and look for new conceptualizations and openings for creative thinking. The way I understand doing analysis that defies old dichotomies and binaries is to search for openings that make it possible to do analysis without Othering, without juxtaposing, but revealing affirmative, non-exclusive relations and co-constitutiveness of relations and absences. This does not mean that everything is the Same (see Braidotti 2002), but that there are positive differences at play that produce the complex realities we live in.

The categorizations that emerge from my diffractive reading are of course situational, a product of this particular study, conducted by me and my particular data, accompanied with the particular

thinkers and thoughts that I have chosen. They are not meant to be taken as universalized truths of existence, but rather as tools to understand these particular plastic relationships. These categories are not pre-decided, but arise through an analysis of the intra-actions, as Anna Tsing also recommends:

> "If categories are unstable, we must watch them emerge within encounters. To use category names should be a commitment to tracing the assemblages in which these categories gain a momentary hold." (Tsing 2015, 29).

I anticipate that thematical patterns will emerge from reading the data, which will help me to separate the findings to different parts. As my theory base is also the base for my methodology, I include intra-activity into the method. This means that I have not presupposed any of the categories and codings that I read out from the text, but they become as I affectively engage with the data. I think Maggie MacLure says it well, that using coding in research does not have to be a rigid representation but rather it is a manifestation of research practice:

> "Perhaps we could think of coding, then, as just such an experiment with order and disorder, in which provisional and partial taxonomies are formed, but are always subject to change and metamorphosis, as new connections spark among words, bodies, objects and ideas. Such a conceptualisation would recognise coding, not as a static representation or translation of a world laid out before us on the operating table of analysis, but as an open-ended and ongoing practice of making sense. It would also recognise that the gaps and intervals that we make as we cut and code the flow of difference are possible openings for wonder." (MacLure 2013, 181)

The concrete way how I did my analysis goes as follows. First, I transcribed the audiovisual material of the data, which means all eight episodes of the radio programme and five episodes of the documentary series. After that, I copied the texts of all the online articles to the same file and transcribed the audio clips and videos that were embedded in the articles.

After this, I started to go through the material again. I searched for assemblages and phenomena and intensive affective encounters that seemed to resonate with the premises of this study. I also went back to the actual audiovisual data to listen and watch again certain parts. I wrote down the first impressions I got from the data, that in my eyes seemed to sing with new materialist concepts and theories.

After drawing out several possible trajectories, I focused on a few and continued my analysis in a rhizomatic and diffractive manner[2]. This means that I did some analysis, then went back to my theory base, reading new articles and rereading those that I had already read before, and then reading my analysis through these theories, seeking for new ripples and associations. Basically, the work was a process of going back and forth between my data, my theory base and my analysis. During this process, the methodology evolved as I worked, since my understanding of how phenomena actually become intra-actively and affectively and how the relationship between human beings and plastics can concretely be analysed in terms of material-cultural becomings came to be only through the actual practice. Thus, my manner of work was in itself onto-epistemological, where I can't really tell apart whether it was theory, methodology or data that guided the work.

My research questions worked as a guiding direction for the analysis. I wanted to keep the questions as open as possible, in order to allow the process to be as free and creative as possible. As a reminder, the research questions were the following ones:

1) How and why are human beings becoming-with plastics in this data?
2) What kind of ethico-political consequences can be mapped out from these becomings?

The answers to these questions are by no means exhaustive, but rather examples of ways to answer to them. It should be noted that the cases and conceptualizations that ended up in the discussion section are but one tiny possible interpretation of the myriad different human-plastic entanglements that could be found from the data. As such, this study works more as a presentation on how diffractive material-cultural analysis could be done and how becoming-with plastics can be analysed and conceptualized rather than mapping out all the possible ways to become-with plastics from the data.

Finally, a word about the citation procedure in the analysis section. As my data is multimodal and there are various speakers and sources, I use a special mode of referencing in order to find some clarity. If the data material is indirectly quoted or paraphrased, the referencing follows the standard procedure. However, direct quotations are referenced with a footnote. If it is clear, who the speaker

[2] It needs to be noted that I started by reading all of the data material I had, contemplating over it and analysing several different encounters and intra-actions present in the data. As I moved forward with my analysis, I had to discard some of the analyses from the discussion chapters in order to keep some clarity and focus in this work. This is why all of the data that I gathered does not necessarily present itself in the final analysis text, but all of the data is nevertheless present in the source section since I think that all of it was crucial for my study process, even though I would not have specific citations from all of the articles and episodes that consisted my data.

is, I have indicated their name in brackets behind the citation, added with a footnote which shows the actual source. Written passages that include body text and citations are referred to with footnotes only. Sometimes the transcript involves a discussion between a journalist and the interviewee. In these cases, I refer to the source material in footnotes.

As the material was in Finnish language, I have translated myself all the citations and quotes from Finnish to English.

3.3 Data: Yle's plastic awareness campaign I love muovi

My data consists of media material produced for Finnish broadcasting company Yle's constructive campaign called *I love muovi*, which means "I love plastic". The campaign took place in spring of 2019 and was aimed towards households and consumers. The aim of the campaign was to inspire people to recycle. In that sense, the campaign is not "normal" journalism. Journalism usually does not explicitly tell people to do something or not. Yle called the campaign "constructive" or "solutions" journalism, which has been a debated trend in Finnish media sphere in the past few years. This is an interesting starting point for my analysis, since the data itself already tries to map out ethico-political solutions for a better future.

Next, I will elaborate a bit on this particular choice of data. The debate of material agency is mostly circling around among theorists who comment and elaborate on each other's theories in a highly conceptual manner. New materialist thinkers have been criticized for their lack of empiria and case studies. For example, even though Barad's thinking has been highly influential in feminist studies and new materialist thinking, she does not give any explicit rules or guides to follow her methodology in practice. It is easy to criticize these theorists for not putting their theories to empirical tests, but to solve the problem proves to be a much harder task. Taking material agency into account poses tricky empirical and methodological questions (see Böschen et al. 2015, Abrahamsson et al. 2015). While for example feminist scholars have brilliantly contributed to the conceptualizing of material agency, the lack of methodological approaches funnily enough makes matter "elusive and fugitive" when combined with theory (Böschen et al. 2015, 257). None of the approaches in the new materialist field really tell us which methods should be used to study material agency, although some attempts have been made.

This is why I intend to take posthumanist and new materialist concepts out of the highly theoretical sphere and see how they discuss with data that is very much focused to the mundane practicality of our societies, that conveys meanings and sets agendas: journalism. While the version of reality that

journalism and media produces is always mediated, it is also an important source for imagining mutual realities and creating understanding of the current state of affairs. The reality that journalistic practices mediates is something that can be shared with others and in the end affects society at large. “Moving imagery and other media are vital components of affective ‘resonance machines’ that powerfully configure popular political landscapes.” (Lorimer 2013, 65). Journalism has the power to shift agendas in societies, set up norms and values and make matters topical. It is through journalism that new ideas are shared and where relations between matter and meaning are configured in front of a big public. In baradian terms it could be said that journalism as a profession and as a practice is already an apparatus that creates phenomena and produces agential cuts in the world.

Besides the fact that I think that journalistic media material is an important phenomena-making machine or assemblage, I have a couple of other reasons for choosing media material as my research data. Firstly, my background is in media and communication studies and I am working as a journalist myself. I am familiar with the ways how news stories and feature material are produced. Secondly, choosing media analysis instead of ethnography (which seems to be the most used data collection method in new materialities) is also a question of methodological interest: I want to see how media material suits for this kind of analysis.

As a journalist myself, I understand that journalism is always about choices, about perspectives and thoughtfully curated views. It is by no means neutral. But in this study, I aim to explain and map out the underlying assumptions and goals of my journalistic data in a way that avoids the false notion of a perfect window to a perfect world.

I remember when the campaign was published. It immediately caught my eye, since I had already decided a year before to do my thesis on plastics from a new materialist perspective. The campaign sounded like it was already almost speaking in the tongue of new materialist scholars: in order to move to a better world, we need to take into account the materiality of our existence and care for it.

The campaign was done in cooperation with scientists, research institutes, university of Eastern Finland, the Ministry of Environment and representatives of plastic industry in Finland. The scope of the campaign and the expertise standing behind it suggests that the campaign aimed to change and rebuild an official or a mainstream narrative of how we should see and treat plastics. The material does not rise from the fringes of the society, rather it depicts the normative becomings that are commonly thought as good or preferable practices. Since the media campaign was created together with experts, the content can be thought to be quite valid in terms of scientific accuracy.

In addition to expert knowledge, the campaign contains interviews with people who discuss their relation to plastics and the radio series presents a look into the cultural history of plastics in Finland. Bringing these all contents together, I believe the data gives quite an extensive view on how plastic relationships have been and are discussed in Finnish society, and most importantly, how this relationship is now renegotiated. The viewpoints are varied, and thus the data does not only discuss recycling and recycling practices, but also how plastics are perceived and used in everyday lives, or in new materialist terms, how plastics take part in our everyday material-cultural becomings.

Having said that, I understand that the data may leave some points and entanglements out. Being aware of these exclusions is crucial to the study. The aim or viewpoint of the campaign is quite strong, thus the content can already be seen to be biased towards certain practices and values. The campaign did raise some eyebrows in Finland when it was published: the plea to "love" plastics was seen as strange due to their harmful impact, some called to question the actual effectiveness of recycling plastics since Finland does not have the capacity to recycle all of the plastic waste that is produced here.

The material for my study is multimodal. First, I collected 24 written articles that were presented on the campaign's website. Videos attached to the articles are also a part of my analysis. The articles vary in themes: from expert interviews to guidance articles on plastic recycling. Throughout my analysis it became apparent that I would not include data from all of the articles to my analysis; thus the final amount of articles I used for my analysis was smaller.

The radio programme *Plastiikkia, plastiikkia! Muovin kulttuurihistoriaa* deals with the cultural history of plastics. The programme consists of eight episodes, approximately 19-minutes long each. The episodes feature a specific plastic artefact each, presenting their cultural impact through historical anecdotes, archive clips and interviews.

The tv programme *Arkistomatka* has five episodes, approximately 19 minutes long each. Each of the episodes presents a person who has a special relationship to the themes related to the campaign: plastics, recycling and activism. On Yle Areena's Facebook-page there are still left videos of Finnish celebrities "confessing" their plastic relationships: these videos are a bit difficult to find since all of them are not found on the website anymore, but the ones that I can find, I will use in my analysis.

The campaign originally included also a fictional series that starred some of Finland's most beloved actors. The storyline tells about a man who decides to get his whole neighbourhood to recycle

plastics. The series is not available anymore on Yle Areena streaming service. This is why I decided to leave it out from my analysis: it is not easy to get to.

I also left out from my data foreign documentaries that were shown as part of the campaign. As I want to map out a situated subject, I decided to stay on material produced in Finland.

I am intrigued by the campaign's strong will to redeem plastics as a valuable material. Despite the joyful and humorous message to 'love' plastics, the campaign does take plastic problems seriously, otherwise there would not be a need for such a campaign. The various programmes that constituted the campaign all take part in an effort to really shift our attention to plastics and also the good that comes out from using and recycling this matter.

I chose the constructive campaign because of its desire to ignite action in readers and listeners and because of its effort to create a new kind of relation to plastics. In that sense, it resonates with Rosi Braidotti's call for affirmative ethics that aim to empowerment through changing negative passions to positive actions through relating to multiple others in compassion and responsibility (Braidotti 2019). According to Braidotti, affirmative ethics require reworking pain and suffering, since they show the interconnectedness of all living entities. Inscribed in these affirmative ethics is the ability of all entities, human and nonhuman alike, to affect and be affected (2019, 214).

> "Joyful or affirmative relations, reached through the praxis of reworking together the reactive and negative experiences and affects, are the desirable ethical mode." (Braidotti 2019)

I believe that through this narrowed, specific data I can analyse some of the current positions of human-plastic entanglements in Finland and conceptualize them further, thus producing a local, embedded and embodied, affective and relational account of human beings here are becoming-with plastic.

4 THE CONSUMER AS THE HEGEMONIC PLASTIC-RELATED SUBJECT

In order to understand the scope and scale of different kinds of vicious problems and how they should be solved, thinking about them from a material-cultural perspective is of utmost importance, since it is in our everyday encounters where social and cultural events happen and take their form.

My analysis is divided into three chapters. First, I will present the hegemonic subject position that is provided as an "obvious" answer to the nature of human-plastic relationships: the consumer position. I come to the conclusion that notions of becoming-consumer and its dualistic properties as the culprit/saviour are not grounded enough in material-cultural practices, and hence this subject position does not inspire or speak for changing the relationship to plastics. I argue that the consumer position is actually a by-product of other becomings that plastics are a part of. A more deeper, culturally and materially complex understanding is needed in order to propose change.

Hence, in the second part, I will present examples of plastic-related becomings in Finnish cultural landscape. These becomings are material-cultural-discursive, historical, affective, embodied, often affirmative and situational. In this section I want to broaden the quite narrow mainstream understanding of human-plastic relationships, while at the same time exploring the ways in which new materialist methodology and empirical material might discuss with each other diffractively. The phenomena related to plastics take shape in constantly repeated and renewed practices that shape both human subjects and plastic materialities in a co-constitutive way.

These two first parts are needed in order to gain an understanding of how and why we are so entangled with plastics. I argue that consumerism or capitalism are not the only answers to those questions, but the situation is far more complex and nuanced. Turning our gaze to the affective relationality of our plastic relationships can help us better understand how we got here in the first place.

In the third and last chapter I shall formulate my figuration of *becoming-sober* as an ethical subjectivity that is inspired by plastics. This becoming hints towards a new, collective subjectivity, that is committed to dealing with plastic troubles in an ethical, affirmative and compassionate way. I will elaborate the concept through examples from my data, which speak towards such a subjectivity.

It is important to notice that the categorizations that are present in these discussions are but simplifications of the possible lines of flight that emerge from the mediated assemblages presented

in the data. Many of the subjectivities overlap and coexist, as subjectivities are according to my understanding both plural (as in pre-individual in their co-constitutiveness), intersectional and context-specific. Since the posthuman subject is something that is processual and becoming, I am not that keen to establish some kind of new fixed subject positions. Rather, my aim is to stay open to the emerging directions that contemporary plastic relations might produce.

4.1 The guilty and the responsible

Through my data, it is apparent that first and foremost invitation for a subject position that is presented in relation to plastics is the consumer position. This notion is an underlying assumption in many of the interviews and explanatory commentaries throughout my data. In many occasions it is clearly mentioned that plastics are a cornerstone of our modern consumption culture. This process of becoming is historical, tied up to larger societal and cultural changes but also to shifts in the way how our everyday material lives have been assembled and enacted. It is noteworthy that much more often than calling us citizens, journalists and experts alike call us consumers. In my data, the word "citizen" as an actant is mentioned only three times, whereas consumer position is offered many times more.

I want to examine this position critically, since for me it looks like often this subjectivity is offered from the outside, in expert analyses and general descriptions of our society. It is an analytical tool, a way to talk about human beings as subjects in a plastic crisis. When combining different discussions and viewpoints together, the consumer position holds a dualistic division in relation to the crisis. The consumer is both guilty of the crisis but also responsible for solving it. Thus, the consumer position is a complex one: it is both destructive but according to experts, also a site of response-ability.

Let us look at the destructive species first. In order to seek for subjectivities that could provide an alternative for the hegemonic destructive subject, it is necessary to take a look to the subject that needs to be transformed. My data gives quite an apt description of the kind of human subject that has led to the problematic situation at hand, since when talking about the plastic crisis, there is also a strong will to find a culprit for it. Quite often in this data, the culprit is the human, either as a species or as a consumer subject. The destructiveness of the consumer subject is connected with notions of greediness, vanity, blindness and laziness. For example, a researcher reveals that one thing that is in the way of recycled plastic packages to become more popular is that consumers prefer pristine-looking packages. A shampoo bottle made of recycled plastics tends to be grey and thus does not appeal the consumer (Nurmilaakso 2019d).

Becoming-guilty or becoming-culprit can rarely be found as a material practice in my data. It is more as an abstract notion, referring to a universal "we" or "us". To follow Frost (2016), this notion is rightfully done, since human beings should rise up to the task to become accountable for the harm they have caused. However, the situatedness of the destroying subject is a bit vague. In general, this attribute is given to the species itself, to the whole of humankind. It seems to be easy to blame human nature or species for the crisis instead of looking critically at one's own actions. In this kind of species-wide discourse, guilt and accountability is distributed but at the same time it lacks situatedness. It is the humankind that is responsible for the destruction, but at the same time the degree of guilt is not evenly distributed. It then raises the question, *who* exactly is responsible for the issue. It is always someone else, or a collective "us" as a species or consumers, but never really an "I".

Researcher Heini Peltola writes about the special responsibility Finnish people might have to the plastic crisis:

> "Even though Finns may not be guilty of the oceanic plastic rafts, we have the possibility to change the world by taking our technological knowhow and new material solutions to developing countries. And there is plastic rubbish to be found on our beaches as well, in our waterways and city streets when the sun is shining on a summery Sunday morning…"[3]

While at first Peltola absolves Finnish people from the plastic crisis, referring to the mediated experience of oceanic plastic rafts, she also reminds that Finnish landscapes too are littered with plastic trash. However, the discourse points that the biggest problems are somewhere else, and responsible and technologically savvy Finns could help solve these problems. There are other mentions too in the data of the potential of Finnish technological innovations. In these assemblages, Finns are part of a global community, where the specific guilt of mediated oceanic troubles is lifted from Finnish shoulders, but the response-ability is shared all the same. The discourse is similar as in climate change discussions from a neoliberal perspective: while Finland as a nation might not be guilty for producing most greenhouse gases and it is also geologically relatively safe from the worst impacts of environmental changes, there might be national gains in the situation through technological advances and showing cultural leadership in the world. Downplaying our own plastic problems and elevating the potential gains work together to build up a national identity that relies on past images of pristine nature and high-tech exports.

[3] Peltola 2019

Consumer-oriented ecological activism has often been criticized, since it ends up creating a dualistic position between consumers and a "system", weighing too much responsibility on an individual's shoulders. Emphasizing the role of individuals forgets the relationality of responsibility and ethics, as well as shifts responsibility away from other players in the network of agents that actually constitute ethical constituencies. There were quite a few moments in my data, where the individual consumer was still pinpointed as the decisive actor. For example, researcher Samuel Hartikainen talks in an audio clip about recycling to journalist Tommi Manninen:

> "Did you know Manninen, that as a consumer you are in a key position in the recycling and product design of plastic products. As a consumer you can influence what happens to plastics after use. Do you take your trash to mixed waste, plastic recycling or do you litter nature? Have you ever asked from the producer of plastics or seller of plastics about the recycle-ability of their products, since most of the products are still not designed as recyclable?" (Hartikainen)[4]

Here, the consumer is given the decisive role in solving the plastic crisis. The consumer is also responsible for acquiring right information and questioning big businesses about their products. A lot of ethico-political pressure is thus put to the shoulders of the consumer. The CEO of The Finnish Packaging Association Antro Säilä says that it is through the ethical awareness of consumers that producers are forced to act more responsibly:

> "This change will be unforeseeably swift because of consumer and media pressure that targets consumer goods brand owners. The competition for the reputation of the most environmentally friendly product will reward its winner with a handsome price" (Säilä)[5]

The consumer should obey the rules and regulations that are set in the systemic assemblages that manage production and waste, but at the same time the consumer should be critically aware of these processes. The CEO of a mobile application that reads the ingredients of cosmetic products, Katariina Rantanen reveals how firms might try to cover their tracks on plastic usage by playing with the definition of microplastics vis-à-vis plastics:

> "As a consumer you have to be very careful with marketing communication, I was for example surprised to know that agents might market their promise to not use microplastics or that the selection does not contain microplastics, or the producer can

[4] Keinänen & Mäittälä 2019
[5] Keinänen & Mäittälä 2019

> answer to a consumer's inquiry that the product does not contain microplastics, but it can contain plastics." (Rantanen)[6]

The aforementioned notions emphasize the role of individual consumers as the major actants in ethico-political assemblages. In general, the data material revolves a lot around individuals and households, since they are also the target audience of the campaign.

Then there were notions, where the ethical responsibility was completely lifted away from the consumer. According to the head of the risk management unit of the European Chemicals Agency, Matti Vainio, it should be on the producer's and industry's responsibility to produce such products that the consumer wouldn't have to contemplate the ethics of plastics at all:

> "Journalist: I have a simple layperson's perspective on this, that if it doesn't degrade in nature, it should be banned, and if it degrades, then it's okay.
> Vainio: Yeah it is as simple as that, our proposal is that the consumer wouldn't have to think if the product has microplastics or not. We should take care that in some time frame all of the products sold in Europe, that there would be no fear that microplastics would dissolve into nature, and then you could use make-up with good conscience."[7]

While some of the notions focus on the individual consumer and other speak on systemic levels, both the micro and macro levels of waste management should be present in order to understand the relationality of human-plastic relationships. For example, without an extensive waste management network, the ability to deal with plastics in a responsible way would be much harder. It is very clear that individuals as themselves or even households can't work around plastic recycling without other systems helping them. Recycling thus is always a spatio-temporal assemblage, that begins with the design of the product (how could it be recycled), production and selling of the product, buying and using the product, discarding it in the proper way, and then the matter continues to waste management facilities.

Following new materialist thought, a responsible subjectivity is pre-individual, since it is dependent on the other actants of the assemblages that would make responsible outcomes possible. Traces of this kind of thinking could also be found in the data. Riku Eksymä, the CEO of Suomen Kiertovoima Oy that represents public waste management, describes the different horizontal agents that take part in the production and management of plastic waste:

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[6] Mäkeläinen 2019g
[7] Mäkeläinen 2019g

> "The key to the solution cannot be found in one pocket only, but it is in the pockets of many agents. These agents are of course the industry that uses plastics as its resource, us consumers which means what our consumer habits are like and how we act to get rid of plastic waste. After this the waste management agents enter the picture, whose aim is to direct as much plastic waste as possible to be utilized in different ways. The life cycle of plastics can be managed in a respectful manner towards the environment, but only through the co-operation of all the different agents." (Eksymä)[8]

Plastics are a line that links different assemblages together, as a thread in a canvas. From the factory to the consumer to the bin to the recycling center or to ecosystems to our bodies, the connecting participant is plastics. At every action taken there is a possibility of choices that have ethico-political consequences, and at every turn, both human beings and plastics have also the capability to affect the outcome to another direction.

Becoming responsible is the other side of the coin of the destructive subject. While these both categorizations are universalizing, the responsible subject is more localized than the guilty destroyer. The solution for turning from a guilty destroyer to a responsible subject is in recycling, the campaign maintains. This solution is a simplified one, and it turns a lot of the responsibility on the shoulders of individual consumers and households.

It has been found in surveys that Finnish people think they are environmentally sound people because of the high rate of recycling in this country. However, as is often reminded in various contexts, recycling does not absolve from the other measures human beings should take to tackle environmental problems and climate change. The image of recycling as a nationally shared practice is illusionary too. Compared to some other European countries, Finland does not fare so well in recycling, since according to my data, still about 70 or 80 percent of our mixed waste could be sorted for further recycling. Approximately 36 percent of Finnish people do not recycle their plastics and 27 percent throw their bio waste to mixed waste.

On the level of material practices, the most apparent sections where the processes of becoming-guilty/culprit are present, are in the articles that describe why people choose *not* to recycle. In a survey that Yle had conducted for the campaign, the most common reason not to recycle some of the waste was the lack of waste bins in the condominium (40 % of the answerers). Many (28 %) feel they live too far away from a waste collection point. Getting rid of recyclable plastics thus needs an

[8] Keinänen & Mäittälä 2019

additional effort that feels uncomfortable and does not fit into the regular routes and habits of everyday life.

> "I won't drive ten kilometers one way by car just for trash, it doesn't make sense! And it surely could not be ecological either."[9]

One of the biggest issues in recycling apart from the location of collection points is the sheer materiality of plastic packages. Plastic packages avoid "thisness" since they are designed to protect the "thisness" of other things, and they are deemed to become waste as soon as their purpose has been filled (Valkonen et al. 2019). However, as Valkonen et al. argue, the change in waste law in Finland in 2016 changed the way we deal with these fleeting materials. The materiality of plastic packages came as a surprise for both waste management agents as well as households, as it became clear how much space these empty packages take (ibid.). As can be seen from the previous sections, experts emphasize rationally how good these plastic packages are, but rationality alone cannot solve problems that arise from material practices, which are affective and emotional. On the level of material practices, plastic packages prove to be a difficult thing. Recycling sounds like a dynamic swirl where matter moves from one application and space to another, but the reality of recycling practices is much less so. There are a lot of halts, pauses and accumulations that take place in the process of recycling.

It shines through from the survey answers that there is something uncomfortable and uncanny about the accumulating plastic packages:

> "I can't be bothered to take plastics to the store. I also hate the indeterminate piles that accumulate around, that I should remember to transport somewhere. It is much easier to take the plastics with other trash to the condominium's mixed waste bin."

> "There is no room for one more recycling bin in a tiny kitchen, so plastics go to mixed waste."

> "I won't start sprinkling different bags and boxes for waste around my home. Or collecting bio waste on a cramped kitchen desk to collect fruit flies."

> "Many times when I've packed my car full of recyclable waste, I have encountered

[9] Nurmilaakso 2019h

> completely filled and overloaded recycling bins at the market yard. It is vexing when you have to then drive around many days in a car that has a rear space filled with waste. In those moments a thought pops up, that it would be easier just to put all of it in a waste bin."[10]

The problem seems to be spatio-cultural. The process of becoming-waste makes recyclable plastics an unwanted materiality in domestic spaces. Here, materialcultural approaches are helpful, since this aversion towards empty plastic containers could not be explained only through discursive or social phenomenona. Both meaning and matter has to be taken into account to understand why big bags of plastic packages are troublesome. It is not about "being lazy", but there is something in the very materiality of plastics-turned-to-waste that makes people uneasy. Plastics take up space, they accumulate and form "indeterminate piles", they sprinkle around and cause all kinds of small spatio-aesthetical harms, reminding us that our lives are not as shiny, neat and untroublesome as we would like to think.

Puig de la Bellacasa (2017) has argued that when waste is acknowledged and taken as a part of domestic sites, the whole relationship to that materiality changes and a relational sphere of care is created. This kind of relationship of care in relation to waste has been analysed through bokashi composting in Finland (Valkonen et al. 2020). In a bokashi process, the smelly matter stops being unpleasant waste, and all kinds of affective encounters with bokashi matter, both unpleasant and pleasant, are a part of the experience (Valkonen et al. 2020). As Puig de la Bellacasa says, repulsion is part of the deal (2017, 147). However, it is important to notice that this kind of relationship is connected to organic matter, and bokashi enthusiasts accept the liveliness of this matter in their kitchens. It is actually the very liveliness, capacity to change and transform, that makes bokashi so intriguing to its followers. Compared to a teeming bokashi bucket, bags filled with empty plastic packages are so very silent.

One deviation to the discomfort of plastic recycling can be found from the data, when journalist Tommi Manninen (Yle, anonymous 2019d) declares his enthusiasm towards plastic recycling. Manninen has learned how to recycle plastics for the purpose of the campaign, as he is the presenter of a community challenge that inspires different municipalities in Finland to recycle more. He tells that it is his competitiveness that encourages him to recycle better. Plastics provide a problem that needs to be solved. Thus, for him, recycling is an ongoing negotiation with different materialities.

[10] Nurmilaakso 2019h

4.3 Redeeming plastics

The materiality of plastics in in relation to guilty and responsible subjects are in motion. What is interesting in this negotiation of becoming-culprit/becoming-responsible is how plastics themselves are situated in these relations. A crucial part of allowing the dualistic consumer subject to emerge, is absolving plastics themselves as the culprit. The idea of the campaign was to absolve some of the hate plastics get in order to change the focus from plastics to our own actions. Several researchers and experts in plastic and recycling industry take part in the process of redeeming plastic packages from the guilt. For example, Riku Eksymä, the CEO of Suomen Kiertovoima Oy that represents public waste management, clearly states that the culprit is a human agent:

> "Sometimes you get the impression that plastic in itself would be the root cause of all evil. That is not the case. Plastics as a material is so overpowering in many of its applications, and in my opinion, we should take a deep breath and think what the problem actually is and then start to fix it based on facts and trusting on expert knowledge. The reason for the present global plastic pollution is thus not in plastics themselves but in us humans." (Eksymä)[11]

Here, he absolves plastics from responsibility: the crisis is not about plastics materialities in themselves, but it is the consequence of the relations, inclusions and exclusions that happen around them.

An especially interesting take on the human culprit comes from artist Toni Kitti, who makes art from plastics and has also decorated his house from top to bottom with plastic kitsch. Kitti would also redeem plastics from the blame, since he thinks the moral agent here is the human:

> "Well, for example if I am photographing some plastic tree, I do get the contradiction. And all the time I see with my mind's eye the picture of the turtle that has grown into this hour-glass shape, some plastic trash it was [that caused it], so it is absolutely shocking how the human ruins and destroys this planet. But it is not the fault of plastics." (Toni Kitti)[12]

Kitti liberates plastics from responsibility, which is a strong ethical statement. Kitti's view is in an interesting contrast with the researcher/expert interviews, where the usefulness of plastics are

[11] Keinänen & Mäittälä 2019
[12] Gustafsson 2019c

promoted. Their aim is to salvage plastics from their bad reputation through using rational, logical argumentation to promote the good properties and usages of plastics. Kitti's reasoning has nothing to do with the usefulness of plastics, his arguments are not rational but emotional and messy, quite posthuman indeed. When looking closer at how Kitti talks of plastics, it is just from the sheer love towards that material he has as an artist and as a relational creature.

The process of turning the attention away from plastics into our own actions requires a process of renegotiating the relationship. A very common argument amongst the researcher/expert interviewees is to take up the usefulness of plastics in food politics. Here, an example of the discourse by the research professor Hannu Ilvesniemi from Natural Resources Intitute Finland (Luke):

> "I myself love plastics, since it is a very versatile resource, which when used correctly protects us from food waste, it prevents many food products from spoiling and thus reduces food waste and also enhances human health, at best even prevents human deaths from different food-related diseases. Plastics are a very good resource when used correctly." (Ilvesniemi)[13]

This reasoning clearly aims to absolve some of the plastic hate in our society, it aims to create some clearance to the proper use of plastics. These redeeming speeches focus on packaging materials, which is understandable since the plastic recycling system in Finland does not yet recognize other forms of plastics than household packaging plastics. To enhance the recycling of plastics thus entails that the focus should be driven towards the way we deal with plastic packaging.

In these researcher/expert analyses, plastic packages are framed as highly misunderstood. Researcher Juha-Matti Katajajuuri says that according to consumer survets, people often think that packaging is one of the main sources of the negative environmental impacts of food industries and that the negative impacts are personified in plastics. This is a misconception, Katajajuuri says, since the main environmental impacts come from the actual production of food, and the actual share of packaging impacts on environment is only a couple of percents of the whole food system. (Keinänen & Mäittälä 2019).

Plastic packages seem to be an easy target to defend. But they are also an easy target to condemn. Plastic packages are the most apparent plastic waste that we come across daily. Vegetables wrapped in plastics are one of the most common tropes of futile plastic usage in Finland. However, it is

[13] Keinänen & Mäittälä 2019

exactly this application of plastics that is actually useful, experts say:

> "In the section of fruits and vegetables, fresh cucumbers are wrapped in plastics and for example soup veggies can be bought ready chopped in a plastic container. Does everything have to be wrapped in plastics?
>
> - Cucumber is packed in wrapping because it enhances the shelf life of the cucumber. Because of that, it is probable that many households throw a lot less cucumbers in the bin, Katajajuuri argues."[14]

In the data, experts are especially mulling over the thought that soon new fossil-free materials could substitute oil in the making of plastic packages. Having said that, just changing the raw material doesn't yet change the culture that is involved with plastics production and consumption, that still relies on disposability and neglect.

> "If plastics after all are a great material in many ways, is it then completely needless to try to reduce plastic usage or strive to that direction?
>
> - This is quite a tricky question, and that is why I wouldn't say so. The microplastics that result from the long-term degrading of plastics are a challenge of another scale. If all plastics would be returned to waste management in a proper way, then we could avoid the biggest plastic-related problems. Unfortunately, we consumers live that kind of life that plastics and packages still end up in nature, Katajajuuri sighs.

> Maybe the problem then is not in plastics, but in us and in the way how we relate to plastics. If we would appreciate plastics more, then we would also take care that it ends up in the right place after use: in plastic collection bins and from there, to recycling centres.
>
> - Do we appreciate plastics enough? That is a tough question. At the same time you could ask, do we appreciate food enough. We do not appreciate either one, really. Food is thrown away, even though it has major environmental impacts.

[14] Nurmilaakso 2019b

Maybe we need to shape up?"[15]

Here again, the human is the culprit, referred to as a general "we", and plastics are absolved from responsibility. The answer to the problem according to this article relies in renegotiating our relation to matter, such as plastics and food stuff, which is basically what new materialist theories suggest as well. Actually, in this excerpt the notions of are quite in line with the kind of vitality and vibrant materialism that Bennett advocates. The status of different materialities has to be elevated (Bennett 2010, 12), and for plastics, it means that both its affirmative capacities need to be emphasized while at the same time the harmful impact that comes through neglect needs to be pinpointed as well. As Bennett does, these experts also argue that an attentiveness to the materiality of plastics is also good for humans. And as Bennett does argue, "a vital materialism does not reject self-interest as a motivation for ethical behaviour" (2010, 13).

However, from a relational viewpoint many of these accounts do not accept plastics as a part of ethical constituencies. From a new materialist perspective, responsibility and accountability should not be put on individual shoulders only. Jane Bennett talks about political problems as assemblages that may also have nonhuman actants to them, since "is it not the case that some of the initiatives that conjoin and cause harm started from (or later became conjoined with) the vibrant bodies of animals, plants, metals, or machines?" (2010, 102). In this sense, it is very interesting how in many occasions, the data aims at absolving plastic materialities from responsibility and guilt, and instead shifting the whole process to the individual human being. Having said that, there are of course notions of ethical assemblages in the data, that shift away from the individual or consumer-centered discourse.

From a new materialist and posthumanist perspective, many of the aforementioned accounts of plastic use are based on rationality and control. The expert accounts reduce plastics to a mere tool, even though there might be affective speech acts ("I myself love plastics") combined with these arguments. From this point of view, the whole becoming-consumer position is a form of anthropocentricism and human mastery, where the aim is to control the matter even further.

What seems to be even more a problem with the discursive formation of becoming-responsible inside the consumer position, is that it does not actually cultivate a lot of response-ability. The consumer position is quite restricted and fixed, and it lacks empathy and affirmation. The experts are doing a fine job when they try to lift the value of plastics based on their usefulness, and there are also notions in the text where people are urged to *care* about plastics. However, rational

[15] Nurmilaakso 2019b

argumentation does not always do the trick. For me, the most appealing call to act responsibly comes through a comparison of plastic recycling to library services:

> "Actually, we should think that we are only borrowing plastics, in the same way as we borrow library books. Some are borrowed for a longer term, some we borrow for a shorter time. Just like the books of a library, they should be returned after use, so they can be helpful to the next user." (Pasanen)[16]

This suggestion in my eyes is a novel way to understand material relations and ownership of matter in a world with limited resources. Comparing plastics with the epitome of civilization and common wellbeing (library books) is a clever move, it is a figuration that can make us see our surroundings in a different way. Perhaps through thinking about the empty, silent plastic packages as borrowed, valuable material that should be treated with respect could change the attitude towards their material presence in homes, kitchens and corridors, and suddenly the accumulating piles would not feel as disturbing anymore.

In this section I have outlined how becoming-consumer is negotiated and drawn out in the data. If becoming in a deleuzian sense is always becoming minoritarian or marginal, then becoming-consumer is almost like an oxymoron, since the consumer from a posthumanist perspective is the hegemonic, majoritarian subject. There is very little anything lively or desirable in these invitations to take responsibility "as a consumer". Thus, I propose that only looking at the consumer position and trying to engage people from their consumer identity does not do the trick. Consumerism in itself does not provide for empathetic relationality or inspire for affirmative action.

Somehow the idea that human beings become consumers through plastics is more of a linguistic trick than an actual embodied perceived subjectivity. Inside a neoliberal capitalist system, the choices for consumers are outright restricting. Becoming-consumer is not something that anyone *desires*, rather, it is a by-product of our desires. Todd McGowan argues that capitalism and culture offer human beings very different things: culture gives subjects certain feelings of belonging through invitations to different identity positions, whereas the "capitalist subject constantly experiences its failure to belong", and thus the fantasy within capitalism is to find some degree of "authentic belonging" (2016, 20). The promise to belonging is sold with every commodity, but the promise is always unfulfilled, it remains in the future. There is really no identity that capitalism

[16] Keinänen & Mäittälä 2019.

provides, McGowan argues, since “[t]he only identity the capitalist subject has lies in its absence of any identity” (2016, 21).

Therefore, there must be something else than the actual want to be a consumer that explains our deep entanglements with plastics. I propose that becoming-consumer is actually just a by-product of the other becomings that plastics invite us to take part of. In the next section, I will give examples of how plastic materials affect our identities and our subjectivities. At the same time I expand the notion of subjectivity to that of Braidotti’s posthuman subjectivity, looking at the ways how subjectivities reach beyond individuals in the intra-actions of material, cultural, social and historical.

5 BECOMING-WITH PLASTICS IN FINNISH CULTURAL LANDSCAPE

In this section, I shall observe relations that revolve around specific artefacts. The following examples are manifestations of affirmative relations with plastics. I want to take this line of flight in order to give a deeper understanding of *how* and *why* are we becoming-with matter that is at the same time so deeply hated and overlooked. In the previous section I presented how the most obvious subject position, the consumer position, was discussed in my data. The notion of consumer position seemed to remain on a discursive level, whereas my aim is to attend more closely to material practices with troublesome matter. I argue that turning the focus to material-cultural relations and affective encounters gives a more nuanced and comprehensible account of what happens to us and what happens to plastics when we interact.

In the next chapters, I will outline different becomings that seem to be specific to Finnish cultural history, but which are not only reduced to concepts of nationality but that take part in more complex ways of becoming. The relationships with plastics and Finnish national identity is a tricky one conceptually. If becoming is understood in Deleuzian terms, it is always becoming-minoritarian, becoming something else than what the existing, stable categorizations in the current society expect a subject to become, moving towards something that the society does not accept or still doesn't recognize (Leppänen 2011, 24). My further analysis shows how plastics are deeply related to the material-discursive formation of Finnish cultural history and present. But is it becoming, since Finnishness does not seem to be a minoritarian position?

Through this analysis I aim to generate an account on how plastics might offer ways to become in Finnish cultural landscape in a minoritarian, non-exclusive and non-majoritarian way. While not all of the subjectivities that become with plastics may be minoritarian in the traditional sense, I argue that there are human-plastic relationships that go against the grain of the general symbolic and social understanding of plastics.

5.1 The revolution of a plastic bucket

The Plastic Age produced artefacts that a whole generation shared as a common experience. In my data, such distinct artefacts are named as the first mass-produced plastic bucket Muovi-Maija, the famous plastic sets of dishes by Sarvis, or the utopian plastic house Futuro. Finnish cultural history is also saved on plastic film materials that are, in contrast to some other plastic materialities, very vulnerable to the doings of time.

But what would a study of human-plastic relationships in a Finnish society be without an analysis of the material-cultural processes that revolve around plastic buckets? Plastic buckets seem to be a good place to start unravelling human-plastic relationships in a Finnish society, since Finns have a "special bucket relationship", as is said early in the beginning of the very first episode of the radio programme *Plastiikkia, plastiikkia* (Mäkeläinen 2019a). It was actually a plastic bucket that revolutionized domestic lives in Finland, since plastic buckets were the first largely mass-produced synthetic plastic product of the Finnish plastic producer Sarvis. The host of the programme Niina Mäkeläinen explains:

> "Since women did the domestic work in the 1950's, the arrival of synthetic plastics relieved especially women's work load. The hit product of Sarvis was a plastic bucket called Muovi-Maija, which replaced the previously used, heavy sheet metal and zinc buckets." (Mäkeläinen)[17]

So originally, plastic buckets were a celebrated innovation that brought relief to laborious domestic tasks such as carrying water from the well. Tauno Tarna, the first industrial designer of Sarvis, tells in the programme that these first plastic buckets marked a "miraculous" change in the society:

> "I think that the miraculous becoming of plastics was back then in the 50's and 60's, when the first plastic buckets came. That was the actual moment of revelation, that here comes the new world." (Tarna)[18]

This promise of a new world is a crucial part of how plastics have permeated cultures globally. There is extensive literature on how plastics and consumer culture have evolved hand-in-hand, and this development is also aptly described in my data. It was through plastics how we became consumers, but as I argued already in the previous chapter, the promise of plastics and the actual material practices revolving around them are so much more.

As a side note it needs to be mentioned that Tarna is a pioneer in Finnish plastic design, known especially for designing the famous set of dishes called Katrilli for Sarvis. The very existence of Tarna as a plastic designer surprised me at first. I too, was tricked by the general nature of plastics. Plastic artefacts seem to be cut from their production and origins, as their shapes do not imply that a human hand has made them. Plastics seem to come out of nowhere and disappear into nothingness.

[17] Mäkeläinen 2019a
[18] Mäkeläinen 2019c

However, there is always someone behind the product, there is a designer and a manufacturer behind every single plastic particle.

Back to buckets. Let us first look at the associations that plastic buckets make in the symbolic, cultural sphere. Philosopher Tere Vadén contemplates the Finnish plastic bucket relationship in the episode as follows:

> "A bucket is a peculiar artefact, as a berry bucket, as a sauna bucket, there is something very archaic and un-European in what these buckets are used for, to make an ice lantern. It has many strange applications. There is an odd desire of usefulness and uselessness in the desire of a bucket. It is a very good and necessary artefact, but not in the sphere of rational counting. There is something emotional about buckets, something spiritual even." (Vadén)[19]

Vadén has, apparently, thought about the material-cultural relationships that plastic buckets have in Finnish society. Here, it is interesting that Vadén choses the word *desire* to describe plastic bucket -relationships. According to Braidotti (2002, 20), the humanist subject was one of rationality, but the non-hegemonic subject is primarily moved by affects, desire and the imagination. What is even more interesting is how the desire is split into two: desiring uselessness and desiring usefulness. It becomes apparent in my analysis that these two different desires respond to different levels of plastic bucket relationships: one could call them the macro and micro levels or the symbolic and the material levels of relations.

Vadéns notions are however the result of active thinking-with plastic buckets. In general, I would argue that the plastic bucket in Finnish context has become a signifier of all things unnecessary, stupid and vulgar, a symbol of empty consumer culture. The symbolic value of plastic buckets became apparent when I watched another programme by Yle that dealt with overconsumption (Sannikka 2020). That particular programme is not part of my study data, but I want to include a notion from it here, since it affected me strongly when I heard it in the midst of my becoming in this research-assemblage. The presenter of the show started with a rhetorical question: if you had to list things that you hold valuable, what would you say? She answers that most people would say that friends, family and meaningful activities are important. She continues, that hardly anyone would answer that they think plastic buckets are important. Still, 2 million plastic buckets are produced in

[19] Mäkeläinen 2019a

Finland only every year. The underlying assumption is clear: plastic buckets are useless excess material that do not have anything to do with *important* things.

The snarky comment by the presenter is a great example of why we need to look at human-plastic relationships a little bit closer. There seems to be a stark contrast between the linguistic or symbolic level of plastic buckets and the actual level of material practices, considering all the different situations where plastic buckets are present. On a linguistic level, plastic buckets are considered as the ultimate example of unnecessary plastics, but in everyday material practices, they seem to be very valuable and handy artefacts. This is very interesting, since the material and the symbolic are not separated, but actually produce one another (Lehtonen 2014, 33). For plastic buckets, however, there is a gap between the material and the symbolic. The signified has drifter quite far away from the signifier. As Donna Haraway (2008) for example shows when talking about dog trainers and their respective animal companions, language and discourse may convey very different meanings than what the actual material practices might enact. Here I see an excellent opportunity to prove an important thesis of new materialist approaches: that matter does matter. If we do not think specifically about the material practices that revolve around plastic buckets, the complex meaning and value of them is lost. I argue that plastic buckets actually are very central to affirmative material-cultural becomings in Finnish society.

As is explained in the first episode of the *Plastiikkia, plastiikkia* radioshow, Finnish people have an extraordinary relationship to buckets. Queuing up to get a free bucket is a cultural phenomenon specific to Finland that started in the 1990's, when a bargain basement store opened up a new shop in the middle of a deep recession. The store promised free plastic buckets to consumers who come in on the opening day. The campaign was a success, and afterwards, many chains have taken up the tradition to offer free plastic buckets to make people queue to a newly opened store. Queuing practices vary from one culture to another. In Finland, queuing is a serious matter, and Finns take pride in being patient queue takers. Truly, free plastic buckets and a plastic bucket queue has become a concept in Finnish society. One of the headlines in my data material says how "The promised land of bucket queue takers shows an example – EU regulations tighten on plastic recycling"[20]. I have encountered the phrase even on Tinder: "the first one to like gets a free bucket". The event of queuing is in itself a material-cultural practice that is embodied, situational and affective, it is an assemblage where a promise of a plastic bucket is a force strong enough to make

[20] Raunio 2019b

human actants reorganize or orient (Ahmed 2010) themselves in the familiar but boring practice of queuing.

But why does this phenomenon exist? The host of the radio programme gives an explanation: "We queue up for plastic buckets, because in a consumption society it is important to get things, and things are made out of plastics. Plastics, then, are the basis of the whole consumer culture."[21] In this explanation, the presenter uses the macro level of society that works on a capitalist, consumerist logic as the reason for free bucket queues, it taps into the "dream of getting something for nothing" (Stewart 2007, 95). This explanation reduces human subject to a pawn of social-economic forces that makes them behave in a certain way. It also reduces plastic buckets into "useless" stuff that exist only because of the joy of things. Capitalism is a system where matter does not matter. As Bennett (2010, 5) writes, "American materialism, which requires buying ever-increasing numbers of products purchased in evershorter cycles, is anti-materiality. The sheer volume of commodities, and the hyperconsumptive necessity of junking them to make room for new ones, conceals the vitality of matter". From the perspective that the presenter gives in the episode, the capitalist logic is the foundation of all human interaction (Fox & Alldred 2016, 61). From this perspective, the mainstream ethically aware discursive approach towards people queuing for free plastic buckets is that of contempt, a mental eye-roll : a person queuing for a plastic bucket in front of a bargain basement store during these catastrophic times when plastic consumption should be restricted seems to be an almost criminal act. However, from a new materialist perspective, these phenomena are not seen as some abstract social forces that work upon mindless human consumers but as "a slow drip of a repeated, routinized and habituated pattern" (Fox & Alldred 2016, 62) of actions and experiences. The phenomenon of free plastic bucket queues does seem to be a repeated assemblage that "mediates a market-oriented affect economy" (ibid).

However, looking at the micropolitics of plastic bucket assemblage, the dreams that are imagined inside the queue are quite something else than a desire to become-consumer. The explanations that the queue takers give for needing a plastic bucket are actually very far away from mainstream consumer culture. The radio programme starts with clips of interviews from these bucket queues. People explain that they need buckets when they go picking berries, or to collect apples from trees. The associations that these queue takers make take us to natural environments, to foraging and harvesting. The connection between plastics and foraging comes through also elsewhere in the material. In one article, a researcher says: "When picking blueberries, I love plastics. I preserve my

[21] Mäkeläinen 2019a

berry haul in reusable plastic containers"[22]. This affectionate statement well describes a keenness towards foraging and how plastic buckets or containers are a crucial part of that activity. I argue that these notions of being close to the nature, being savvy and resource smart are also parts of the imagined attributes that are given to Finnish culture.

Foraging is common to many communities, and they are an important part of national identities and cultural traditions (Hall 2013). Today, however, as foraging is no longer important for daily survival, foraging connects to cultural phenomena such as interest in "pure" diets, access to otherwise expensive products, voluntary desire to live sustainably, romanticisation and nostalgia and connecting to one's cultural heritage (Hall 2013). A study conducted in New Zealand showed that for many people, "the act of foraging is significant in terms of identity, memory and, in some cases, senses of collective cultural heritage" (Hall 2013). I have not come across a similar study of Finnish foraging, but I would assume there are similar reasons behind Finnish foraging culture as well. Without having empirical evidence to back this notion up, I would argue that foraging is thought to be something very "Finnish", and the common meme of Finnish people's special nature relationship is very deeply tied up to this notion.

Anna Tsing says that to understand capitalism, we should also look at the "noncapitalist elements on which capitalism depends" (2015, 66). At first glance it looks like this type of foraging is cut away from the capitalist market logic, since most of the leisurely foragers pick berries and mushrooms for themselves or their friends and relatives. Picking up free food for free with a free plastic bucket does not sound like succumbing to the hegemonic subject position of a capitalist consumer. The bucket queue taker might even sport an idea of "fighting the system" by taking the free bucket bait but not swallowing the hook of being lured into mindless shopping. The berry-picker is someone who is practical, resourceful, active and knows how to feed themselves outside the capitalist food system. Foraging is quite often also a social activity that is shared with friends or family: I myself almost always go foraging with my siblings or friends. The promise of the plastic bucket is a promise of an affirmative relation with nonhuman nature that entails an individual gratification. Owning a plastic bucket opens up the possibility to *becoming-forager*.

In this sense, from the perspective that the common understanding of dealing with plastic buckets is entangled with assumptions of consumer culture and "wanting things because it is important to get things", then the actual material relation with plastic buckets opens up a subjectivity that goes against the grain of the hegemonic consumer capitalist subject. Becoming-consumer turns into

[22] Keinänen & Mäittälä 2019

becoming-forager. In this sense, the berry-picker presents resistance to power, resistance to the urge to buy cheap berries from the store that someone else has picked under hardly humane labour conditions. At the same time, the assemblage of human-plastic bucket-forest-berries/mushrooms ties the person to memories or a sense of collective cultural heritage. As Fox and Alldred show, "thoughts, memories, emotions and desires – through their ability to affect – are also material" (2016, 31). We are talking about joyous, intra-active encounters here, of assemblages that combine plastic buckets, berries, apples, desires, affirmative action, senses of belonging and identity. Thus, the desire of a plastic bucket here is enacted as a positive energy, not as a lack of something (Braidotti 2002, 77).

Having said that, it could also be argued that the macro and micro levels of free plastic bucket queues are co-constitutive: it is the promise of the micro level, of becoming-forager, that makes the person *desire* a plastic bucket and thus makes the person behave as the macro level wishes them to behave, which is to queue in front of a store. As McGowan (2016, 11) writes, "[t]he fundamental gesture of capitalism is the promise, and the promise functions as the basis for capitalist ideology". Thus, the question seems to be where the desire or promise comes from: does it spring from capitalism that promises desires that can never be fulfilled, or is the desire an "affirmative mode of acting, relating and existing" (Goodchild 1996, 37) which springs from affective material-cultural encounters as an active, positive and vital force that acts against capitalistic totalitary. I would rather turn towards the affirmative notion of desire than the psychoanalytic understanding of desire as a lack.

I checked the price for a plastic bucket in the respective store chain that invented free bucket queues. A plastic bucket produced in Finland costs less than 2 euros. It thus prompts the question: if a person feels that they need a plastic bucket so much, why would they just not go to the store and buy it? Surely queuing for a couple of hours is not worth the reward. This kind of behaviour sounds utterly irrational. But the consumer or the forager is not rational, since it is the desire that drives it. From a traditional capitalism critique viewpoint, the answer might be that the bucket queuer is a victim of false consciousness. Advertisements and the logic of advanced capitalism might truly drive us to want things that we do not especially need. In the same manner, also the posthumanist subject is driven by affects, desires and emotions. The difference in my view is in the weight one gives to the power of capitalism. In the posthuman sense, affects and desires are created in relation, in assemblages, where becoming is always happening in-between. In this sense, capitalist currents are a part of these assemblages, but they are not the defining explanation of the behaviour. Having said that, one could argue that capitalism or neo-liberal consumerism is such an all-engulfing

machine, that even these posthumanist arrivals are swallowed by it, becoming yet another apparatus to justify consumption and unequal material relations. The key in my view is to stay alert and stay true to the quest of posthumanist and new materialist theories, that rethink material relations and promote non-hierarchy, empathy, compassion and connectivity.

I would not be too harsh against the queue takers. They take their place in the queue assemblage in order to fulfil their perhaps a bit murky wants, that crystallize when someone asks what they actually need a bucket for. In this act of explanation, the moment of becoming emerges, that moves the subject away from the capitalistic subject, into the sphere of the other that remembers the affirmative relation they have to plastic buckets.

It could be argued that plastic bucket relations are an example of the ways how national identities and other subject positions are always formed through intra-active and affectionate material practices that are renewed and repeated. To think of Finnishness as a performative act would be to recognize that Finnishness is not something that is tied to any biological origins or family trees, but it is a non-ethnocentric (Braidotti 2002, 69) repeated material practice. This type of becoming would not be becoming-Finnish in a hegemonic way, since it would be free of Othering or belonging to some fixed Majority. The forest-plastic bucket becomings would be such affirmative becomings that do not entail exclusion of Others, but rather are formed through invitations and inclusions. Plastic buckets give a possibility of connecting through a cultural practice that is actually available for everyone. Making ice lanterns or picking berries is not something that is reserved for specific people only, but due to their cultural connotations, they can be read as parts of the imagined national identity of Finnishness. This is a benign way to connect with a sense of belonging: no-one is forced to pick berries or mushrooms. If someone does not want to pick berries or mushrooms, that does not mean they would be excluded from the sphere of national identity. One *can* be Finnish without ever putting their foot in a forest.

Unfortunately, I can't full-heartedly make this kind of an interpretation. The data does not consider the actual berry-picking reality that goes on in Finnish forests. A remarkable amount of the berries that come to the markets from Finnish forests are picked by foreigners. Since this perspective is not included in the data, I cannot turn into a deeper analysis of this matter, but in the context of Thai berry pickers, a plastic bucket and berry picking does not ensure a connection to Finnish culture and identity. The 'macro' level of such assemblages are something completely different, connecting to global flows of work power and advanced capitalism. Thus the situated, embodied subjectivities that become in those assemblages are also different from the possible affirmative readings that I presented above. While for people who forage for their own pleasure and private use may see berry-

picking as a rejuvenating pastime, for foreign pickers it is a matter of surviving while putting up with possibly inhumane working conditions and toxic relations. To read these entanglements as affirmative or positive would be neglecting the ethico-political problems that revolve around migrant labour in Finnish society.

The aforementioned is an example of how seemingly similar assemblages that involve similar participants (picker, forest, plastic bucket) can produce very different ethico-political consequences. Thus, it is always important to look at the specific assemblages and the connections that precede them and come after them, since the assemblage or action in itself might not reveal the ethico-political scope of that particular event. Differences matter.

Besides the forager position, plastic buckets are part of other types of becomings too. There is one especially affective clip that speaks to me as a researcher in multiple ways. In the clip, a woman tells the journalist that "there is so much you can do with a bucket. You can pick berries or put juice in there or anything."[23] Then, an enthusiastic babble by a small child can be heard in the background. The woman picks up the cue and continues: "or if there is vomit, it is good to have it there by the bed just in case." Then the child giggles in a most mischievous manner.

There are so many relations at play here, and for me, it is the perfect example of an affective encounter that sends an event into an unexpected swirl. First, the interviewee enthusiastically acknowledges the multiple applications a plastic bucket can have. Here, again, the promise of the plastic bucket is present, "*there is so much* [emphasis added] you can do with a bucket", it is the most simple and most omnipotent object. As McGowan (2016, 24) argues, through the capitalist system "objects appear whole and present opportunities for the subject to achieve fulfilment". Again, the first connotations with a plastic bucket turn towards the realm of foraged or self-picked food stuff: berries or juice (probably made of apples or berries). Here again, an instant identification to the DIY Finn who knows how to survive with what nature has to give, with a little help from plastics. It seems to be the proper answer in a free plastic bucket queue, almost discursive, if discursive directs what can be said and what not. Saying that you want a plastic bucket only because it is free stuff would not be appropriate in the same way as presenting that you are on a noble task to acquire a vessel for your foraged goods.

Then the child interrupts the talk, making their presence noticeable. The chuckle of the baby produces an affective reaction in the mother, through which she is reminded of a very specific assemblage: the baby-vomit-bucket-caretaker assemblage. There is a very clear turning point here, a

[23] Mäkeläinen 2019a

"jump from ideal to matter and back again" (Stewart 2007, 56) : the affective reaction the woman has from the baby's voice changes the course of the free plastic bucket queue discourse. Her voice changes, it becomes slightly pitched and has a warm ring to it, as she recounts the application of the plastic bucket as a vomit container, guiding her speech as much to the journalist as to the child as well. This encounter, while seemingly mundane, has micropolitical aspects to it. It is an example of how matter takes part in the social production of our everyday relations. Through this affective memory of a sick child, a lot of information is passed about their specific relationship and how plastic buckets are a part of it. In this encounter, the DIY Finn becomes a mother.

It needs to be noted that somehow, the context of plastic buckets and vomit is appropriate in this encounter, whereas in another context it could be deemed inappropriate. The sense of appropriateness comes through the warm and happy voice of the woman, who deals with vomit as a very ordinary, everyday substance in her life. For me as an interpreter her phrase connects to some common knowledge of human bodies and how these bodies change through age. Somehow I know that children are often sick and vomit, and I know that the woman refers to a sick child when she says that the plastic bucket is good to have by the side of the bed in case of vomit, even though she does not specify that the vomit comes from the child. From the context and the cue I still know this is the case. Without the child giving this affective cue, the context would be very different. Then the interview would only portray an adult woman saying that she needs a plastic bucket next to a bed for vomit. The whole context and meaning of the encounter would change. Perhaps this kind of a statement would've revealed a habit to drink too much and thus needing a bucket often? Again, the assemblage needs wider understanding of its context.

Through the unpleasantness of other matter [vomit] and through the loving relationship between a mother and a child, the unpleasantness of plastics is wiped away. A light and easily cleanable plastic bucket is exactly what you want to have if your child is sick. Scraping off vomit from a wooden bucket would be a wholly different experience. Thus, this particular entanglement of baby-vomit-bucket changes the way how plastics as a material is perceived. Through this affective encounter, the context of the plastic bucket changes from the realm of foraging to the realm of care, empathy and family relations.

After the mother's notion, the child responds affectively to their mother's voice through an exhilarating laugh. This encounter revisits the complex relations between a mother and a child, the possibility of intersubjectivity (Braidotti 2002, 24). The child shows a sign of trust by laughing to this matter, even though being sick is a very embodied, vulnerable situation. The exchange between the mother and the child here conveys a feeling of embodied care, where the plastic bucket stands as

a third participant of the specific assemblage. The child seems to have significant knowledge of its own life and portrays an ability to affect and be affected (Leppänen 2011, 21–22). It is not clear how old the child in the clip is, but possibly a toddler who does not quite speak yet. It can be, that the child's reaction is only an affective response to the mother's changed tone of voice. However, there is unintentional comedy at play in this encounter. The chuckle sounds like the child would understands the cultural aspects of vomit, how it stands on the edge of disgust and comedy. Even though vomit in general is perceived as disgusting matter, here, in this context, vomit becomes something funny and warm. I would say that the whole of Western entertainment industry would also recognize the potential humour that resides in a vomit in an inappropriate place.

This small encounter is a dance of affects in an assemblage, and this assemblage further affects my research assemblage. My own reaction to this specific clip is incredibly affective, it is an embodied experience of exhilaration, realization and memories. The child in the clip makes me laugh (as they do to other people as well when I have played this clip for them) and it brings back my own experiences of being taken care of as a child.

So where are the politics? In line with the great tradition of feminist theory, it is appropriate to throw in the phrase "the private is political". The encounter clearly states a relationship of care in a domestic site that has been repeated multiple times. In the light of the very intimate relationships between caring adult-bodies and a sick child-bodies, it would be quite peculiar to say that plastic buckets are unnecessary or not important, when clearly they are intertwined to family relations in a most intimate way.

The surprising element here for me as a researcher is more a theoretical one, when these affirmative connections between buckets, family relations and questions of national identity are revealed. It feels like looking at a plastic bucket with completely new eyes. The symbolic shifts: suddenly, the plastic bucket becomes the symbol of parental care, sympathy and safety. As Braidotti (2002, 70) writes, deriving from Deleuze: "[t]he truth of an idea, in other words, is in the kind of affects and the level of intensity that it releases. Ideas are noble or lowly, active or reactive, depending on whether they mobilize one's powers of affirmation and joy, over the forces of denial and negation". At least in my mind, this small analysis has provided for an absolute process of joy and wonder in our mundane material practices that involve plastic buckets. The end point of this analysis is in a completely other realm as the one where we started, the realm of non-important. In my mind, the idea of a plastic bucket has changed from lowly to noble.

But wouldn't it be possible to become also with something not-plastic, let's say, wooden buckets? Tere Vadén gives an answer in the data: a bucket in its plastic form is many times better and easier to use than a wooden bucket, and in terms of resource efficiency it is better than a metal bucket. As Vadén says in the data, plastic buckets should be "absolved" from their sins, since in their specific materiality, plastic buckets has clear applications and it is an artefact where the exact plasticity of it makes it so much better than buckets made from other materials. He concludes that "if we would be sensible and would have some kind of sense that could think of things in a longer term then of course we would make them biodegradable, mut that kind of sense we do not unfortunately have right now"[24]. So still, there are open becomings left in our plastic bucket -relationships, that entail changes both in the materiality of the buckets as well as our cultural practices.

The whole purpose of a plastic bucket is to be in relation, since without a relation, it is *empty*. Mostly, it is a tool used by human beings, as an extension of human ability to carry stuff. It is the ultimate example of *matter in relation*, it illuminates the variety of assemblages that it can take part in and how its meaning and its differential material properties as well as the meanings of other participants in these assemblages change via the different encounters. In the forest, the potential of the plastic bucket is in its ability to be filled. A plastic bucket filled with lingonberries is a happy achievement, a plastic bucket empty of lingonberries is lost potential, perhaps a disappointment. A plastic bucket filled with vomit has earned its place, although an empty plastic bucket with no vomit would perhaps be more convenient. A plastic bucket filled with lingonberries is part of a different material-cultural event than a plastic bucket filled with vomit. Sometimes, even an empty plastic bucket fills its task, whether as a stool or a drum. Here we see that the plastic bucket is not always the same, its potentials and becomings are shaped in intra-actions, since "there is no autonomous essence to entities that would pre-exist their relations to others" (Pyyhtinen 2015, 40).

To say that a plastic bucket has agency would be a simplification of the various actions and purposes that it can get through relations. A plastic bucket vibrates with

various possibilities. Calling it an agent would sound too restricting, since truly, these are matters of relation, not matters of agents doing stuff, since the purpose and role of the plastic bucket is each time renewed as it is used, since "flows and relations may only temporarily be locked up in objects; their processuality is primary" (Pyyhtinen 2015, 83). As Sara Ahmed says, "objects not only are shaped by work, but they also take the shape of the work they do" (2010, 244). I see that this means that artefacts become as a result of labour, but they also get their purpose in relation, they become

[24] Mäkeläinen 2019a

vomit buckets or berry buckets depending of the situation. In this regard, plastic buckets prove to be quite versatile objects. Who knows, what the plastic bucket is needed for next?

Thus, through the prism of a plastic bucket, a whole set of relations, identities and positions is revealed. When looking at the actual material practices that go on with plastic buckets, the view turns into less anthropocentered vision of an active world where assemblages come together and dissolve in various affective actions. While plastic buckets might not do and move by themselves, they do have the power to affectively engage with human agents in ways that lead to new connections and desires.

From this analysis, I could conclude that plastic buckets take part in several different material-cultural entanglements, where the human-bucket assemblage has many different possibilities to become. My argument is that through plastic buckets, we do not want to become subject to advanced capitalism and consumer culture, but desire to become different kinds of resourceful and prepared subjectivities that are closely connected to nature and other human beings. In terms of material-discursivity then, the plastic bucket might symbolically stand for negative things, but the material relations it takes part in are actually acts of resistance against the dominant consumer culture, acts of connecting to heritage and cultural habits and acts of care in the domestic sphere.

5.2 Lively and temporal plastics tell forgotten tales

Not all plastics are designed to become trash, and to prevent that from happening, plastics are also collected and preserved. In my data, examples of this are varied, ranging from once very common Finnish Sarvis dishes that are now hoarded as precious collectables and scattered around in museums around the world to popular exhibitions of Barbie dolls (Mäkeläinen 2019c, 2019h). One of the episodes of the radio programme tells about the invention of film material, and further goes on to reveal how old film material is taken care of in Finland. In this episode, the liveliness of plastics is especially apparent. Plastic film matter is delicate stuff, and preserving it is no easy task. Even though the devilish reputation of plastics is connected with its durability, plastic materials can also crumble, disassemble and grind into smaller pieces, or even explode.

In the radio episode, film conserver Miia Väinämö compliments plastics for making the whole art form of movies possible (Mäkeläinen 2019f). This same notion is repeated also elsewhere in my material: plastics are described as the stuff that dreams are made of, something that renders people capable and allows for imagination to take flight. The pioneer in plastic design, Tauno Tarna, tells about his former teacher and famous designer Kaj Franck and Franck's relationship to plastics:

> "Kaj loved the oval shape. He always wanted to research ovality. It is terribly difficult to make it out of glass, it is hard to make with ceramics, but with plastics, if a mold is made then it doesn't really matter what shape it is. He was able to realize his big dream in ovality." (Tarna)[25]

Such an abstract dream, to make something oval, but through plastics, this abstract desire was materialized in its perfect form.

In the early stages of film industry, movies were filmed on a plastic material called nitrocellulose, which was very dangerous and easily flammable. Nitrocellulose lights up in low temperatures and turns into gas that furthers the reaction. "In certain conditions, this material destroys itself", Väinämö explains. The destructive nature of this particular type of plastics is demonstrated in the episode through two accidents that have happened in Finland, one in 1927 in Tampere and one in 1959 in Helsinki. The first one claimed 21 victims, whilst the other didn't require any actual lives, but a big storage of Finnish early movies were lost in the fire. Väinämö tells about an incident herself when she was vacuuming film material with a special vacuum cleaner to extract dust and dangerous gases away. The vacuum cleaner broke and caught fire, which spread to Väinämö's jacket too. Otherwise, she hasn't had any incidents with the matter. She is not scared of it, because she is so used to it, Väinämö says.

In the 1950's, another cellulose-based plastic, acetate film, came to replace nitrocellulose. According to the episode, "it did not behave as unpredictably as its predecessor". [26] While acetate film was not as dangerous, it did not age as well as nitrocellulose. Acetate film loses its colours easily, it bends and breaks. Plastics are not forever in the sense of usability or condition: plastic also stains, gets scratches, releases toxins, breaks into pieces or even crumbles. While the matter doesn't disappear, the role of the matter changes from desired to unacceptable. "As plastics break down, they betray the promises that they seem able to make when they are new and pristine. When new, plastics flatter our desire to remain in control of the material world, promising a sheer perfect surface for the world (to plasticize it)." (Fisher 2013, 117.)

From the 1990's onwards films have been made out of polyester.

> "It is still hard to say how polyester holds, how it keeps colours or how it otherwise preserves as a material. Time will tell. But these three materials are mainly film

[25] Mäkeläinen 2019c
[26] Mäkeläinen, 2019f

> material and all of them are plastic, all of them have different consistencies" (Väinämö)[27]

This reveals how little we actually know of plastics. The durability of different types of plastics is yet a mystery, as are their effects on bodily systems of different creatures (other than clearly mechanical ones, as choking to big plastic particles). This is why in Finland, the film storage of the National audiovisual institute is underground in a cave, where the temperature is constantly in minus degrees. The aim is to slow down the decaying process. The presumption is that the films will remain "forever" in these caves.

Väinämö takes the journalist Niina Mäkeläinen to a chamber to see destroyed film material. The conserver opens a film case, and Mäkeläinen gasps loudly. "It is in crumbles!", she exclaims, sounding a bit derailed.

The reaction of the journalist is clearly affective, followed by an emotional response. The response reveals surprise and horror in front of decayed matter, but the horror is connected to the fear of losing something important: the life that was captured on that film has disappeared. The promise of plastics as durable matter has failed.

The conserver confirms that nothing can be done to this matter anymore, the decay is inevitable.

> "Conservor: It is in the process of destruction, and it is so far in that process that from here it doesn't anymore, like, the film material melts together and it becomes that kind of powder and the smell is horrible.
> Journalist: Let's take this here. What do you do with it?
> Conservor: Nothing. It has reached its end.
> Journalist: But do you still store it?
> Conservor: Yes, of course. Nothing is thrown away."[28]

The conserver then reveals that copies have been made of the film already in the 1970's. The information that was stored in this film-turned-to-powder has been duplicated, and thus the destruction is not that complete. However, it raises questions about why it is so important to still store this matter that does not serve its original purpose anymore. Why does it continue to be valuable even after there is nothing more to salvage from it?

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[27] Mäkeläinen, 2019f
[28] Mäkeläinen 2019f

The episode does not give an answer to that question, but it seems to me that the matter itself is somehow culturally meaningful, not just the information it contained. Following Igor Kopytoff's (1986) idea of the cultural biography of things, the "life" of a thing might then continue even after its "death", since what is done to an object after it has served its purpose is part of its biography. By preserving these crumbled films, they remain as witnesses of times passed. Kopytoff asks what might we think of an original Renoir painting "lying neglected in a museum basement" (1986, 67). The answer is that this would feel tragic, Kopytoff writes. Thus, the exclamation that the journalist makes when she sees the film in crumbles, is also an expression of this tragic feeling: something valuable has been lost. And yet, even if it is lost, it still prevails as an idea in this heap of foul-smelling powder. The powder carries traces of its past. The powder remembers.

Today, movies are mostly filmed digitally. Film director Juho Kuosmanen tells in the episode that he still wants to film his movies to actual, material film. The way Kuosmanen describes his work with film reminds me of the way how Deleuze and Guattari talk about the art assemblage, where the painter, the brush, the paint and the canvas all work together in order for an art piece to become.

> "There is maybe also this aspect of a world view, since in digital working, even though you would add some rubbish or grain or something that would decrease the quality of image, it is still based on control and how we edit that material. Then again, shooting on film and what happens to copies of film, they get scratched and if they are not in a completely terrible condition, then that imperfectness is also beautiful to look at. When shooting and watching film the material is always present, which is like finite and impermanent and I argue that it kind of amplifies the experience of temporality. There is a presence of some kind of wonder, and I feel that in the digital world, this presence of wondrousness is lacking, it lacks precariousness and wonder." (Kuosmanen)[29]

It is interesting how Kuosmanen takes a sceptical stance towards working digitally because it is based on control and mastery over matter. Digital matter here is also connected with finitude and eternality, whereas film material is connected with temporality, fleeting moments and, in the end, loss. However, there is something beautiful in this potentiality of loss. As Kuosmanen says, it brings out an aspect of wonder to be able to experience something in space and time.

How I see Kuosmanen's description is how he as a passionate professional is becoming-with plastics when he works. It is a matter of a "world view", where Kuosmanen does not want to work

[29] Mäkeläinen, 2019f

through control but through surprise and wonder. His view takes the liveliness of matter seriously and acknowledges the role of film material in the creative process. In a way, the film matter together with other matter (dust) and other forces (light) bring their own say into the process, thus the result is a doing a human-nonhuman assemblage (Bennett 2010, 28). The expression of the liveliness of plastics here stands against the impression of plastics as "a malleable and docile partner of creation" (Bensaude Vincent 2013, 22), that would twist and turn to the will of the intelligent designer. Instead, Kuosmanen opens up to the wonder of unruly matter and lets it take part in the result. In this sense, I see Kuosmanen is cultivating something that could be called posthuman subjectivity.

This episode of film material interestingly shows how plastics can work against their reputation as durable, obeying and docile material. Bodies that take care of vulnerable film material can experience fear, horror or sadness, if valuable material explodes or decays. Bodies that shoot with film need to deal with anticipation and letting oneself become vulnerable to the process, since one does not really know what the film ends up being like until it is fixed. Both Väinämö and Kuosmanen are professionals whose skills and knowledge become-with plastics. They have learned how to work with unpredictable matter and also to appreciate their processes in time.

5.3 Becoming-emancipated with nylon stockings

Plastics have played a specific role in the material-discursive production of women's lives throughout the history. In the radio programme that concentrates on the cultural history of plastics through various specific fields and artefacts, an interestingly large part of the episodes concentrates particularly to the entanglements of women and plastics. Women have traditionally done most of the domestic work, thus plastic artefacts have eased up these tasks. Barbie dolls have been both the Madonna and the Whore, accused of tempting girls to bad behaviour but also seen as an emancipatory, feminist figure (Mäkeläinen 2019h). The entangled history of plastics and cosmetics is relatively new, and is now coming to an abrupt end: today the idea of having plastic particles in lipstick is a worrying thought (Mäkeläinen 2019g).

From a baradian intra-actionist perspective, it could be read out from the data that plastics and the category of woman have been co-constitutive in different ways. Gender can also be seen as a becoming that does not originate from or end up in an individual but is something that is formed in relations (Leppänen 2011, 24).

Here, however, it is important to stay aware of the dangers of categorizing people, as the point is not to succumb to Othering or repeating old "grossly inadequate" sociological categories (Braidotti 2002, 13).

The practice of identifying and labeling categories, identities and positionings comes with the high r isk of fixing and confirming them in the same process. As Braidotti writes, "[a]t both the micro and the macrolevels of the constitution of subjectivity, we need more complexities both in terms of genders and across ethnicities, class and age. This is the social agenda that needs to be addressed. The inflationary discourse of the 'feminine' has never proved particularly helpful for women and 'others', unless it is supported by a healthy dose of feminist consciousness" (2002, 15). However, at the same time "[t]he female feminist subject starts with the revaluation of the bodily roots of subjectivity, rejecting any universal, neutral and consequently gender-free understanding of human embodiment" (2002, 22). How I interpret this is that Braidotti means that what "human" means differs intersectionally. That is why in this analysis, I look at the specificality of experiences where plastics and identities intersect.

Following Baradian intra-activity and Leppänen's notion of gender as something that becomes in relation, then the basis of the analysis would be to look at how material relations might or might not themselves bring out gendered differences in plastic relationships. Having said that, there are definitive traces across the material where gender does seem to matter. In my data, the subject position and categorization of women as subjects that become-with plastics are so clearly articulated already in beforehand that it is hard to try to *not* presuppose the doings of gender in plastic relations. Subjectivities that become with plastics seem to take different routes that both strengthen the hegemonic subject-position but also strive against it.

For the sake of this analysis, I chose one especially interesting woman-plastic assemblage for further examination, which revolves around nylon stockings. Historian and writer Kaari Utrio tells about her first encounter with nylon stockings in an affective manner in the *Plastiikkia, plastiikkia* radio show. Before stockings were invented, women had to wear socks with suspenders and corsets corsets that were troublesome to wear and take off. Utrio explains how in the 1960's when she studied at the University of Helsinki, women were not allowed to wear trousers in the premises, so socks and skirts had to be worn if one wanted to get educated. Wearing a girdle and suspenders to keep the socks up was a troublesome task, Utrio recounts. During the wintertime, women were always worried that someone might see the woolly trousers they wore underneath their skirts to cover up the naked part of the thigh in between the girdle and the socks.

> ”I remember when my mother bought me and herself our first stockings and I remember how we tried them on together and were thoroughly astonished by this amazing comfort. We didn’t need but panties on and then we pulled these stockings on top. We were very astonished, like can this even be true. After that we shifted completely to stockings, even though they were expensive, but we preferred to compromise on something else than stockings. To use them produced such a tremendous feeling of easiness, comfort and timesaving, and this meant also, that old girdles could be thrown away, no need for that armour anymore. The 60’s were a great time in women’s lives, and the change in women’s intimate lives, the time when birth control pills, tampons and stockings came, which were significant to the women’s liberation movement” (Utrio)[30]

Here, Utrio shares an affectionate memory from her youth. In this memory, she recounts how she and her mother are connected through the novel sensation of wearing nylon stockings. Here, a bodily sensation is coupled with a shared experience with a close family member. From Utrio’s voice can be heard that she is quite fond of this memory. Nylon stockings changed both her and her mothers’ experience of living life as a woman through making everyday business of wearing underwear much easier.

If agential capacity is measured in the capability to affect and be affected, then in this specific assemblage, the surprising encounter leads to a becoming that changes the subjectivity of the affected participant, in this case, Utrio. As Leppänen and Tiainen (2016, 34) write, researchers should be able to pick up moments or points from their data, where an originally intensive encounter with different kinds of materialities and forces produces actual changes in the participants. Here, that point is clear. As Utrio got nylon stockings on her for the first time, she knew there was no going back, even though it meant loss of more money.

The experience of the stockings is both material and discursive in a co-constitutive way. Discursive normativities create “particular socio-cultural categories and ideas about appropriate/inappropriate behaviour related to gender, age, class, and ethnicity” (Højgaard & Søndergaard 2011, 342). While different bodies are still restricted through specific dress codes and evaluations of appropriate or inappropriate looks, the patriarchal code of Utrio’s youth was stricter than today. The discursive materialized in uncomfortable and time-consuming practices with girdles and socks and naked thighs that had to be dealt with in the wintertime, all in order to pass the normative code.

[30] Mäkeläinen 2019e

On an everyday level of material practices, nylon stockings can be seen as an empowering aspect for women. Elizabeth Grosz writes that freedom is a capacity of the body, linked to its capacity of movement and "multiple possibilities for action" (Grosz 2010, 152). It would be perhaps too far-fetched to say that nylon stockings revolutionized women's lives. But if plastic stockings made it easier for women to go to university and study, to make them less worried about their bodily movements, it should be accounted for as exactly that kind of a small, everyday micropolitical act redirects the becoming of a subject. Plastics in the shape of nylon stockings gave Utrio and her peers a possibility to live a bit differently, and as Utrio says, they never looked back. A change in the material circumstances through nylon stockings may not have immediately changed the discursive, but as Utrio recounts, these small material things such as tampons, birth control pills and stockings were present in a time when women's lives begun to take a new turn. It could thus be said that they were co-constitutive in *becoming-emancipated*.

From a critical perspective though, it could be said that nylon stockings made it easier for women to succumb to the societal pressures and discursive gender expectations. Stockings did not absolve women from the strict dress code (at least not straight away). Every morning, Utrio actually spent *less* time to make herself pass as a proper female subject in the society of that particular time. Elizabeth Grosz conceptualizes freedom as a positive activity, "freedom to", instead of the more traditional, negative sense of "freedom from" (Grosz 2010, 140). In this notion, freedom is not only a liberation or removal of oppression or constraints or limitations, but it is a capacity of action. There is a difference, Grosz argues, whether the female subject is deemed free only through getting rid of the power of the Other, or whether freedom can be achieved through exploring what the subject is capable of making and doing (2010, 141). Grosz does not mean to discard the "freedom from", as it is still relevant, but the "freedom to" is a direction forward toward positive action. Grosz writes that the women as a group do not have that many "choices" as men have as a group, and thus the question of freedom for oppressed groups "is never simply a question of expanding the range of available options so much as it is about transforming the quality and activity of the subjects who choose and who make themselves through how and what they do" (2010, 151). Thus, freedom is not that much about a choice as it is of autonomy to take on activities or refuse them.

At that particular time that Utrio is describing, the choice at first glance does not seem to be a "freedom to", since the choice was either to dress appropriately and follow the patriarchal dress code or not step into the university building. However, the way in which Utrio describes the affective encounter with nylon stockings and how she connects it with larger currents in the society speaks of a larger, 'macro' level change, where these kind of small, micropolitical practices take the

current in new, unpredictable ways. On the ‘macro’ level, the women’s liberation movement awakens and tools that gave women more control of their own bodies (tampons, pills, stockings) come to the market. On ‘micro’ level, there were women who materially and culturally engaged with these new artefacts and with each other, producing wholly new assemblages where subjectivity and the role of women were renegotiated, allowing women to expand their capability to act in societies.

In general, ‘micro’ and ‘macro’ are understood as everyday and structural levels of lived realities that should not be understood as binary opposites but as interdependent levels (Coole & Frost 2010, 33). The way I see micro and macro levels in this study is somewhat in line with the “flat ontology” of new materialist approaches. By this I mean that I do not think there is a hierarchical level between for example everyday material practices and societal processes and discourses, since these go both ways. Discourses and societal processes come to be only in actions and relations that take place in their frames. Such things as a society or a culture would not exist without the material practices that constitute them, or in other words, “micro assemblages may become components of larger macro assemblages, which emerge from the interactions of their parts” (Pyyhtinen 2015, 46).

Thus, these both scales should be understood as co-constitutive, and to say that ‘macro’ would always be restrictive and ‘micro’ enabling would not be right. Utrio’s example is a parade example of the simultaneous becoming of the subject as both submitting and gaining agency through the discursive in terms of Michel Foucault, as the “basic premises inherent in both kinds of conceptualizations are the complex processes of simultaneity between submission under and emerging agentic subjectivity through—at this point in our argument—discursive power” (Højgaard and Søndergaard 2011, 340). That is why “socio-cultural categories are not conceptualized as stable and fixed, easily demarcated entities, but rather as discursive (and material) practices that are reiterated and/or challenged by subjects and communities.” (ibid. 341)

> “Foremost among Deleuze’s concerns is the idea that the philosophy and the politics of difference must take into account not only the negative aspects of power, that is to say the experiences of oppression, exclusion and marginality, but also the need to redefine the positive structures of the subject. Politics has to do with the elaboration and implementation of structural changes within and without the subject, starting with his or her desires. Politics has to engage with potentia, as well as with potestas.” (Braidotti 2002, 125).

From a retrospective view it can be said that such materialcultural changes happened that truly paved way for an emancipated subject and a whole new wave of feminism. Thus the subjectivity that becomes in Utrio's example is pre-individual, it is a sum that is larger than its parts, co-constituted materially, since the "process of becoming is collectively driven, that is to say relational and external" (Braidotti 2002, 143). It was not Utrio alone who was becoming-emancipated with nylon stockings, but this position was a set of changing material practices and innovations that gradually led to a collective emerging subjectivity.

Nylon is a great example of how matter and meaning become in relations. Nylon socks made such an impact in women's clothing that when the production of nylon was redirected to other uses during war, women painted their legs so they would look like they were veiled with nylon. What a great example of trying to convey a specific meaning through appearances, even though the material circumstances have changed. As Tuuli Innola writes, the experience of one's look is a material-societal process that is deeply affective and informed by nonhuman matter (Innola 2020). According to Innola, affective materiality takes part in the formation of human experience, and nonhuman agency is a part of this becoming (2020, 39). Nylon socks, either actual or painted, demonstrate how "looks" are materially-discursively produced and practiced, and how the materiality of plastics (or rather the lack of it) in this case takes part in the process in affective ways.

At the same time as women were trying to make their legs look like they're covered in nylon, this matter that was used for female-specific clothes was directed to the use of warpower. Later, when nylon socks came back from the sphere of war to the sphere of clothes, another war broke loose: nylon riots.

> "In December 1941, Japan attacked the US naval base in Pearl Harbour. USA joined the second world war. Production of nylon socks was halted, since all possible nylon was needed as material for soldier's tents and parachutes. A return to silken socks was no longer possible, so women coloured their bare legs with coffee and drew a black line in their calves to mark the seams of socks. Real nylon socks were hard currency in the black market. When socks came back to the stores after the war, they were hoarded with such vigor, that those events have been named 'nylon riots'. The shelves of markets fell as the masses thronged in, and fights could not be avoided."[31]

What is the role of nylon stockings today? Through a temporal analysis it can be said that certain connotations still sit fixed between nylon stockings and gendered expectations, although today

[31] Mäkeläinen 2019e

nylon stockings would not be considered as female-specific as before (Berger 2009, 61). However, the very materiality of nylon stockings has changed through time. Expert on vintage clothes and recycled fashion Outi Pyy tells in the radio programme that nylon stockings today are made weak so that people would keep buying new ones. Pyy and the journalist meet in a thrift shop.

> "Pyy: This is actually quite a concrete good aspect of it, that here in this shop selection there is a lot of those older [clothes], you can see when compared to new ones, how the quality has changed. A piece of clothing that is 40 or 60 years old, it is usually in mint condition compared to these newer ones. A good example is exactly those stockings. Nylon was originally developed in the 30's, and it was so durable that if you ever find those older stockings from the 70's from flea markets, that is so durable stuff that it doesn't break at all. And the stitches are made in such way, there is a patent for unravelling stockings, that eventually just wear out during years.
> Journalist: The image of stockings is that they always tear.
> Pyy: It is a great example of a product that has been designed to break, when they noticed that if they only make very good products, then they won't get women to buy them again and again."[32]

Here the capitalist logic is at work, the fossil sense, which does not think soberly of the waste that comes from poor level of design. The historical route of nylon stockings has taken a long leap from the material that was used for soldier's tents and parachutes in the second world war to the easily breaking stockings that are made today. It has been an intentional choice to change the capacities of the nylon matter, since "[t]he durability of any thing is a practical accomplishment, something produced in practices" (Pyyhtinen 2015, 78).

As is apparent from the data, the early nylon stockings were made to last and women also strived to keep them intact. If the stockings got ripped, they were fixed. Today, nylon is mixed with less durable plastics such as elastane, and the quality of the fabric is thus worse. On an everyday level, poor quality stockings cause minor harm and economic loss, when stocking users have to constantly buy new ones to replace the ones that have broken. In this sense, nylon stockings are a weird plastic artefact: they are made from this durable, non-degradable matter, but at the same time they are very un-durable. This contradiction in nylon stockings reminds me of the contradiction of PET drinking bottles:

[32] Mäkeläinen 2019e

> "A material that is remarkably tough and unbreakable enables extended use and endurance over time and space. Durability makes commodities mobile, and it enables long periods of storage and extensive supply chain connections. In contrast, disposability implies spatio-temporal transience – an ephemeral material always in the process of becoming waste." (Hawkins 2013, 57)

Plastic items are usually designed for a specific purpose only, and since plastic production in domestic sites is hard, it is also difficult to even repair plastic artefacts by yourself (Michael 2013). However, plastic products may be adapted to alternative uses in households (2013, 32). To wrap up the chapter of stockings, I still need to address once again a very special relationship between nylon stockings, domestic creative adaptations and Finnish cultural history. In the year 1974, a household-oriented magazine Pirkka started to publish tips to solve small everyday problems on a column called Niksi-Pirkka. Often the idea was to be savvy and save money through reusing old or surprising things in a new way, such as making pillow cases of old t-shirts or using a rhubarb leaf as a sauna seat cover in summertimes. Today, these tips would be called ecological, sustainable and in line with reuse-thinking, the very values and practices that are also offered as a solution to the plastic crisis by the many researchers present in my data.

Throughout the years, old nylon stockings have been an inspiration for practical people. These stocking tips are a humorous part of Finnish culture. One tip that is told by the presenter in the radio programme goes like this:

> "If moose flies disturb you while moving in the forest, you can easily make a protective headwear from stockings. Put stockings in your head and cut holes for your eyes, nose and mouth. Tie up the legs around your neck. This way moose flies can not get in your hair".[33]

Here, again, nature, plastics and Finnishness. This tip immediately creates a mental image of a person walking around in a forest looking like a B-class bank robber. It taps into the general knowledge that Finns have about walking in the forest during best mushrooming season: moose flies are an absolute nuisance. The thought of a sticky moose fly clinging to your hair immediately produces an unpleasant bodily sensation in me. I have myself thought as well how to avoid getting attacked by those in-my-face animals when walking in nature in Finland. Putting stockings in my head seems silly, but it goes well with the rational subject that becomes with plastics in relation to

[33] Mäkeläinen 2019e

Finnish identity. Finnish identity that becomes-with-plastics is not about high fashion, style or being sexy: it is about being comfortable, smart and penny wise.

These stocking tips are quite rare in the sphere of giving plastic items a "new life", as plastic items usually are not that easy to reuse. As Michael writes, "there is little plasticity in plastics, especially if we take plasticity to connote the potential for new or renewed connections to be rendered domestically" (2013, 34). However, among plastic artefacts, plastic buckets and nylon stockings seem to be among those that exhibit surprising amounts of plasticity when engaged with creatively.

Unfortunately, I didn't find any research that would've illuminated *how* often these nylon stocking tips have actually been used. I do not know whether these are actual real-life practices or humorous attempts to dig into the comical aspects of the thriftiness, even stinginess of imagined Finnish consumers.

5.4 Cultivating response-ability through creative entanglements

As is apparent from the previous examples, positive relations are quite possible with specific plastic materialities that have been designed to serve a certain purpose. The problem lies in the less lovable plastic materialities, for example plastic packages. This is why I want to look at one example where affirmative action was cultivated around these mundane things.

In the documentary series Arkistomatka, artist Kaisa Salmi is followed as she creates her performance art piece *Plastic Mama*, that was presented in Helsinki centrum on 8th of July in 2019. The documentary does not show the actual performance, since it aired before the performance took place, but funnily enough, I was there to witness the performance. Or to be more specific, I was working in the building next door to the plaza where Kaisa Salmi performed, so I occasionally went to the balcony to listen to the performance. At that point I did not yet know that I would be analyzing the birth process of this art piece in my thesis.

There is another connection between me and Kaisa Salmi as well. In 2016 I took part in Kaisa Salmi's performance in Kouvola. The performance was about Finnish civil war that took place in 1918, and it invited locals to affectively and bodily engage in a dance-like event that was supposed to let people experience feelings that are associated to the civil war. The location of the performance was in the proximity of a field, where people were executed during the war. From my own experience I can thus say that Salmi's way of doing art is situational, embodied and relational.

Salmi's relationship with plastics is contradictory. This is presented already in the beginning of the episode as the journalist Marko Gustafsson reports:

> "I am going to meet an artist who has dealt with climate change in her work for years already. She hates plastics but makes art out of it and calls all of us too to join her in a plastic art work party. Furthermore, plastics are also a necessity for her as transport." (Gustafsson)[34]

We then see the artist and journalist meet at Helsinki coastline, where the artist has a small glass-fiber rowing boat that she uses to get to her studio, which resides on an island just off Helsinki. The rowing acts almost as ritual of transformation, it is a material, embodied practice that is very crucial to her becoming as an artist. Plastics in the shape of the boat are a crucial part of this passage.

In the case of *Plastic Mama,* Kaisa Salmi explains that she has asked for Finnish consumers and school children to collect recyclable plastic waste from their homes "so that they can concretely see how much of it actually becomes in our homes", Salmi says. The point is to deal with plastic anxiety, Salmi says, that is turned into art.

The document shows Kaisa Salmi in a school, receiving children who have come to the place with plastic trash they have collected in their homes. Salmi welcomes the children and then engages in a discussion with them, in which she lays some foundations of a shared understanding of plastics.

She asks, whether children knows what plastics are made of. One child answers, "oil". Salmi then asks if the children have noticed bins for recycled plastic waste in their yards. The children confirm. Salmi continues:

> "There is so much plastics that accumulates in our homes. Here we can reuse plastics, recycle them. Recycling is very important. For example, if we think of a plastic bag that you can buy in a store, you have it approximately 25 minutes, and does someone know how long it lasts in nature before it decomposes? 500 years! It is like, very long. And you all perhaps know that oceans, that there is almost more plastic than fish in them. So, it is quite important to do something else with plastics than put them in the nature. But in this workshop the aim is to build a big mountain of plastics, that is called Plastic Mama, only from these plastics. We will make kind of flowers, Maaret can show, like that for example. And here are some that are already attached, the kind of flowers that can be, the flowers can be like anything that becomes out of these. And

[34] Gustafsson 2019e

> now you could actually come and empty out all the plastics you have brought into a big pile here." (Salmi)[35]

Kaisa Salmi's brief for the children binds them in a large spatiotemporal assemblage, that contains both time "500 years!" and a space as large as all the oceans of the world "there is almost more plastic than fish in them". Thus, the reason for recycling and dealing with plastic matter is informed by a hyper scale. Salmi also vaguely links the everyday practices of households and global pollution problem together. In her brief, Salmi invites the children to the sphere of the guilty consumer, but also offers them the choice of response-ability through saying that something else should be done with plastics than littering. Instead of just leaving the invitation of responsibility hanging, she then allows them to engage with the material, which is crucial for cultivating curiosity and interest.

As Salmi is speaking to the children, the camera pans out on the young participants. They do not look too enthusiastic or excited about the task, but as soon as they are asked to bring out the plastics, elements of play step in. Salmi compliments the children for the trash that they have brought in. She then shows a bundle of plastics that are tied together and explains: "We call these flowers now, and then we bind them to this [net] like this"[36]. After that, the work starts. Children engage with plastics, combining them into bundles that are tied up to long plastic nets that will become the skirt of *Plastic Mama*.

In this process, all parts of the assemblage are in a flux. Children become artists, the artist becomes a caretaker, plastics become art. All this happens, small, affective transformations while everything still remains the same. It is interesting how plastics are negotiated in this particular assemblage: first, the brief sets the basis of the work in plastic horror. However, the stuff that children have brought to the workshop are exactly that kinds of plastics that experts are yearning to salvage from the blame, which is recyclable plastic packages. When the children start to work with plastics, Salmi engages with them, complimenting their trash eagerly. Matter and meaning become in relations, and these shifts are never binary or dichotomous but fluid and moving.

The footage shows children crafting "flowers" out of plastics, children playing with plastics, working together and asking for help from the adults with their tasks. Here, I can see a strive towards "*potentia* as an affirmative and vital force" instead of "negative, resentful, disawoved affects" (Braidotti 2002, 72). The kids are encouraged to engage with plastics through joy and

[35] Gustafsson 2019e
[36] Gustafsson 2019e

beauty in an attempt to turn their aesthetics from that of doomsday to that of blooming flowers. Such a metaphor of fleeting life, what could be more suitable form to turn plastics into?

The cycle of plastics takes an extra turn in its process of becoming-waste. The value of things is created in processes and the category of waste is something that is produced in relations, not something that is inherent to the object (Valkonen et al. 2019). The evaluation process is always too a material one. As is apparent with Plastic Mama, the material practice of turning recyclable plastic packages into art reignites the evaluation process of these particular plastics. However, the meaning of the performance was not to create anything stable. At the end of the project, the whole *Plastic Mama* dress is going to end up in a recycling center.

Without knowing the actual result for the children, it could be argued that in this unexpected assemblage children create new, affectionate memories with plastics that might inspire them to look at trash differently still in future. Through this action, children were asked to pay attention to the material flows in their homes and afterwards, engage in a creative process with the material that would normally be perceived as dirty waste. Crucial to response-ability is cultivating curiosity (Bozalek & Zembylas 2017, 63). This I think is aptly present in Salmi's performance, where children are asked to look at plastics in a new way, recognizing their potential to change to something else. If response-ability is something that is "cultivated collective knowing and doing" (Haraway 2016, 34), then it could be argued that Salmi achieved this goal through bringing the children both information and the possibility to materially engage with plastic materialities.

At the end of the programme, the artist and the journalist meet at the rocky beach of Salmi's work island, where they pick up plastic trash.

> "Journalist: Do you get that environmental anxiety, does it come to you?
> Salmi: Well yeah, it is like a constant, but when you know how little you are, that this human can't this Earth in any way, or human destroys itself, I think.
> Journalist: Were you just about to say that this human can't save this planet?
> Salmi: What? Can't? Well, I don't know, maybe not, I don't know (laughs). But I mean, this is so terrible."[37]

What I find interesting in this dialogue is the way how Salmi and the journalist refer to "this human", which would be about a particular type of being human. "This human" is a destructive species, that doesn't have the ability to save this planet. It might be just a linguistic trick, but

[37] Gustafsson 2019e

embedded in this notion is also the possible existence of "another human". Rosi Braidotti would probably offer the posthuman as an alternative to "this human".

Salmi's approach is quite cynical. She does not give "this human" any slack. There is no trust, there is no hope. Still, she herself keeps on working with these troublesome issues. Particularly interesting is the final point that Salmi makes in the programme:

> "Environmental issues are very important for me, I think about them all the time, and then the form just is whatever it is. A general, shared topic such as climate change, I have dealt with it for almost 30 years. Or like plastics, which are also an environmental issue, that one also for a couple of decades. These kinds of crises or horrible scenarios are like igniting points for me, where I think that this is interesting or it stays spinning in my mind as something difficult." (Salmi)[38]

Here, I can't help but make a connection with Donna Haraway's (2016) concept of staying with the trouble. Salmi commits to thinking-with troublesome topics. Salmi's example confirms my argument that becoming-with-troublesome-matter can lead to affirmative material-cultural encounters and ethico-political engagements that aim towards a different subjectivity, even when there is not much hope left.

[38] Gustafsson 2019e

6 THE ETHICAL FIGURATION: BECOMING-SOBER

The previous chapters explain why we have come to this situation that is called a plastic crisis. It illuminates the ways how plastics are deeply entangled into our material-cultural existence, how our subjectivities become with plastics and how these relations are all but rational and straight. My attempt has been to illuminate how plastics and human beings invite each other into assemblages that are not intentionally about destruction and malice, but that seem to be safe and familiar ways of subjectification. All the previous notions also take part in the blinding effect of the fossil sense. We do not consider ourselves as bad persons, if we feel like taking part in important cultural habits, in emancipating and self-enhancing rituals or connecting otherwise with oneself, nature and other people.

Based on the extensive theorizations of new materialists, posthumanists and material ecocritics, it is exactly the false notion of a rational and exceptional subject that has brought us to this crisis. Thus the awakening process is also a difficult one. What was thought to be progress has proved to undermine the very core of our existence, which is planetary safety. Climate change, the Sixth Extinction, plastic pollution and its effects on ecosystems are throwing the old way of life off balance. To follow Rosi Braidotti's thought, the key is not to figure out who we are but who or what we want to become (Braidotti 2002, 2).

Next, I will outline my figuration of *becoming-sober,* that paves way to the kind of subjectivity that seems to be informed by the desire to get out of the plastic crisis. This becoming entails a vision that sees accumulation clearly, that cultivates affirmative action and compassionate being and which may still learn ways to exist with plastics.

6.1 Conceptualizing becoming-sober

Figurations are conceptual images of new subjectivities. Figurations have been an important part of feminist theory, with one of the most famous figurations being Donna Haraways cyborg. Rosi Braidotti has also drawn out several figurations, such as the nomadic subject or posthuman subjectivity. Braidotti writes that new figurations "are no metaphor, but rather on the critical level, materially embedded, embodying accounts of one's power-relations. On the creative level they express the rate of change, transformation or affirmative deconstruction of the power one inhabits. 'Figurations' materially embody stages of metamorphosis of a subject position towards all that the phallogocentric system does not want it to become." (2002, 13)

Thus my figuration of becoming-sober and all the other figurations presented in this study are creative, critical accounts of the material-cultural plastic entanglements. In these figurations, humans and plastics are co-constitutive, cooperating, connecting both through negative and affirmative, operating on both 'macro' and 'micro' levels of the society and our everyday lives. It is about moments when people have realized in their different material encounters that this is not what I want to become. These realizations have never occurred by themselves, but always in relations that produce affective responses. This figuration is about who we are becoming with plastics, and what kind of politics these encounters suggest.

The inspiration for this sobering figuration comes through my data. The most important cue for this figuration came from the interview with philosopher Tere Vadén, who talks about the *blindness* of the subject that has led to the accumulation of plastics. The accumulation of plastics should have been no surprise for the Plastic Age subject, but still it has been going on for decades with devastating consequences. Tere Vadén explains in the radio programme Plastiikkia, plastiikkia what kind of logic has brought us to this situation:

> "Now there is this kind of plastic awakening, that people notice that plastic pollution is about everywhere, but it is kind of weird, like how can it be a surprise or an awakening, since if we produce massive amounts of matter that does not decompose, well then it is everywhere and it accumulates everywhere. With good old common sense it should not be a surprise, that afterwards plastics is in seas and ground and air and blood circulation and everywhere. If it doesn't compose, then it must be somewhere, there are megatons made and thrusted in every place and it is not recycled and it doesn't compose. Here is the blindness of the fossil sense, it can't look at its own use of resources in a straight or sober way. There is always some blind spot in that use of resources, and what happens to those resources. The other part is, that those artefacts, we do not know their stories, we do not know where plastic things come from. I must have plastics on me, on my wrist, on my glasses, I don't know where the oil has come from, is it from Siberia or Venezuela or where. And I don't know where it goes. It goes somewhere, into some animal's blood circulation or into some sea, but I don't know it, and the system of production and consumption works that way, that that kind of information is not possible. We live so far away from that production that

> a sense of what happens to all this stuff after we have used it, that sense doesn't get a chance to build up." (Vadén)[39]

I like the way how Vadén describes the fossil subject as not capable to look at resource usage in a straight or *sober* way. This sobering up, awakening, is a reoccurring theme in my data, and that is why I want to borrow this concept to forge a figuration of a becoming subject that is *becoming-sober*. Thinking with Vadén also shows the methodological approach I have taken in this study: it is both the data and the theory I am thinking with. Here, diffractive ripples from the theoretical base and the new ideas from the data intersect.

According to Bensaude Vincent (2013), a blindness towards the materiality of plastics was needed in order for the twentieth century to turn towards mass production and consumption. What actually happened was the birth of a whole industry that produced more durable waste. Donna Haraway (2016) writes that a disaster such as the Anthropocene has been possible because of the inability to think. She derives her figuration from Hannah Arendt's analysis on Adolf Eichmann. According to Arendt, Eichmann was an example of the "banality of evil" that derives from "commonplace thoughtlessness" (Haraway 2016, 36). The analogue between a Nazi war criminal and the fossil subject is quite a radical one, but one that Haraway makes nevertheless.

Sobering happens through encounters with both human and nonhuman actants, or it could be said that the sober subject becomes in assemblages, where plastic accumulation and the contradictory nature of our coexistence with plastics can't be neglected anymore. The process is not always a happy one, as Haraway (2016, 38) says, "thinking people must learn to grieve-with", since "[g]rief is a path to understanding entangled shared living and dying; human beings must grieve with , because we are in and of this fabric of undoing".

However, negative passions do not exclude affirmative action. In becoming-sober it is the harmful impact of plastics that renders people capable, but the result can also lead to a change in the material-discursive being of plastics. Despite its horrendous capabilities, it is exactly this horror-induced attention that also sparks new kinds of connections and actions around plastics, and plastics may also be invited into new connections. Becoming-sober does not necessarily entail exclusion of plastics. Through these affirmative relations, ethical positions are taken. It is, as Braidotti would say, a "transformation of negative into positive passions" (2002, 135).

[39] Mäkeläinen 2019a

> "The selection of the composite positive passions constitutes spaces of becoming or corporeal affects. These are essentially a matter of affinity: being able to enter a relation with another entity whose elements appeal to one produces a joyful encounter. They express one's potentia and increase the subject's capacity to enter into further relations, grow and expand. This expansion is time-bound: the nomadic subject by expressing and increasing its positive passions empowers itself to last, to endure, to continue through and in time. By entering into relations, nomadic becomings engender possible futures, they construct the world by making possible a web of sustainable interconnections." (Braidotti 2002, 135)

My concept of becoming-sober means becoming posthuman in the sense that this subject acknowledges the madness of the Rational Subject, sees the intoxicated resource wasting in a sober way and also sees their own position in the assemblage. From here, an opportunity to do otherwise rises. Becoming-sober is not becoming majoritarian, since the hegemonic subject is the capitalist fossil subject. In a classical dualistic sense the Other of the sober subject would be the capitalist fossil subject. But the sober subject is no one, no fixed position to oppose this subject, and thus it does not provide for a binary pair, since through minoritarian becomings other becomings become possible, "[t]he 'other' dissolves into a series of nondualistic and non-oppositional entities, organic and inorganic, visible and not – all powerful matter in the sense of potentia, all stretching beyond death and finitude" (Braidotti 2002, 145). Becoming-sober is moving away from what the ruling system would want, it is moving away from blind capitalist consumerism and neglect.

Now, it is important to notice again that the sober subjectivity that I aim to develop here is not clearly someone or something. It is a vision, a pre-individual "affect that flows, like writing, it is a composition, a location that needs to be constructed together with, that is to say in the encounter with, others" (Braidotti 2002, 118),

To demonstrate this figuration, I will present manifestations of becoming-sober that I have read out from the data. For the sake of this study, these are but examples and a small cut from the actual robustness of my data. The ways to become-sober are multiple, as are the lines of flight that follow.

It is now important to notice that since my data is form a journalistic campaign that aims to constructively answer to a specific issue, that the angles, positions and perspectives that are presented are all carefully selected and edited in terms of conveying a certain message. That is why generalizing for example clothes designer Paula Malleus's becoming would be futile, since it can't be expected that all people who encounter massive piles of textile waste would become clothes

designers who expertise on recycled materials. However, in many of the cases presented in the data, the awakenings that deal with plastics have led the participants to deal even *more* intensively with plastic issues. This is interesting, since realizing the multiple networks of harm that are formed around plastics could also lead for an exclusion of plastics or some kind of turning away or blinding an eye. This must also be the case for many, but it is just not described in this data, since this data is about inspiring people to affectively deal with plastics in a responsible way.

6.2 Illustrations of becoming-sober

In this chapter, I will demonstrate how my conceptualization of becoming-sober could be illustrated through empirical data. I will specifically look into two cases of clothes designer Paula Malleus and actor Marja Salo, who both have their own episodes in the Arkistomatka documentary series. Through analysing these episodes further, I could find similarities in their experiences that could on a conceptual level be tied to the figuration of the sobering subject.

As becoming-sober happens through encounters, both Malleus and Salo can track specific moments in their lives when they have become aware of the trouble that plastics bring. After the sobering encounter, something has shifted inside of them. Malleus is known for her recycled fashion, making clothes from excess fabrics and old clothes found from thrift stores. For Malleus, the sobering moment was tied to an encounter with massive mounds of textile fabrics, which often are made of plastic fibres.

> "Malleus: The shock came when we came for the first time to Fida's recycling center, that was our longstanding partner in delivering materials. As we go in, we realize the mass that takes shape in front of our eyes, like oh, this is not a good joke.
> Journalist: And now we talk about these massive textile waste mountains that are born every day?
> Malleus: Like this nice idea we have is not only a nice idea, but like wow, we are actually in front of some much bigger problem that is not discussed anywhere."[40]

First, Malleus describes her encounter with the hyberobject of textile waste mountains. In the video material, there is footage from such a center with big batches of textiles layered on top of each other. The video cuts back to Malleus, who with her eyes follows an imaginative textile mountain as

[40] Gustafsson 2019b

she describes how the problem "takes shape" in front of her eyes. The experience has clearly been an embodied encounter that exceeds basic human dimensions. The realization happens both on an individual and societal level (or micro and macro) since the material mountains scale both with the perceiver's own body as well as with the sociological imagination. The spatio-temporal realization shines through: if this is the situation only at this one Finnish recycling center, then what does it mean if we think about the scope of this issue for example, globally? As is described elsewhere in my data, textile waste has become an ever bigger problem since so many fabrics are mixed, often with plastic fabrics such as acrylics, viscose or nylon. Thus, plastics make the textile problem even more problematic. These kinds of mixed fabrics are very hard to recycle, and the microplastics that part from these textiles cause harm when they end up in the environment. The other issue is in the sheer volumes of textile waste. In the documentary, there is a clip from a documentary series *Kell' Onni On* from the beginning of the 1980's. One of the episodes called *Lumppurien yhteisö* concentrates on a community that deals with textile waste or rags. In the episode, the rag collectors tell that they collect 60 tons of rags per year only from the countryside of Finland. That was 40 years ago, in the rural areas of a small country.

After this affective, embodied encounter with textile mass, Malleus decides that something has to change. Malleus describes this transformation very clearly with her own words, how her encounter with those waste piles has led to an ethico-political commitment:

> "Malleus: I see that the changes that I have yelled for, that they are slowly realizing themselves. I hope that my work is something that affects the founding structures that shape this society.
> Journalist: You probably mean with things that people would change their thinking towards consuming less, throwing away less, trying to use the product till the end, with as long product life cycle as possible.
> Malleus: Yeah and when we go to that background structure, so that certain kind of paradigm of greed that has spread and poisoned the whole planet, of course it can't be affected since those people who keep that mechanism up need to have that epiphany and come away from there, but like from my own part at least offering something and bringing alternatives to it all."[41]

What is interesting though is that *becoming-sober* does not mean for Malleus that she has turned away from plastic fabrics. As can be seen in the footage of the documentary, the relationship that

[41] Gustafsson 2019b

Malleus has for fabrics is an enthusiastic and affective one, she gets excited about recycled plastic fabrics, about their colour and condition, about the things that she can do with them. The sobering up has led to a kind of response-ability (Haraway 2016). She does not overlook plastic textiles but rethinks ways to "give them a new life", as is stated in the documentary.

For Malleus, the magic of her work is in transformation. In the documentary, she tells how she as a kid found some beautiful fabric, which she then taped on a Barbie to make pants for the doll. I am fascinated by the fact that Malleus tells about her becoming, her moment of realization through a Barbie. Malleus's example is a great way to show how the plasticity of Barbie, the ability to become anything, has also helped her co-players to become something. Already the very first affective encounter that scooped Malleus forward to become the designer she wanted to become was forged in relation with plastics in the form of a doll.

> "But yeah, that was maybe the first time, that I have done something myself and realized something. Like, I realized that something that exists can become something else. And this is by no means a new idea, but kind of like, wow, we need to do this." (Malleus)[42]

Malleus thus recognized that together with excess fabrics, she has the ability to engage in a process of transformation. Later, she cultivated this skill together with knowledge of materials and ecological design. Malleus and her colleagues have developed a professional eye for fabrics, which turns waste into valuable matter again. This sounds a lot like "material thinking" that according to Gabrys, Hawkins and Michael (2013, 7) happens when "changes in knowledge reshape our engagement with the material world, at the same time as the material world affects our knowledge and knowledgeability". Malleus's professionality takes a new direction through her encounters with troublesome matter, while at the same time the material also talks back to Malleus, inspiring her to reuse them in novel ways.

For Malleus then, her solution is quite close to what Jane Bennett (2010) or Pyyhtinen (2015) suggests, that is to work ethically in the specific assemblages that the human subject takes part in. Malleus has decided that if her passions drive her towards clothing design, she could as well do it through using recycled fabrics and even plastic materialities. She acknowledges that she can't affect the whole system by herself, as would also be too much to ask according to Bennett. Instead, she

[42] Gustafsson 2019b

has decided to *work with* plastics, and through that, give her own contribution to the bigger assemblages that constitute our material-cultural society.

Actor Marja Salo remembers two occasions which have led to ecological awakenings. The first one happened over a decade before, when she read Tim Flannery's book on climate change. She describes it as a "shocking experience" and how the book got her to change her opinion on nuclear energy.

The other awakening has to do with plastics. This encounter was even more affective, a more intimate and embodied experience:

> "I just once, but I can't remember when, took a bag with me to this local forest, [because I thought that] my own forest looked so disgusting, that I wanted it [trash] out of there. Then it becomes a kind of obsession, and it also makes you feel good. I have organized these events, where I have almost forced the actors of this theatre to come for example to Seurasaari to collect trash." (Salo)[43]

Here Salo describes how it has been the embodied feeling of disgust in her nearby forest that prompted her to act differently. There are many aspects at play. The feeling of something of your "own" being ruined, and then making it clean again by taking out the things that do not belong there. There is a perception of a commons here, a sense of shared space that ignites response-ability in Salo. This response-ability is further widened to her immediate human relations, when she takes the people from her everyday life with her to collect trash.

Now, it is important to notice that while Malleus and Salo describe their notions from a personal viewpoint, affects are not only personal but transpersonal and prepersonal, as they can be viewed as "emergent property of extensive assemblages that construct affective atmospheres" (Wetherell 2013, 350). Affects flow in assemblages, and as plastic accumulation and the awareness of its harmful effects has grown, so have also grown and changed the affects that direct the meaning-making of plastics.

As a sidenote, it is interesting how both Malleus's and Salo's awakenings have happened in Finnish cultural landscape, since quite often, the plastic problem is articulated as something that is happening somewhere else than in Finland. Becoming-sober is informed by global injustices as well as local injustices, and there are many accounts in my data of plastic awakenings that have happened abroad. These include the accounts of actor and activist Jasper Pääkkönen, marine

[43] Gustafsson 2019a

biologist Jessica Haapkylä and documentary maker and plastic bag collector Timo Lapila. What is shared in these accounts is an embodied, affective encounter with notable volumes of plastic matter in an environment where the plastic presence formed a stark contrast to the perceived aestethics of the location. Pääkkönen was fishing in Seychelles, where he encountered atolls filled with plastic trash far away from human habitation. "It was quite shocking", he describes in the Arkistomatka episode (Gustafsson 2019d).

Documentary maker Timo Lapila gathered plastic bags for several decades to his attic, which is called the unofficial plastic bag museum of Finland. In the episode, he first tells about different bags and their cultural evolution. His collection consists of tens of thousands of bags, he estimates.

> "Journalist: At what point did you wake up to realize that a plastic bag or plastics could be some kind of a problem?
> Lapila: Let us take some material forth. In the Eastern corner of Crete there is a place called Mirabello Bay. This is how it looks. [shows a picture to the journalist]
> Journalist: Wow.
> Lapila: You can wade in plastic trash there up to your ankles.
> Journalist: A beach completely filled with plastic trash.
> Lapila: These [pictures] are some ten years old, that is when we woke up to this matter most effectively, when we waded in that water and plastic bags wrapped around our ankles like eels. It was quite disgusting."[44]

The sensation of plastics wrapping around ankles in a holiday destination creates an affective reaction in Lapila. The phenomenon of plastic crisis here is intra-actively and affectively created, with eel-like plastics in a place that was loaded with promises of holiday and perhaps beautiful nature. The disgusting part is clearly informed with "matter-out-of-place".

In many cases, the response-ability in becoming-with plastics is informed by multidirectional relationships with non-human entities. Nonhuman–plastic relationships are a major informant of the plastic crisis. Relationships with non-human species are an important part of cultivating response-ability. Mostly these nonhuman–plastic entanglements refer to oceanic relations, for example whales, sea birds and fish. Marine biologist Haapkylä describes her sobering in Helena Raunio's article as follows:

[44] Mäkeläinen 2019b

> “ - The first wakeup call to plastics came in Hawaii islands, where I was researching corals. A turquoise sea and a glorious sandy beach… but filled with plastics.
>
> Haapkylä cannot forget how birds fed their offspring with plastics on this paradise island of hundreds of thousands birds. Or [forget] Indonesian shores, where she was writing her doctoral thesis on corals. A huge amount of plastic bottles and other plastic trash was collected from these beaches daily, to get paying customers to come there.
>
> - It felt quite unbelievable, when dozens of black garbage bags were thrown in the ocean during one evening from a cruise ship with 2 000 passengers. It made me feel very desperate.”[45]

For Haapkylä, these encounters have had an impact in her life in Finland. She says she thinks carefully what she buys and recycles all her plastics.

It needs to be reminded that Haapkylä’s example is quite rare. Often the knowledge of plastic harm is mediated, and people rarely *see* animals eating plastics on their beach holidays. However, images of animals choking in plastics have the ability to ignite worry and even action in Finnish context even though the events are happening away from the direct space. In a way, this responsibility is very much in line with feminist materialist thought that acknowledges that “we are all part of the world, and that we cannot distance ourselves from it or assume a stance of innocence in our relationships with others” (Bozalek & Zembylas 2017, 68). Furthermore, there are dangers in over-emphasizing the scale of plastic problems elsewhere, making them seem as far-away troubles. As researcher Samuel Hartikainen (Raunio 2019a) says, microplastics can be found for example in lake Kallavesi in Eastern Finland.

Thus, becoming-sober is both situated but also informed by far-away injustices. In Marja Salo’s case, her trashpicking activity is not restricted into her immediate, local surroundings, but she engages in the practice even on her beach holiday. Her sobering subjectivity does not justify behaving differently in different spaces, the ethical practice holds, no matter the surroundings:

> “Salo: I don’t do much beach holidays, but two years ago we did an interrail trip to Mallorca with the kids. The Mediterranean is horrible, it is filled with shreds, so we started every morning with like, we bought collecting nets on the first morning and then every morning we cleaned that whole beach from plastics. People thought we

[45] Raunio 2019a

> were crazy, but it was like every morning there was many bags of plastics shreds from there, and still it is that kind of small shreds. So that anyone who goes to Mallorca now and looks in the water will see those shreds there on every beach, you can't escape it, that it is filled with plastics.
> Journalist: It is easy to harness a family into this kind of activity, or does it need to be harnessed, they just do when you say that now we buy nets and start to work?
> Salo: Yeah no need to harness anymore, we are indeed on the same agenda all of us. Besides, it is fun. It is actually a lot more fun because it is meaningful, it is nothing that is forced that needs to be done now but it makes you feel good."[46]

Trashpicking is actually for Salo a collective, affirmative practice: her whole family takes part in the activity. Truly, Salo is making affirmative relations with troublesome matter. Ethico-political practices in Salo's family are cross-species, as Salo explains that her dog also takes part in the trash-picking process:

> "I think this is a very therapeutic pastime. We do this a lot with my kids, my kids are very good at picking, and my dog is very good at picking trash, I have trained it to fetch it." (Salo)[47]

Somehow, the becoming of Salo reminds me of a Deleuzian becoming-animal, which Braidotti (2002, 123) describes as "a spatial and temporal mode of enhancing a common life-space which the subject never masters nor possesses, but merely crosses, always in a pack, a group, or a cluster". Salo and her family or different species go through their habitat, enhancing the common life-space even though this space is not in their possession. For Braidotti, the nomadic subject is immanent to its surroundings or environment. Salo's activities are always embodied, always tied up to her actual living space.

Meaningfulness is something that both of these women take up in their discussions. According to Højgaard and Søndergaard, "[d]iscursive practices define or make possible what counts as meaningful. In this way discourse becomes productive—discursive practices produce something" (2011, 345). In these examples, meaningfulness is tied up with a notion of good life that is not connected to worldly possessions, and meaningfulness is never cultivated in a vacuum, it also requires relations, becoming meaningful to someone or something.

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[46] Gustafsson 2019a
[47] Gustafsson 2019a

> "I think that what this life is about in the end is that something is meaningful. Unfortunately, the structures of this society are such that this is not often brought up. I have many times thought about why people get midlife crises, you know that they flip in their 40's or 50's, so why do they flip? Well, because they have never asked themselves that hey, do I feel that I am meaningful, or they have asked but they have not dared to listen to the answer, and then you just go and do like, this is the way it should be done, that these kinds of tracks are built for human brain that this is how you need to operate. And what I started to do with my firm, I started to define exactly what I see and feel, so that it becomes such a place where I can carry out my own meaningfulness." (Malleus)[48]

For Marja Salo, her small everyday practices are a way to deal with feelings of anxiety.

> "Journalist: Do you ever get anxious when you notice that this is never going to come to an end, this waste?
> Salo: Well yeah I do get anxious quite often, but then in a certain way the fact that you collect, that you do something concrete for it, that makes you feel good, even though it is so small then that gives a feeling that the only things you can change is your own behaviour. You cannot in a way affect anyone else. But I do for example know that people who are in my company, who know me, will never throw a cigarette stump to the ground, because I will immediately pick it up after them."[49]

While the basis for Malleus's and Salo's work is in anxiety and disappointment, their actions also are a source of joy and happiness. As Bennett (2010, 13) writes, "a vital materialism does not reject self-interest as a motivation for ethical behavior". It is acceptable to enjoy staying with the trouble. While the actions that Malleus and Salo take are inspired by the harmful accumulation of matter, they also find a sense of joy and meaningfulness in dealing with that matter. Obviously, these kinds of actions would not be needed if there was no plastics in the first place. But committing to ethical practices where plastics play a crucial part means they are taking steps away from the fossil sense and plastics themselves also take part in this line of flight.

Salo finds meaning in taking part in actions that do not benefit herself or her family alone, but that are in her perception meaningful on a larger scale. Salo takes the journalist to view her "favourite

[48] Gustafsson 2019b
[49] Gustafsson 2019a

place" in the National Theater, which is a great, light-filled corridor that has a high ceiling and colourful glass mosaic windows, made in 1902. Salo comments on the glass works as follows:

> "Things like that are not made anymore, can you imagine that someone has painted those up there with their own little hands, and that brings me to a thought, that perhaps also has to do with recycling, that you are yourself a part of some kind of continuum of time and that you have to keep in mind also the next generations." (Salo)[50]

Here, Salo puts her in spatio-temporal continuum that reaches beyond her own life cycle. The affective relation that she has to glass art that has been made by someone who does not exist anymore links her to the apparent notion of how the material practices that are taken at some point in time can possibly resonate even after generations have passed. It sounds like Salo's actions are informed by a desire to be a part of something greater than just herself. It is about becoming aware of the assemblage that reaches out beyond the explicit existence of an individual.

Both Malleus and Salo have cultivated a new way of gazing plastics, a new way of looking around them. Both of them are aware of their surroundings and the materialities that come across, which makes them affectively react to the things they see. Both of their gazes are a mixture of pleasure and disgust: Malleus is horrified by the mounds of textiles that never end, but at the same time she rejoices when she finds fabrics that she can work with, and usually plastic fabrics are good and durable stuff to work with. She claps her hands enthusiastically when she finds fabrics that are just the right shade of emerald and blue. For an uncultivated eye these mounds of matter are meaningless or incomprehensible, trash or garbage, but Malleus's "material thinking" allows her to see further in the cultural biography of these things. They are necessarily not at their end point yet:

> "Journalist: Do you think you could use the plastics in these [fabrics]?
> Malleus: Of course we can.
> Journalist: For example this pile here, could you find anything useful here? I see this stuff as something I could use only as wiping clothes in my garage."[51]

Salo's trash-picking gaze is a selective and strict gaze, which judges materialities while it goes: what belongs to nature and what doesn't. Salo's gaze is thus following the old nature/culture division. On the continuum from culture to nature, plastics stand in the most furthest corner of

[50] Gustafsson 2019a
[51] Gustafsson 2019b

culture. Other types of trash, such as paper trash can in her calculations be left in the environment, since it will degrade through time. Even metal cans are ranked higher than plastics in Salo's eyes:

> "Sometimes I think that even though these metal cans do not belong here in the nature, well at least they don't produce microplastics." (Salo)[52]

Salo is disgusted by plastic trash that is in her eyes "out of place", but there is a kind of lust that she has developed for finding more trash, it is almost like a game, which ignites and amuses her. As Salo and the journalist walk around a beach, collecting garbage, the journalist remarks a few times how cultivated and "professional" Salo's gaze is. Her eyes pick up trash from places where an un-cultivated eye would not see them.

The way how Malleus's and Salo's ways of looking have changed and thus have also changed the ways in which their bodies orientate around plastics is the result of embodied affective and discursive processes. As Wetherell (2013) argues, the affective and discursive talk back to each other, and the way I see it in my data is exactly this: material-discursive practices entangle with affective encounters, which both work together to orient bodies and transform their capacities. There is no chronology between the affective and the discursive, Wetherell argues (2013, 355).

However, Salo's cultivated gaze is not only picking up plastic trash from the environment, but the gaze also affects the way she sees the environment as a whole:

> "I don't see this beautiful nature, because all I can see is all this trash around here." (Salo)[53]

> "If we sit with my husband somewhere in the coast, he says oh how beautiful the scenery is, then I am like, yeah, I just think about all the trash that is under the sea there. I can't enjoy it in the same way as he does." (Salo)[54]

This is a process of grief, as Haraway would put it. The price for sobering up is losing the sense of pristine nature, which was a contested notion in the first place: as Tsing (2015, 30) reminds us, contamination creates things, and it is an unavoidable process. Existence is messy, assemblages are sources of cross-species and interdisclipinary pollution. The grieving part of becoming-sober is to understand that the accumulation of plastics does not end in any near future, and how an individual can't do too much about it. Both Malleus and Salo express how they think their actions do not have

[52] Gustafsson 2019a
[53] Gustafsson 2019a
[54] Gustafsson 2019a

a big impact on society, but the sense of meaningfulness that the actions cultivate is already enough. Accepting that contamination is inevitable can open a view for new landscapes. Becoming-sober is a process of adapting, grieving and finding solace.

The question of relationality and collective action is also present in both Malleus's and Salo's case. Malleus talks about how she can already see some change in the society. Salo sees people taking up similar activities as herself. While some people might have deemed Salo's family as 'crazy', she notes with a slightly surprised tone that the phenomenon of leisurely trash-picking is spreading:

> "I have actually lately seen that people do it. It is a thing that has started to grow. The day before yesterday I saw this ordinary man with a stroller, who had garbage tongs and a garbage bag with him when he was pushing the child outside. It was a lovely sight. I had the urge to ask if I could take a photo of him." (Salo)[55]

Here again, a change in the aesthetics. A sea view makes Salo anxious because of the things she cannot see, but an ordinary man with a plastic bag spurs such an affirmative affective reaction in her that she would like to capture that 'lovely sight' in a picture. I see a whiff of shared subjectivity at play, Salo looking at someone taking the same steps as she takes, feeling a sense of collective change, a collective subjectivity appearing. These are embodied signs of people becoming aware of the material realities of their surroundings and responding to what they see in actions that are manifestations of response-ability.

In this chapter, I have proposed a figuration of becoming-sober, and demonstrated it through examples from my data. Becoming-sober is a relational, post-fossil collective subjectivity, which is connected in joy and grief, which cultivates specific skill sets to deal with the troublesome matter and which opens up new directions for future subjectivities to become.

Plastics are a lively part of these becomings, "a participant in shaping ethical actions" (Hawkins 2017, 19). Plastics in these relations express a kind of response-ability, as they entangle with other human and nonhuman actants in the aforementioned assemblages. In these assemblages, accountability and response-ability is not reducible to one human actant, but the ethical dimensions are co-constituted by various players in the assemblage. Thus, becoming-sober is also becoming posthuman, since there would be no sobering up from the fossil subject without de-centering the human. Becoming-sober makes room for plastics instead of trying to shut them away or deny their existence.

[55] Gustafsson 2019a

The contradictory nature of plastics is what makes the process of becoming-sober so interesting. Becoming-sober means also dealing with temptations and mixed feelings. Since the sober subject is not fooled by the trap of rationality, they recognize the messiness of life and material relations. The sober subject does not lift itself above, but levels with others. The meaning is not to go cold turkey. The meaning is to learn how to see soberly the actions of the fossil subject, to find ground under one's own feet to situate, to take a stance, and then, think how to deal with troublesome matter. The outcomes are myriad, since becoming-sober is an open-ended process.

7 CONCLUSION

Plastics have for a great extent enabled the prosperity and advances of the last 70 years or so, but the marvels of the Plastic Age have come with a price. Plastics have accumulated on this planet throughout decades, causing both aesthetical and physical harm for human and nonhuman animals alike. There is no nature without plastics anymore, and the harmful consequences of plastic pollution are at the same time anticipated and still unknown. Yet, the volume of the production of plastics is expected to only grow. This has led to a situation that is often described in the media as "the plastic crisis", and the acknowledgement of the crisis is usually accompanied with calls for change. More precisely, the question is about how the relationship between human beings and plastics should change so that the world wouldn't end up wrapped in plastics, as Barthes (1957) predicted.

The controversial relationship between human beings and plastics that has fuelled this thesis also touches the very core of new materialist and posthumanist theories, which aim to rethink what it means to be human in this age of multiple ecological crises. In this study, I have approached the coexistence of plastics and human beings through these theories to understand better how plastics and human beings are materially and culturally intertwined, and what kind of openings for change these relations might entail. As the theories I follow are based on the idea that matter and meaning become in relation, and perceived "things" only gain their properties in relation to other "things", then from this can be further derived the notion that "plastics (along with myriad other elements) enable particular sorts of humans to emerge" (Gay, Hawkins & Michael 2013, 6). In line with new materialist thinking, I argue that thinking more deeply about material relations and attuning to affective becomings and their mechanisms can provide new insights on how we should deal with plastic problems.

There were two objectives that I set out to fulfil in this thesis. The first aim of this study was to produce new insights on the complexity of human-plastic phenomena and conceptualize different kinds of modes of becoming-with plastics in the situated context of Finnish culture and society, and even touch upon the ethico-political aspects of these becomings. Here, the idea was to see what kind of human beings emerge from plastic entanglements, and how and why are these processes unfolding in our society. The aim was to move further from just stating that yes, we are entangled, but to even look at the ethico-political consequences of these entanglements.

The second objective was to contribute to the methodological development of new materialist and posthumanist studies and to explore the empirical possibilities of these theories.

My research questions that guided the process were the following ones:

1) How and why are human beings becoming-with plastics in this data?
2) What kind of ethico-political consequences can be mapped out from these becomings?

The answers to these openly formulated questions are not exhaustive, since the questions worked more as tools for thinking than exact problems that should be solved. Next, I will discuss the process and the findings related to the aforementioned objectives together with proposals for future research.

7.1 New understanding of human-plastic relationships

The overall focus of this thesis was on the specific subjectivities that become in relation with plastics. My analysis was divided into three parts, where the first part dealt with the discursive hegemonic plastic-related subject. The second part observes material-cultural encounters and practices with particular plastic artefacts. The third part moves on to a figuration of an ethical, posthuman subjectivity that becomes-with plastics. It needs to be reminded that the becomings that I have conceptualized in this study are but a glimpse of all the possible becomings that could be read out from the data. For the sake of this study, I had to narrow down the range of intensive, interesting choices to analyse. My data would have offered openings for many more lines of flight.

In the first section of my analysis, I looked critically at the most obvious plastic-related subject position that was offered in the data, which was the consumer position. The consumer position has two roles: it is both the culprit and the saviour of the ‘plastic crisis’, it is both responsible for the destruction but also responsible for solving it. This subject position is the hegemonic subject that is produced in plastic discourses. The assumption in this hegemonic discourse is that human beings are lazy, greedy, blind and vain, which makes us consume plastic products without awareness of the consequences. However, the discourse of human species as the culprit stayed on the discursive level. Material practices of becoming-guilty were not too present in the data. At the same time, the plea for a responsible consumer was called out multiple times, but the argumentation for this subject position was almost always grounded in guilt and blame.

In this first section, I concluded that the consumer position does not easily cultivate curiosity or feelings of connectivity, compassion and empathy that would be needed for affirmative action.

Quite rarely people themselves want to identify themselves as consumers, and I proposed that the consumer position is something that comes as a by-product of other becomings. When researchers or experts or interviewees speak of "us consumers" or "we consumers", it is a rhetorical tool where they try to create an imagined community of consumers, which would then imply some kind of shared responsibility. At the same time, the burden of the destructiveness of the consumer position is shared, as experts admit that they are a part of the system that they want to change. Thus, the double role of the consumer subject is grounded in moral condemnation and discursive blame. However, these notions are not grounded in material practices, and I argue that politics of condemnation and blame are not sufficient by themselves to inspire changes in consumption patterns. As Bennett reminds us, condemnation of singular agents who "must pay for their sins" leads to unethical politics. The culprit/saviour discourse also too easily lends political power to capitalist-driven subject positions, suggesting that other options are not available, and that consumerism is the only way to take a stance in this world. Lastly, the consumer discourse also puts a heavy load on individual human beings, overlooking the assemblatic nature of our relations, and how agency is distributed in these assemblages. As Bennett (2010, 38) says, "[o]utrage will not and should not disappear, but a politics devoted too exclusively to moral condemnation and not enough to a cultivated discernment of the web of agentic capacities can do little good".

Hence, I moved on with my analysis towards actual material practices in order to look at affective encounters and what kind of becomings they cultivate. In the second part of my analysis, I observed closer some material-cultural practices that revolve around specific plastic artefacts. I analysed becomings in relation to plastic buckets, nylon stockings, film material and plastic packages in Finnish cultural landscape. There were various subject positions that I coded out from these relations, such as becoming-forager, becoming-emancipated and becoming-professional. These positions were not anticipated beforehand but created through analysis. They are but linguistic codes for a range of different shifts in modes of being, catalysed and cultivated with plastics. In my analysis I show how both human beings and plastic artefacts become in relation with each other, and how matter and meaning in these instances are intra-actively produced. Here, I deepen the nuanced understanding of how and why human beings become with plastics in particular cultural and historical settings. In this section, the focus is on assemblages and in the co-constitutiveness of human beings and plastics.

In this section, the hegemonic consumer discourse is confronted. The relations that revolve around plastics are not only due to greediness and laziness of capitalist consumers, but there are various affects and desires that guide these relations. This interpretation can be read as a posthumanist

critique of the humanist, rational subject. By taking into account the capacity of plastic materialities to affect and be affected, the viewpoint also shifts from an anthropocentric one to a more diverse, non-hierarchical although asymmetrical viewpoint. My intention in this work has not been to evaporate or erase the human subject, but to bring the relationality and intra-active nature of subjectivities into light, thus at the same time promoting the accountability of human subjects but also giving credit to the affective, multiple processes that create different phenomena.

Through this analysis, it became evident that while the relationship that we have with plastics on a surface level is conflicted and ridden with prejudice and hate, there are deeper currents in these relationships that come to light when looking at plastic-related material practices. Plastics in many instances appear to not only restrict or disturb human activities, but also encourage and inspire people for different modes of action. These modes might even exist parallelly. Whether it is shooting movies on plastic film material, creating new clothes from old fabrics, doing art from most mundane plastic packages or putting on nylon stockings, plastics are a part of becomings that are affirmative and creative, enabling certain kinds of human to emerge. Plastics may render people capable of ethical actions, plastics may bring people together in the form of films, art or foraging, plastics have even paved way for collective becomings for subordinated subject positions. The transformation is inevitable and apparent, and still very subtle, and I argue that it is exactly the material existence, the liveliness of plastics that is crucial for these particular becomings. I argue that plastic-related becomings are different than becomings related to other materialities, such as wood or metal, which has to do with the material-discursivity of plastics, in other words, the special material properties and vibrancy that plastics have but also the cultural connotations and discursive weight that plastics carry. At the same time it is important to notice that plastics are not the same everywhere, and the very malleable nature of plastics, and on the other hand, the perceived rigidness and durability of the matter, are important factors in the kind of affects that arise in human-plastic encounters.

Finnish cultural landscape was an important backdrop for my analysis. As Braidotti (2019) says, ethical subjectivities are situated and relational. Through my analysis, I was able to find how specific imagined ideas of Finnishness and Finnish culture affect plastic-related subjectivities, or how the geopolitics of Finland affect plastic relations. For example, Finnish forests and the typical climate were important entities in plastic relations: for foragers, it matters what kind of forests one walks in with a plastic bucket, and for Kaari Utrio and her peers, harsh Finnish winters meant a hassle with awkward woolly pants before nylon stockings were introduced. Finnishness was also related through exclusions: the somewhat blind perception that the plastic problem is not really

caused by Finns or that the actual problem is somewhere else than in Finland came through from the data. In this discourse, the idea of Finland as a pure and technologically savvy saviour country was produced. However, actual material realities show that microplastics have invaded also Finnish nature, and plastic management needs fixing also in the domestic context. This leads to the question of proximity, which was an interesting factor in several ethical becomings. Often, the worried subjects were informed by global injustices, and the actual awakening to the problem had happened abroad or through foreign images. However, there were also examples of subjectivities that have gained inspiration specifically related to their own immediate surroundings, like trashpicker Marja Salo.

In the third part of my analysis, I formulated my own figuration of becoming-sober as an alternative collective subjectivity for the blind fossil subject. Figurations are a feminist tool to configure new paths for ethical being. The inspiration to the sober figuration came from the data, as philosopher Tere Vadén talked about the fossil subject which can't look soberly into its own relation with resources. The problem of the fossil subject is that it is blind to its own actions and their consequences, and this blindness needs to be maintained in order to justify unethical material relations. The figuration of becoming-sober is a "cyborg" in the footsteps of Haraway, it is an ethical subjectivity inspired by plastics, even though the relation to plastics is highly controversial. Becoming-sober entails willingness to stay with the trouble and find joy and meaningfulness from tricky and messy relations. Becoming-sober is a process of adapting, grieving and finding solace.

I demonstrated the figuration through examples derived from my data. I focused on the narratives brought by Paula Malleus and Marja Salo, who both deal with stuff that others have discarded. Their relation to plastics was somewhat different: Malleus rejoices from reusing plastics, turning abandoned textiles into celebrated new designs. Malleus uses "material thinking" in collaborating creatively with plastics, giving them a new "life". Salo hates plastics and what plastics do to nature, and in her own discourse, the nature/culture divide still exists strongly and she is clearly very troubled by plastics. However, she has devoted her pastime to collecting trash, and has also engaged friends and family in the same activity. Thus, both of these agents have taken the conscious decision to deal with plastics in assemblages that they deem to be more meaningful and more ethical than other ways of being. Both Malleus's and Salo's practices have changed the way they perceive their surroundings. Engaging with plastics is meaningful for them, giving purpose without thinking that dealing with plastics on an individual scale is the only answer to the crisis. The crucial part of their becomings in relation to plastics is that instead of orientating away from plastics, they have orientated towards plastics, thus choosing to stay with the trouble (Haraway 2016). According to

my understanding based on Braidotti and other scholars, to become a posthuman ethical subject means taking into account the critical connections and positions that take part in the processes of knowledge production and becoming, giving space to other agencies and recognizing their capacities to affect and be affected, accepting one's own position as part of the assemblages and thus realizing one's ability to also take action in an affirmative way that goes against the exhaustion and cynicism of our times. This is what happens in these particular processes of becoming-sober.

The sober subject is something that is right now in process, in this space and time. The tracks to this collective becoming can be traced already decades back, but it is only now when our society is reaching kind of a tipping point. More and more people are taking up activities that have resulted from awakening to the 'plastic crisis'. They are feeling a sense of urgency that makes them take action in the sphere of their own capabilities. From this viewpoint, I argue that becoming-sober is a pre-individual collective becoming, a similar process to what happened with Kaari Utrio's generation in the 1960's, the collective becoming-emancipated.

Already in the introduction of this thesis I emphasized that this work is not so much about plastic agency, but it is about intra-active relations, about the phenomena in which human beings and plastics are formed. The focus was more on how plastics affect human subjectivities, not vice versa. Having said that, plastics are a lively part of these becomings, and as these processes are co-constitutive while not necessarily symmetrical, plastics are also affected in these encounters. For example, the plastic bucket proved to be all but an unnecessary and simple artefact. Plastic buckets take part in various cultural and social processes, in which subjectivities are in motion, for example in acts of connecting to heritage and cultural habits and caring relationships in the domestic sphere. At the same time, the nature of plastic buckets is negotiated and reconstructed. A plastic bucket vibrates with possibilities, that are enacted and renewed in each encounter, as "flows and relations may only temporarily be locked up in objects; their processuality is primary" (Pyyhtinen 2015, 83). This means that the plastic bucket in itself is nothing, but a plastic bucket in relation is a wide array of things.

The nature of plastic existence is a kind of Deleuzian in-between, where the origin of the artefacts is unknown and the endpoint is in oblivion, and the temporality of the matter is incomprehensible to humans. Plastics, because of their design and their connotations, are constantly in a process of becoming-waste. However, there were also interesting side paths from this inevitable becoming-waste process in my data. For example, the practice of preserving destroyed, unusable and unredeemable film materials in well-kept vaults for the sake of Finnish cultural history is an interesting example of how the fulfilment of the waste-becoming process is denied. Again, this

process is a manifestation of how matter and meaning become in relation: the actual state of things can't be perceived only from one side. A pile of film material in crumbles might be waste somewhere else, but in those vaults, it was an important remnant of cultural history.

The question why we are becoming-with plastics was also embedded in my research questions. The hegemonic answer would be that human beings are entangled with plastics because we are lazy, greedy and vain. This Hobbesian understanding of the human subject is the dark side of the Enlightenment subject, and as such runs very deep in traditional philosophical and cultural thinking. The contemporary critical interpretation of this subject is the blind fossil subject, that refuses to see the material consequences of mindless consuming. The disappointment towards this human subject was very present in my data as well. Thus, there was a seed of posthumanist critique present in many of the interviews, as people stated their yearning for another kind of humanity. However, the concept of an evil and lazy human subject existed on the discursive level while at the same time the material practices in which the interviewees engaged showed a very different subject arriving. Analysing closer the material-discursiveness of plastic relations created an opening towards affirmative action, collective becomings and compassion that overruns the negative passions, as Braidotti (2002) would say.

Simply stating that we are becoming-with plastics because of consumer capitalism would also be an understatement from a relational viewpoint. From a Baradian perspective of agential realism the material, social, cultural and discursive are co-constitutive of each other. For Barad, phenomena such as capitalism or consumerism are produced in material practices. This notion changes radically the concept of an individual agent, since agency or the capability to do something is not an inherent property of a being but a consequence of matter in relation. Even capitalism and consumerism are phenomena that are created in assemblages, and as assemblages and becomings in a Deleuzian sense do not have an origin point, then just one relata can't be the decisive agent. Plastics take part in joyous and affirmative assemblages and calling these just a result of cold capitalist schemes would be an understatement of the capability of human and nonhuman entities to affect and be affected. Having said that, capitalist or neoliberalist currents may indeed take part in these assemblages.

A simple answer to the question why we are becoming-with plastics would be that the material capacities and dreamy possibilities that plastics have provided, combined with the ever-increasing production of plastic artefacts and their accumulation throughout decades has led to a point where these becomings can't really be avoided anymore. The entanglement is so deep, that a disentanglement does not seem possible or even fruitful anymore. It is quite evident that a life

without plastics is not possible. I argue that the problem is not in plastics themselves or in their oily origins, but in the cultural and political relations. Even if plastics are made from renewable materials, their effects and properties that become in relation to human and nonhuman animals remain the same unless human beings take some serious steps to alter the courses of these assemblages. Thus, the true problem lies in the cultural issues. I propose that the answer lies in active and radical engagement with plastics, both on an individual and personal level but also on a collective level. This is what posthuman accountability is. It is acknowledging the responsibility and capability to action that human beings have in the mess they have caused, but the process entails a larger awareness of material relations and cultural practices.

The ethico-political consequences of these encounters and becomings were also a guiding research question. From my viewpoint, the answer to this question can't wholly be separated from the research process. There were moments where some ethico-political stances could be read out from the original data as such, as people described how they had ended up doing affirmative politics through critical and creative engagement with troublesome matter. Having said that, I would argue the ethico-political consequences of plastic-related becomings are immanent to the work and the thought-process presented here. By this I mean that realizing the political potential in human-plastic relations requires a deeper and nuances analysis of these relations, and a profound change in the perspective from the anthropocentric to the new materialist point of view, where ethics are not a one-way road, but a negotiation in entanglements, where different agencies and flows of power and affects shape human actions. In new materialist ethico-political thinking, the full responsibility is not on individual shoulders, but plastics are perceived as important actants in ethical constituencies. This was apparent in many of the examples in my data, but especially in the sobering accounts, where the human beings have changed their practices and attached themselves "to assemblages one may judge as tending toward noble ends" (Pyyhtinen 2015, 54). I would dare to say that through the thought processes that this kind of analysis provokes, further openings for ethico-political change become possible. This radical shift does not easily turn into mass-produced policies, but it is a result of active thinking-with troublesome matter.

A word needs to be said of my own process as a researcher in the middle of this assemblatic work. The revelations that I had while diffractively reading theory and data through each other also affected me and the way I perceive my surroundings. Plastics for me have turned from mute and despisable/disposable stuff to lively and loud matter, that engage me in curious processes. I did not recycle plastics before I started doing this thesis. As I engaged in the research process, I started to observe my own spatial and corporeal orientations in relation to plastics. Now my kitchen has a

proper station for recycling plastics, and I give a lot more thought to the way how I deal with this troublesome matter. Talking about plastics and their material-cultural existence has also offered multiple fruitful and interesting discussions with my teachers, peers, friends and acquaintances. Many are quick to judge plastics, but after mulling over the possibilities and hidden messages a plastic bucket may exhibit, a step is taken to a new terra. I am delighted by the surprised and curious gazes these human beings cast around their plastic companions after these conversations.

A thought that followed me throughout this thesis was the fear of downplaying the actual crisis and promoting the kind of harmful consumption that has brought us to this situation. However, I do not see this thesis as a manifest for continuing plastic production and consumption as it is. Rather, it is an empathetic observation of the various reasons why human beings and plastics are so entangled, and a proposal for a method of cultural change. Understanding how matter, culture and history entwine, and how desires, affects and emotions orient us in the society, can help us to become more aware of our own relationship to plastics. This, in turn, can lead to more proportionate and balanced existence together with this controversial matter: I stand with the message of the *I love Plastics* campaign, that we should *care* more about plastics. This thesis is also problematizing the common Western historical discourse of human beings as bad, lazy and evil, and the common discourse of plastics being unworthy and useless matter. This thesis questions altogether whether we can subject any properties or qualities to anything without at first researching their placements in assemblages and the various currents of affects and power that dwindle in these networks.

7.2 Methodological advances

One of the most important inspirations for me to do this thesis was to investigate the empirical possibilities of new materialist and posthumanist theories. New materialist and posthumanist scholars seek normative change in the society, and thus I think that these theories need to be more in dialogue with the very stuff of the world that they so enthusiastically aim to conceptualize. If these theories are not brought closer to empiricism and practice, the important and radical insights and advances they provide might go to waste without proper fulfilment.

In this work, it was both the theory base and the theme of the study, plastics, that guided my methodological path. As the focus of this work, human-plastic relationships, is a set of complex phenomena, the methodology also needed to be of the sort that allows to take the complexity into account. In order to achieve this, I turned towards fluid methodologies, which have been robustly discussed among feminist studies. The rhizomatic methodology for this thesis set the stage for the whole thesis, not only for the analysis part. After I had grounded myself on fluid methodologies, I

went on with the task to develop a method that fits the problem. For the sake of this study, I developed a method I call a diffractive material-cultural content analysis, which allowed me to creatively and non-hierarchically engage with theory and data. Working diffractively allowed me to converse with a topic that is slippery and hard to grasp, shedding light on plastic issues from surprising angles while at the same time being sensitive to the complexity of these matters. It also allowed me to build bridges between high theory and mundane everyday practices and experiences.

Choosing diffractive and fluid methodologies as a guide throughout this thesis lead into a work that "alters or creates reality in both symbolic and material terms" (Saukko 2001, 34–35). In this line of thinking, the researcher is a situated, active member of an assemblage, that consists of previous thinkers, data, materialities, histories, time and space. Diffractive and rhizomatic thinking means that "our analyses do not just reflect the world, they are active interventions: the making of difference" (Orlikowski & Scott 2015, 698). I dare say that the stories, rhizomes, associations and assemblages present in this work bring about a world that looks at human beings and plastics from a new perspective, in other words, a perspective that looks at plastics and human beings as co-constitutive in assemblages where lively matter and different practices come together in a specific cultural context. This perspective does not judge in advance or lean into old categorisations but stays open for new figurations and constellations. This work is not a reflection of reality as such, but it is a creation that allows for openings that might otherwise not be opened at all.

The experimental work presented here provides an important exploration to how new materialist theories might be used for empirical analysis. This thesis demonstrates how diffractive reading can be used also in combining theory and empirical data together, as diffractive reading is often used only to read different theories through each other. Furthermore, it could be argued that these kind of advances are crucial in order to bring the sometimes radical and possibly revolutionary ideas of new materialist and posthumanist theories to the sphere of practice and empiria.

Since new materialist studies that have taken empirical steps have usually used ethnography as a means to collect data, I chose to pay homage to my background in journalism and media studies and analyse journalistic media material instead. Media material is a common resource in cultural studies, and some, as Stacy Alaimo (2016), Eva Giraud (2019) or Nancy Tuana (2008) have also used media materials in their new materialist studies.

The data consisted of articles, radio programme episodes and documentary series episodes that were published under a plastic awareness campaign called *I love Plastics* by the Finnish public broadcasting company Yle in the spring of 2019. The aim of the campaign was to open up the many

ways in which plastics takes part in our society and culture and also give solutions that would help people to better deal with this contradictory matter. In that sense, the data already spoke the language of the theories used, it was open and ready to question our relationship to plastics and also ready to demand change to this relationship. I was especially intrigued by the multimodality of the data. When researching affectivity in relation to plastics, the audio and video materials proved to be very fruitful in conveying both linguistic and non-linguistic cues for analysis.

Using media material as data meant studying assemblages that were already framed from a journalistic perspective, and sometimes it felt like looking at the world through double lenses: first the journalistic or representational lense, and then through the academic, methodological lense, that turns away from representationalism. However, choosing media material as my data allowed me to explore more closely the cultural, political and historical layers that were built in the journalistic process on top the raw happenings of life. The data itself was a semi-arranged assemblage of agenda-setting journalists, experts with scientific and system-level solutions, of other interviewees with their personal stories and experiences that illuminate the robustness of plastic relations. The data also brought forth historical continuums, something that might be hard to perceive while doing for example ethnography.

7.3 Discussions for the future

I hope that my analysis shows the multiplicity of plastic relations in Finnish society. Instead of concentrating only on the horrors of plastic relations, I wanted to examine how they also spur new, affirmative connections and thus can even inspire ethico-political consequences. Material feminist scholars believe that new associations and figurations can create ethical responses. Haraway (2016, 115) speaks for mapping out details of the multispecies entanglements our world consists of, telling stories that connect "actual beings to actual response-abilities". This is what I have aimed for with this study, to link actual beings to actual response-abilities, connected with figurations that give food for thought to think differently.

> "Each time a story helps me remember what I thought I knew, or introduces me to new knowledge, a muscle critical for caring about flourishing gets some aerobic exercise. Such exercise enhances collective thinking and movement too. Each time I trace a tangle and add a few threads that first seemed whimsical but turned out to be essential to the fabric, I get a bit straighter that staying with the trouble of complex

> worlding is the name of the game of living and dying well together on terra." (Haraway 2016, 115–116)

While recycling and caring for plastics is not the answer for saving the world in these times of multiple serious and slow disasters, such as climate change and the Sixth Extinction, thinking our relation anew with plastics may lead to small material-cultural changes that may then pave way for further possible transformations. Recycling plastic packages may sound and feel like peanuts in the midst of the gigantic systemic changes the Earth and its dwellers are going through. Theorizing affirmative plastic relations when oil-based plastics are so harmful in many ways may seem naïve. But think we must, as Haraway says, and sometimes it is good to start from the small and obvious, the near and quotidienne to start unravelling the path for new becomings.

My conclusion is that when we think actively with plastics and become aware of their materiality, a window for change through affirmative becomings opens up. These changes are not big or radical, but as they accumulate, the results can be crucial for the future of this planet. There is no magic wand that could turn the old humanist subject into a new one. Rather, the subjectivities that shape the course of life on this planet are in a constant becoming. The transformation happens in everyday encounters, in the micropolitical affective relations between human and nonhuman matter that are guided and informed by the macro level of the society. Power and resistance are intrinsically interwoven to these processes. There is no "new" subjectivity as such. It is not something that is completely different than the previous one. It is something that is forged in relations that take place throughout days, months, years and decades. The ethical subjectivity that becomes-with plastic is thus not only individual but relational and sometimes even collective as it is informed by various understandings of plastic relations across space and time.

Plastic phenomena and human-plastic relationships should be studied further, and the openings are myriad. Many trajectories that appear in my literature review and analysis could be followed for further research purposes, as the length of this paper did not allow for a thorough contemplation of them all. The research approaches taken here could also be used for studying and conceptualizing other becomings with troublesome and controversial material-cultural phenomena, such as fossil fuel issues or animal production. The process of sobering could be researched further, in order to better understand the mechanisms how these becomings take course and how the growing understanding of lively materialities and co-dependencies affect these processes. In these times of political polarisation, a relational and affective perspective provides for a more compassionate entry point to highly conflictual topics.

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