STUFF MATTERS AND MOVES:
Analysing Environmental Consciousness and Memory Objects through a New Materialist Lens

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DECLARATION OF ORIGINALITY

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I declare that this thesis, *Stuff Matters and Moves: Analysing Environmental Consciousness and Memory Objects through a New Materialist Lens*, is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Olivia Loots
February 2022

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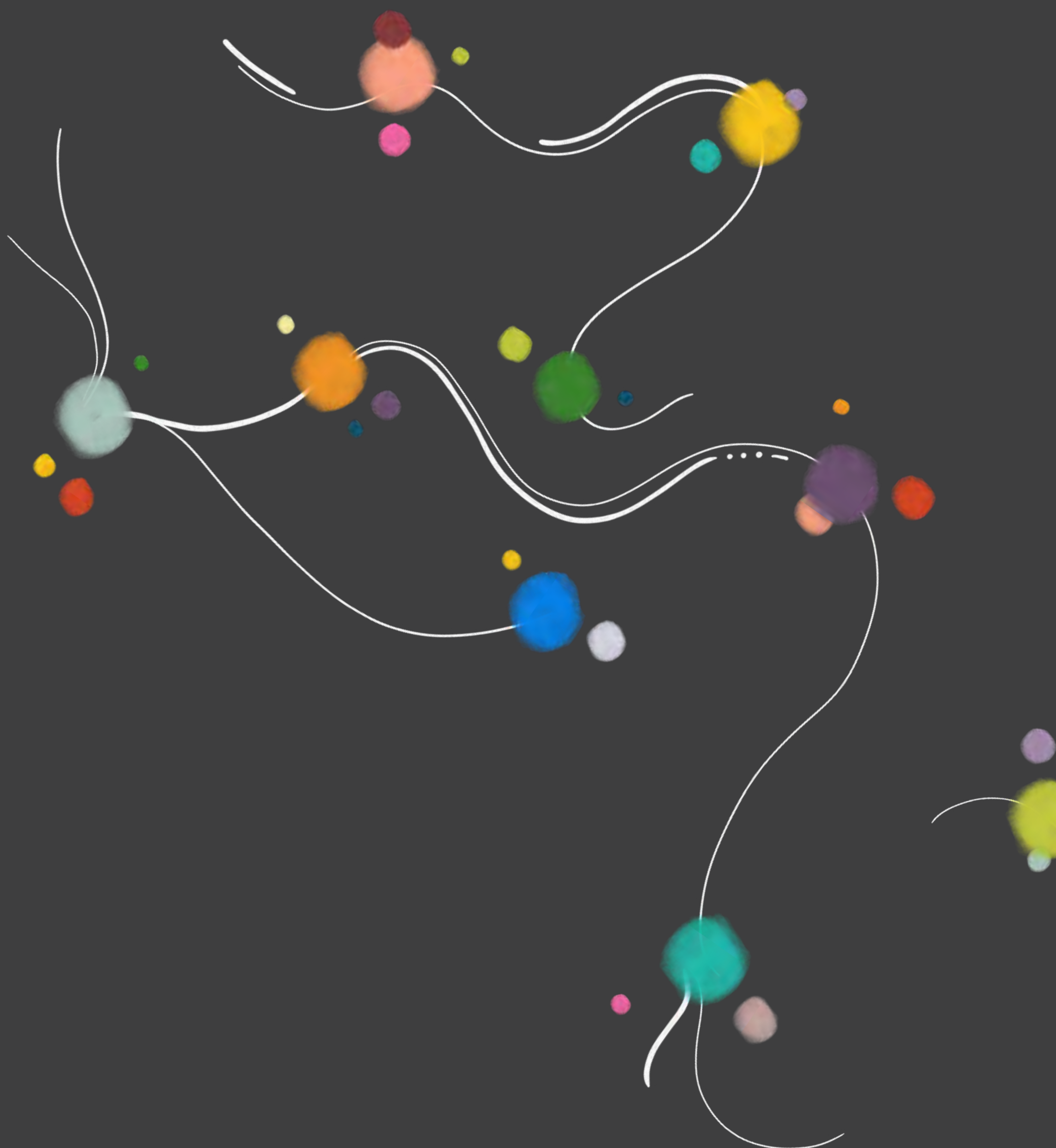
This is a dedication to all human and nonhuman
memory banks depleted and replenished
with the ebb and flow of history.

May our capacities assemble in the most creative
and most necessary ways possible.



ABSTRACT

Rapid environmental degradation, a pressing issue in the twenty-first century, is almost unimaginably recalibrating human practices and perceptions of interaction, scale, and situatedness. Because the concept of (individual) 'memory' can provide vital insights into micropolitical habits in the current century, this study explores the conceptual and material relations between environmental consciousness and memory through a new materialist lens. Within the framework of visual culture studies – an interdisciplinary field committed to rendering the 'invisible' workings of society 'visible' – this thesis teases out how sentimental objects that have "agency" and "fascinate through their shape, texture, colour, and size" (Rigney 2017:474) are treated in the Anthropocene, or the geological 'age of humans'.

This study uses the intersection between memory and environmental consciousness to examine the limitations and capacities of the new materialisms and assemblage theory. Through the use of Deleuzoguattarian concepts, it analyses how changes, or deterritorialisations, occur when environmental consciousness and memory are plugged into the same assemblage. In other words, the study explores the ways in which humans' relationship with their memory objects could potentially change when they start thinking more critically about environmental issues. I critically reflect on the diverse theoretical *and* practical implications of conducting new materialist research in the humanities in the twenty-first century.

Through conducting semi-structured interviews with South Africans who self-identify as environmentally conscious, I firstly, established whether participants experienced an altered connection with their memory objects due to their eco-consciousness and secondly, foregrounded the affective flows between heterogeneous materialities in assemblages. The discussions that flowed from the interviews allowed the identification of prominent tropes that signal some ways in which humans engage with and understand the Anthropocene. These tropes are, firstly, patterns of the participants' persistent dichotomous thinking about nonhuman objects, 'nature' and 'the material'; secondly, the complex relationship between pleasure, responsibility, and action; thirdly, the fluctuating value of memory and 'waste' objects alike; fourthly, the transience of all things; and finally, the noteworthy role of family lineage in discourses of environmental consciousness and memory.

Relating the tropes to environmental consciousness and memory objects foregrounds the deterritorialising effect plugging one materiality into a new assemblage has, which enlivens novel

ways of seeing human engagement around thinking related to binaries, habits, value fluctuation, transience, and lineage/linearity.

KEY TERMS

Visual culture studies; the new materialisms; Deleuzoguattarian ontology; rhizome as image of thought; affect; assemblage; (de)territorialisation; material turn; human/nonhuman; memory studies; memory objects; environmental consciousness; Anthropocene; South Africa; environmentalism; transdisciplinarity

OPSOMMING

Die spoedige degradering van die omgewing, 'n dringende kwessie in die een-en-twintigste eeu, is besig om menslike gebruike en persepsies van interaksie, skaal en gesitueerdheid (*situatedness*) op amper ondenkbare wyses te herkalibreer. Om rede die konsep van (individuele) 'geheue' kritiese insigte kan lewer in mikropolitiese gewoontes en gebruike soos waargeneem in die huidige eeu, ondersoek hierdie studie die konsepsuele en materiële verhoudinge tussen omgewingsbewustheid en geheue deur 'n nuwe materialistiese lens. Binne die raamwerk van visuele kulturele studies – 'n interdissiplinêre veld wat poog om die 'onsigbare' in die samelewing 'sigbaar' te maak – poog hierdie proefskrif om te toon hoe sentimentele objekte wat oor agentskap beskik en "fascinate through their shape, texture, colour, and size" (Rigney 2017:474) in die Antroposeen, die geologiese 'tyd van die mens', behandel word.

Die verband tussen geheue en omgewingsbewustheid word in hierdie studie gebruik om die beperkinge asook die moontlikhede van die nuwe materialismes en montageteorie[1] (*assemblage theory*) te bestudeer. Aan die hand van 'n Deleuze-guattariaanse woordeskat analiseer ek in hierdie proefskrif hoe veranderinge, of deterritorialisering, plaasvind wanneer omgewingsbewustheid en geheue in dieselfde montage 'ingeprop' word. Met ander woorde, hierdie studie ondersoek die wyses waarop mense se verhoudinge met memorabilia moontlik kan verander sodra hulle krities begin dink oor omgewingskwessies. Ek lewer 'n kritiese nabetragting oor die diverse teoretiese én praktiese gevolge wat uit nuwe materialistiese navorsing in die een-en-twintigste eeu vloei.

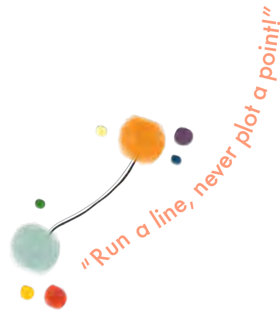
Deur semi-gestruktureerde onderhoude met Suid-Afrikaners wat self-identifiseer as omgewingsbewus, het ek eerstens vasgestel of die deelnemers 'n veranderde verhouding met hul sentimentele objekte het as gevolg van hul omgewingsbewustheid. Tweedens, het die onderhoudproses my toegelaat om die affektiewe vloei tussen heterogene materialiteite in montages op die voorgrond te plaas. Die gesprekke met die deelnemers het 'n geleentheid gebied om prominente trope te identifiseer wat spreek van hoe hulle die Antroposeen verstaan en daarmee omgaan. Hierdie trope is eerstens, patrone in die deelnemers se dualistiese denkpatrone oor nie-menslike objekte, 'natuur' en 'die materiële'; tweedens, die ingewikkelde verhouding tussen plesier, verantwoordelikheid en aksie; derdens, die fluktuerende waarde van onderskeidelik geheue-objekte en vullis; en laastens, die pertinente rol wat familie-afstammeling vervul in diskoerse wat omgaan met omgewingsbewustheid en geheue.

[1] Skrywer Willem Anker (2007:17) vertaal *assemblage* as 'montage' (eerder as samestelling), aangesien hierdie term volgens hom "die naaste Afrikaanse ekwivalent" aan die oorspronklike Franse woord *agencement* is.

Deur die trope tot omgewingsbewustheid en geheue-objekte te verbind, word die uitwerking van deterritorialisering wat teweeg gebring word wanneer een materialiteit by ’n nuwe montage ingeprop word, op die voorgrond geplaas. Die gevolg is dat nuwe denkwyses moontlik kan ontstaan rondom menslike interaksie wat verband hou met binêre denkstrukture, gewoontes en gebruike, waardeverwisseling, verganklikheid en liniêre herkoms.

TREFWOORDE

Visuele kulturele studies; die nuwe materialismes; Deleuze-guattariaanse ontologie; risoom as denkwyse; affekte; samestelling; montageteorie; (de)territorialisering; materiële wending; menslik/nie-menslik; geheuestudies; omgewingsbewustheid; Antroposeen; Suid-Afrika; omgewingskwessies; transdissiplinariteit



CHAPTER 1

introduction

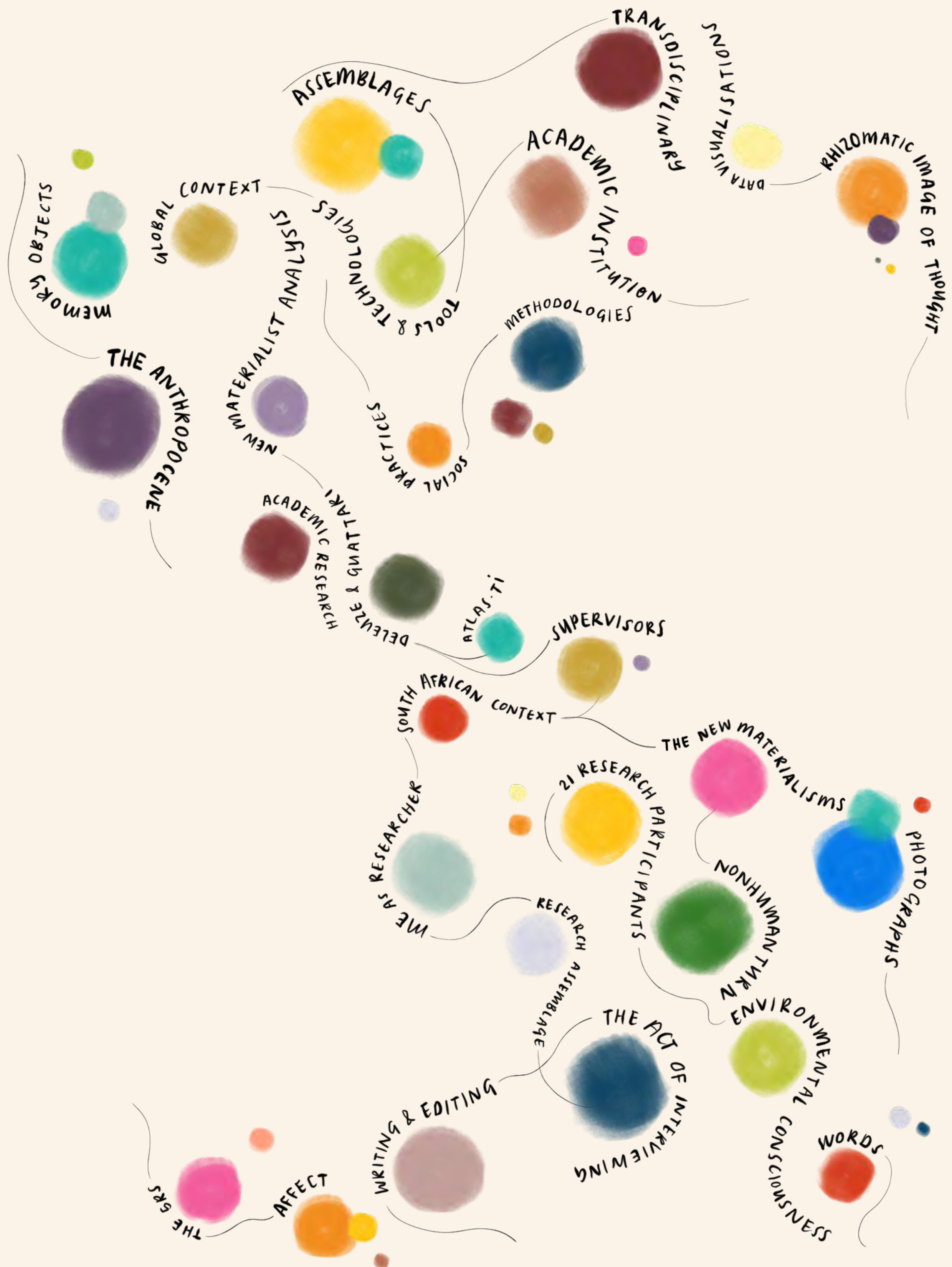
Make rhizomes, not roots, never plant! Don't sow, grow offshoots! Don't be one or multiple, be multiplicities! Run lines, never plot a point!

- Gilles Deleuze and Félix Guattari (1987:24)

The ordinary throws itself together out of forms, flows, powers, pleasures, encounters, distractions, drudgery, denials, practical solutions, shape-shifting forms of violence, daydreams, and opportunities lost or found. Or it falters, fails. But either way we feel its pull.

- Kathleen Stewart (2007:29)

Figure 1.1 | rhizomatic visualisation of this study



CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

Objects, as memory studies scholar Ann Rigney (2017:474) notes, "fascinate through their shape, texture, colour and size", capture earlier moments and "promise us stories by outliving the time in which they first came into being". Setting objects aside for a moment and shifting our attention to planetary degradation, it becomes clear that an awareness of the Anthropocene[1] and the human role in this situation is increasingly seeping into human consciousness. The Anthropocene (although still a contested term), widely understood as the current geological epoch, posits human activity as having profoundly influenced recent global environmental changes on Earth (Lewis & Maslin 2015:171).

I am intrigued by how objects are treated in the Anthropocene, especially those commemorating a given past. Since the onset of 2018, I have dedicated my attention to exploring this relationship. Throughout my search, the most explicit reference to memory objects in the literature that treat memory and the Anthropocene was found to be made by memory scholar Stef Craps during the introduction of a roundtable discussion early in 2017. Craps posed two questions. "What are," he asked, "the implications of the notion of the Anthropocene for memory studies?" (Craps 2017a:2). He continued: "How, if at all, does the awareness of living in a new geological epoch defined by the actions of human beings affect the *objects of memory*, the scales of remembrance, and the field's humanist underpinnings?" (Craps 2017a:2, my emphasis).

The current study takes these evocative questions as a point of departure, but then zooms in on sentimental objects in order to tease out possible answers to these important questions. Although the relationship between memory objects and the Anthropocene may seem tenuous, I set out to explore the ways in which relations are altered when these notions are plugged into the same assemblage. In the current study, the intersection between two seemingly unconnected notions – environmental consciousness and memory objects – is used to serve as *one* example that might showcase the new materialisms' potentials. In other words, the study sets the scene for the reflection on the tensions and unfolding affects and assemblages between *any* two (or more) notions.

[1] A variety of definitions across disciplines have led to confusion, misunderstandings and disagreements about the term 'Anthropocene'. Albeit a term still under scrutiny, the Anthropocene could be described as the current human-dominated geological epoch following the Holocene (Lewis & Maslin 2015:171). The term, as used in the current context, is properly defined shortly and its ambivalences are further discussed in Chapter 2.

An assemblage, as set out by philosopher Gilles Deleuze and psychoanalyst and political thinker Félix Guattari, can be understood as a set of fluid relational connections that come together for a period of time and produce a recognisable behaviour or effect. Each assemblage is composed of heterogeneous elements that are not autonomous entities in themselves, but rather processes or connections. The connections that constitute an assemblage can be seen as 'lines' that produce phenomena of acceleration and rupture (Deleuze & Guattari 1987:3-4). The process of 'plugging into' denotes the de- and reterritorialising capacities brought about by diverse materialities in an assemblage.

In brief, assemblages consist of lines and connections. For any assemblage to exist, it must be the case that some of these lines uphold its structure. Molar lines (lines of rigid segmentarity) hold the assemblage together and form its territory. Conversely, molecular lines (lines of supple segmentarity) allow assemblages to adapt or change in order to survive over time by typically leading to deterritorialisation. Finally, there are those lines that reach outside of the assemblage and escape the structure of which they are a part. These lines connect such an assemblage to that which is outside itself and in doing so bring about vastly new understandings and connections (Smith 2012:346-347).

In their collaborative works Deleuze and Guattari constantly aim to undo the idea of the world as a static and unitary object that is made up in turn of other static and unitary objects. Towards avoiding the kind of thinking that assumes the universe to be a closed totality, they replace this idea with an understanding of the world as an open-ended dynamic process of which the constituent parts are also further processes, that is, further assemblages. In order to give an account of phenomena encountered in the world, the whole of the collaborators' philosophical project becomes an attempt to develop a theory of how lines connecting assemblages function and interact.[2] The present project is underpinned by a new materialist Deleuzoguattarian ontology and I use 'assemblages', 'plug into', '(de)territorialisations', and 'affect'[3] to discuss

[2] In Chapter 2, the concept of the assemblage is further discussed in relation to the suggestion made by Deleuze and Guattari (1987:5) that rhizomatic models of thought, rather than (or at least in collaboration with) arborescent ones are necessary to tease out phenomena encountered in the world.
[3] This thesis teases out different meanings of affect, since there is no consensus on this point, even within disciplinary formations such as philosophy or cultural theory (Houser 2018:15). Philosopher Brian Massumi's (1995, 2002) definition of affect as 'intensity' is taken to be germinal for affect theory and "would seem, prima facie, to swerve from humanism into posthumanism" (Houser 2018:15).

relations between notions. In particular, I investigate the deterritorialising effects produced when environmental consciousness is plugged into a (territorial) memory assemblage.

I acknowledge and critically engage with my own role as an embodied researcher who is interacting and entangling with words, research tools, participants, and other materialities in this assemblage. Well before having heard of Deleuze or Guattari, I have enjoyed rearranging and repurposing what I had at my disposal – magazine or newspaper clippings, pieces of fabric, paragraphs of words, emptied glass bottles – to create connections that were previously left unconnected. Throughout the years I have developed a sustained interest in what happens at the crossroads between things such as visuals, words, memories, objects, and humans. Imaginably, the current study grew from diverse subjects: my lifelong fascination with the stories that mundane objects tell and a more recent concern for the degradation of planet Earth.

Because affect that flows between materials inevitably impact the entire assemblage, I state upfront that I wrote this thesis from my own position as a white, middle-class woman in her late twenties who has enjoyed and continues to enjoy privileges many of my age and gender, in South Africa and across the globe, do not have. The education and instruments, emotional and financial support, and other life-shaping opportunities that I am afforded irrevocably shape this position in society and I am deeply aware that many other humans and nonhumans have many more hurdles to overcome than myself. I am grateful for the experiences I am exposed to in my life and commit myself to using these capacities to make the world a more just place for all.

Turning to the title of the present thesis, my choice of the word 'stuff' is largely inspired by gender-studies theorist Maurizia Boscagli's book entitled *Stuff Theory: Everyday Objects, Radical Materialism* (2014). I agree with Boscagli (2014:5) that the term 'stuff' appropriately "expresses the everydayness of hybrid materiality: it has a mundane ring that also speaks, nevertheless, of the potential threat that all our possessions pose to us". Our own stuff and the world's stuff are nonhumans with whom we share spaces and minds (Alaimo 2016:9). This thesis, *Stuff Matters and Moves: Analysing Environmental Consciousness and Memory Objects through a New Materialist Lens*, takes seriously the proposition that stuff indeed matters and moves. Stuff matters in that it means something, adds something, and has something to say about how we imagine our human condition as well as our relationship to the nonhuman world. Stuff moves in that it is not, and can never be, stable and silent. It shifts into and out of categories without human permission. In this sense, stuff also moves humans affectively.

Studying affect, as anthropologist Kathleen Stewart (2007:1) notes, must be approached as "an experiment, not a judgment". When it comes to affect, one must trace stuff's potency, which lies in the recognition that it is at once "flighty and hardwired, shifty and unsteady but palpable too" (Stewart 2007:3). Contemporary society teaches what it means to be human in the twenty-first century, and its modes of vision frame our perspectives on the interplay between human and nonhuman actants (Ayers 2012:45). In this thesis, I peer through a new materialist lens and focus on stuff – from mundane and seemingly 'useless' things in worn boxes to the unfathomable mass of landfill waste patches that increasingly burden the planet – in order to tease out how humans might see the world more justly.

This thesis uses the new materialisms to explore the relations between memory objects and environmental consciousness by referring to academic literature and qualitative interview data collected between 2019 and 2021. Craps (2017a:3) notes that memory theorists have, such as other scholars, started turning their attention to the Anthropocene, an epoch marked by human activity as a significant dominant influence on the 'natural environment'.[4] Although direct engagements with the Anthropocene by memory theorists were "rare until very recently", a body of academic literature centring on this theme is emerging (Craps 2017a:3).[5] In this study, I refer to these writings alongside literature that centres on the new materialisms,[6] visual culture studies, memory (objects) and environmental discourses.

Although distinctions can be drawn between memorabilia, memory objects, sentimental objects and other 'stuff', this study refers to them interchangeably. These terms are used to describe any object that belongs to someone, usually as a form of remembrance and /or commemoration of a past event or relationship. Such objects are not necessarily functional, but could be, and are

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[4] Within constructed schemas of representation, object and subject are treated as poles or binaries (Bryant 2011:14). In this case, nature (the object with an arbitrary negative connotation) stands in opposition to culture (the subject with an arbitrary positive connotation), similar to supposedly opposite conditions such as domestic/public and female/male (Weiner 1992:3). I place 'natural environment' in inverted commas to address this problematic dichotomy. With psychoanalyst and philosopher Levi Bryant (2011:24), I call for "a single plane" populated by a "variety of different types of objects including humans and societies", rather than two distinct ontological domains. This point is discussed in more detail later in this study.

[5] Academic studies that treat memory *or* the Anthropocene have been conducted in the fields among others, of memory studies, archival studies, visual culture studies, literary studies, psychology, trauma studies, environmental humanities, Anthropocene studies, and philosophy. Furthermore, non-academic literature (typically found on social media platforms) on environmental consciousness and memorabilia does not seem to explore the relationship between these notions. Either one or the other is treated as point of departure, and potential links between these remain unclear.

[6] "New materialism" was coined by philosopher Manuel DeLanda and feminist philosopher Rosi Braidotti in the mid-1990s. It broadly criticises anthropocentrism (Connolly 2013:399).

predominantly valued for their sentimental attachment (Gordon 1986:135, Hatzimoyis 2003:373). Furthermore, I interchangeably refer to environmental consciousness, environmental awareness, and eco-consciousness. These terms refer to a form of affective awareness of environmental matters and pro-environmental behaviours and include eco-friendly practices and lifestyle trends.[7] Humans who identify as environmentally conscious share a general engagement with environmental factors and a propensity to engage in pro-environmental behaviour (Sánchez & Lafuente 2010:732).

I am further aware of the critique from within and outside academia about further terms used in this thesis. In particular, there are disagreements about and slippages and inconsistencies around the use of the terms such as 'Anthropocene' and 'new materialisms'. There is no consensus regarding whether 'Anthropocene' is an apt description for the current era, for two reasons. Firstly, the concept can easily be read as universalist, that is, that all humans everywhere are responsible for the mess 'we' made, without sufficiently considering the role of (predominantly white, western and male) capitalism, which is largely responsible for the dilemma. Stories about the origins of the Anthropocene all too often "construct a monolithic, postracial 'we' and singular temporality of being instead of differentiating geologic life" (Yusoff 2018:64).

Secondly, theorists argue that the term simply reinforces the anthropocentric worldviews that led the ecological catastrophe in the first place, while equally reinforcing the technocratic ideals of humans who are then supposedly able to 'fix' this mess (Emmett & Nye 2017:17).[8] What the concept of the Anthropocene has nonetheless achieved is that it is able to place the environmental humanities in a temporal and spatial framework that begins *before* human beings existed and asks how long they will survive (Emmett & Nye 2017:17). In this thesis, I use the term 'Anthropocene' to denote the current human-dominated geological epoch while remaining aware of these ambivalences.

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[7] Although environmental consciousness is not new, many environmentally conscious trends recently unfolded, most notably zero waste (a movement urging consumers to create as little waste as possible) and minimalism (a movement driven by possessing very few material items). Other phenomena include tiny-house living (a trend in which humans voluntarily live in small spaces such as refurbished shipping containers), plogging (a Swedish exercise trend that combines jogging with picking up litter), and locavorism (a trend in which humans only eat locally produced foods in predominantly recycled packaging) (Driver 2018).

[8] In response, several alternative designations have been coined that lay the blame for the environmental crisis at the door not of an abstract humanity, people in general, but of, most predominantly, capitalist modes of production. These include 'Capitalocene' (Moore 2015), 'Corporatocene' (Colebrook 2017a), 'Plantationocene' (Tsing 2015), 'White-supremocene' (Colebrook 2017a) and 'Chthulucene' (Haraway 2016); but none of these phrases have caught on.

In a similar vein, the new materialisms have been critiqued for overstating its alleged 'newness' without due respect to traditions such as indigenous ontologies, and for mistakenly rejecting Marxism and cultural materialism (see for example Gamble, Hanan & Nail 2019:111-112). In fact, the new materialisms sit alongside "a strong and lively tradition of (human) body feminisms, Marxist ecophilosophies, Merleau-Ponty's phenomenology, New Left experimentations with eros and an under-explored tradition of indigenous thinking and sensing" (Bennett 2018:448). Yet, for historian Hans Schouwenburg (2015:59, emphasis in original) the 'new' in new materialisms signals "not so much an increased engagement with the material world, but rather a new *conceptualisation* of developing theory and reading texts, which cuts through established dichotomies between matter and meaning or culture and the social". Taking note of these complexities, I use the term with caution.

The present focus on the Anthropocene is situated within the interdisciplinary field of visual culture studies. One of visual culture studies' attempts is to make 'visible' that which was previously rendered 'invisible' by dominant discourses (Lauwrens 2005:70, Mirzoeff 2002:191). This, along with this field's increased engagement with affective flows, is useful in shaping the current study. In light of this, I designed this thesis as a potentially (and hopefully) interesting object with which to engage affectively.

Throughout the thesis I provide 'Multimedia Drawers' (Multimedia Drawer 1.1 below explains what this entails) and Figures that, alongside written text, produce a visually rich product that communicates findings in variegated ways. This media-rich and transdisciplinary[9] approach allows exploration of the relations between environmental consciousness, human memory, and sentimental objects in a twenty-first century South African context (Figure 1.1 at the beginning of the chapter provides a rhizomatic visualisation of this thesis content). (Multimedia Drawer 1.2, on the following page, explains how the design of such Figures throughout this study have been inspired and developed).

[9] Transdisciplinary studies do not only engage multiple disciplinary fields, but also "move […] beyond the bridging of divides within academia to engaging directly with the production and use of knowledge outside of the academy", which requires critical reflection of "the world and of one's role in that world" (Toomey *et al* 2015:1-2). Toomey *et al* (2015:3) claim that there is a "strong case for […] transdisciplinarity in environmental and sustainable development research".

Multimedia Drawer 1.1: What is a 'Multimedia Drawer'?

The principal role of the multimedia drawers found throughout this study (visually marked in dark grey boxes like this one) is to provide supplementary information using a combination of textual and visual materials. The narratives found in these drawers explain or summarise key concepts and are distinct from Figures, which generally simply serve as visual aids to certain arguments. Some drawers can indeed be pulled out a bit further to provide in-depth understandings of important information, while others contain quick examples and take less time to poke around in. Taken together, all of these add a distinct perspective on the various components involved in composing this project's research assemblage.

Multimedia Drawer 1.2: Drawing data in and through this study

Minjung Kim
predestination, 2012
Burnt coloured paper and black ink on mulberry Hanji paper
145x76 cm
(Minjung Kim [sa])

Korean artist Minjung Kim (1962 -) has an intimate physical relationship with hanji paper, possibly influenced by her childhood years spent around her family's paper mill. Hanji is a traditional Korean paper made from the inner bark of paper mulberry trees. Using incense sticks, Kim burns tiny holes in small sheets of coloured paper. She then glues it into patterns on another paper, often linking the shapes with fine ink lines (Minjung Kim [sa]).

Kim "meditates with paper": she must "remain silent and control [her] breathing, to avoid

Drawer 1.2 cont. ⟶

irregular lines and dots" (Minjung Kim [sa]). She must simultaneously "tam[e] quivering paper, sensitive to the slightest breath, and [...] the flame that could in an instant consume it". This relationship with paper is paradoxical: through her oeuvre she honours its qualities by partially destroying it through burning. She explains that the "duplication of layers" of her burned-paper works extend "beyond the surface of the initial sheet of paper" and that these "accumulations proceed from a form of meditation, for they require practice and patience". The layers thus represent space and time.

Speaking at her predestination exhibition at the Leslie Sacks Gallery (Sante Monica, USA) in 2012, Kim explained that each coloured paper in her artworks represents a thing in the universe and the "meeting [ink] ribbons" symbolises their togetherness in this specific time and space (Minjung Kim [sa]). The striking vibrancy of her works and her engagement with media and process served as inspiration for visualising my own study's written content.

To produce these rhizomatic visualisations, I used predestination's (2012) energetic spots of colour and their arbitrary spatial diffusion as a point of departure: every drawing becomes an assemblage of which the spots represents a materiality and the lines - connecting the spots - the affective flow between them. Colour usage and composition is deliberately random. Whereas Kim spends time with colourful hanji paper, fire and ink, I spent time with pixeled canvases, digital paint brushes, and data in the production of my graphics.

I begin this chapter by outlining my study's most prominent contribution to extant literature, followed by a discussion of my study's intended aims. Subsequently, I provide a brief review of the relevant literature. Firstly, I discuss the humanities' renewed interest in materialities with specific reference to the new materialisms and the concept of the assemblage. I then turn to the academic literature in the field of visual culture studies, memory studies, and Anthropocene studies by including a brief historical overview of the backgrounds of these fields. I end the literature review by briefly referring to the emerging literature on memory *in relation to* environmental humanities. Following this, I provide an outline of the study's theoretical and methodological framework, highlighting the usefulness of a new materialist approach for studying memory objects in the 'age of humans'. Finally, I end with an outline of the chapters that constitute this thesis.

1.2 CONTRIBUTION OF THE STUDY

Against the backdrop of visual culture studies and with the new materialisms as theoretical and methodological framework, this study seeks to foreground new materialisms' potentials by exploring the unlikely intersection of humans, memory objects, and environmental consciousness that compose rhizomatic assemblages in the twenty-first century. In this way, it seeks to answer Craps's (2017a:2) questions in terms of exploring the implications of the

Anthropocene for memory studies, and how an awareness of this epoch affects memory objects, scales of remembrance, and the field's humanist underpinnings. This thematic, theoretical, and methodological combination is novel within the extant realms of research. By combining these diverse notions so as to analyse how assemblages are composed and altered, I establish a unique inter- and transdisciplinary perspective not only when it comes to the process of conducting research, but also around how we understand ways of living and remembering in the twenty-first century.

This study contributes to extant literature in the humanities in two prominent ways. Firstly, my research forms part of a broader 'nonhuman turn'[10] in the humanities of the late twentieth and twenty-first century (Duncum 2012:183). Within the field of visual culture studies, research on the new materialisms, which is tightly entwined with nonhuman approaches, remains limited.[11] I contribute to this recent philosophical development by focusing on materialities, problematising dichotomies (especially those of the culture/nature and human/nonhuman relations), and foregrounding the notion of affect. I assess the new materialisms – theoretically and methodologically – most prominently by approaching this project as a research assemblage consisting of diverse materialities, thoughts, capacities, tools, and so on. Some ways in which I achieve this by 1) documenting oral narratives through qualitative interviews relating to the experienced relationships between study participants, their memory objects, and their environmental consciousness, and 2) producing data visualisations in order to provide a layered discussion of this study's content. As part of these applications, I reflect on my ambivalent role as researcher by teasing out how the research process is staged and creatively produced by means of my playful interaction with data, visualisations, tools and other components of the research assemblage.[12]

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[10] New media scholar Richard Grusin (2015:ix) acknowledges that the 'nonhuman turn' possibly contributes to "turn fatigue": the "weariness (and wariness) of describing every new development in the humanities and social sciences as a turn". However, he refers to the etymology of the term 'turn'. The definitions of the word as presented in the *Oxford English Dictionary* demonstrate that it is used in English as an action noun involving nonhuman movement and change in five ways: 1) the rotation of a wheel or a planet around an axis; 2) the flow of a river around a bend (movement, but not around an axis); 3) the way in which a season turns (a change in state); 4) a change that occurs when, for instance, something is 'taking a bad turn' (action with an affective impact); and 5) the fostering of collective behaviour, for example in the phrase 'awaiting one's turn' (group action). In this "interesting" sense of the word, it is "agency or action, not wheels or rivers, that rotates among individuals or changes course or direction". Nonhuman materiality and movement can thus be seen as "part of the meaning of the word [turn] from its inception" (Grusin 2015:xix).

[11] In recent years, visual culture studies has been critiqued for favouring the visual as the dominant sense and, in response to this, multisensory, embodied, and affective experiences are increasingly emphasised (Duncum 2012:183).

[12] Fox and Alldred (2017:156) explain that, unlike some "'spontaneous'" assemblages in daily life, research assemblages are machines designed [or engineered] to do specific tasks", which make them amenable to analysis,

Secondly, this assessment and implementation takes place by drawing together two seemingly unrelated strands of ideas, namely environmental consciousness and memory objects. By means of this combination, I reflect critically on what it means to form part of a complex and multifaceted twenty-first century. This reflection will be underpinned by original empirical research that holds the potential of contributing to a clearer understanding of current obstacles and knowledge production within the Anthropocene. In particular, the discussions gleaned by interviews allowed me to identify prominent tropes that signal pressing and insightful human perceptions of and engagements with life in the Anthropocene. These tropes are, firstly, patterns of the participants' persistent dichotomous thinking about objects around 'nature' and 'the material'; secondly, the complex relationship between pleasure, responsibility, and action; thirdly, the fluctuating value of memory and 'waste' objects alike; fourthly, the engagement with and acceptance of the transience of all things and, finally, the noteworthy role of family lineage in discourses of memory and environmental consciousness.

For example, through the identification of these five tropes I was able to pose and answer variegated questions: what factors were at play when a participant's bodily experience of losing weight was accompanied by 'shedding' memory objects and adopting a seemingly 'eco-friendly' diet? What affective function did a photograph fulfil when it simultaneously sparked a childhood memory and a sustained drive to dedicate a participant's life to environmental justice? What materialities affect a participant to distribute former sentimental objects 'responsibly'? How do deliberately vague technological metaphors such 'cloud computing' obscure the detrimental environmental effects of storing sentimental object digitally?

Yet more questions included: How does a participant's perceived value of a (memory or waste) object affect their intensely somatic engagement with it? What affective flows occur when sentimental objects become recyclable (or unrecyclable) stuff or when waste materials gain value through composting? What materialities comprise an assemblage in which the figure of the child is both a utopian vision of a hopeful future and a dystopian vision of an overpopulated planet? Perhaps the most obvious link between eco-consciousness and memory is foregrounded in the following question: How do affective flows between upcycled waste and sentimentality lead to a

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assessment as to how and why they work, and determinations of the ways in which a change of methodology, data collection, or analytical methods alter affective flow, and hence the kinds of 'knowledge' they produce. I use verbs such as 'conduct', 'analyse' and 'assemble' to refer to research, data, interviews, New Materialist analysis, tropes, and so on, while acknowledging that I – as the researcher – am *one* materiality in the research assemblage that has been engineered to emphasise certain aspects instead of others.

reterritorialised assemblage? Read together, the questions evoked by these tropes reveal something of the common human vocabularies and understandings that participants shared, which shaped the structuring of their reality.

As introduced above, relating the tropes to environmental consciousness and memory objects further foregrounds the possibility of establishing de- and reterritorialisations in assemblages: plugging an eco-consciousness assemblage into a memory assemblage has a deterritorialising effect, which enlivens novel ways of seeing human engagement around thinking related to binaries, habits, value fluctuation, transience, and lineage/linearity. By focusing on the different ways in memory objects and waste affirm their place in the current research assemblage, I was able to tease out the interplay between and potentials of territorialisation and deterritorialisation. Focus on this topic enables me to contribute to the diverse research on the Anthropocene as viewed from an interdisciplinary and reflective perspective. The pressing issue of environmental degradation in the current century calls for novel collaborations and approaches not only to research processes, but also to systems of thought. By way of these contributions this study is vital, especially within the South African context.

1.3 OBJECTIVES OF THE STUDY

Taking these contributions as points of departure, the objective of this study is fivefold:

1. To trace the history of and the (re)turn[13] towards new materialist approaches in the fields of visual culture studies, memory studies, and the environmental humanities (Chapter 2);
2. To establish how and from which angles academic literature portrays the relationship between the Anthropocene and memory studies (Chapter 3);
3. To plot the theoretical and practical challenges and liberations of a new materialist approach for qualitative data enquiry (Chapter 4 and 5);
4. To explore the workings of assemblages composed of diverse materialities, such as South African individuals, eco-friendly practices and habits, beliefs surrounding environmental consciousness, memories, and memory objects (Chapter 6); and

[13] The new materialisms emerged, to an extent, from Deleuze's reading of philosophers Baruch Spinoza (1632 – 1677) and Gottfried Wilhelm Leibniz (1646 – 1716). In contrast to other modern materialists, Spinoza and Leibniz thought of all matter as defined by an immanent capacity, power, or force (Gamble, Hanan & Nail 2019:119). New materialists have taken up this tradition to move beyond the ancient and modern mechanistic materialist treatments of matter as the passive object of external forces. The renewed interest in materialism over the last few decades can thus to some degree be seen as a 'return' to and reinterpretation of such existing philosophical ideas.

5. To discuss the way in which assemblages are deterritorialised when new elements are plugged into them (or, how introducing environmental consciousness alters an existing assemblage between a participant and her/his memory objects) (Chapter 7).

To achieve the first three objectives, I conduct and reflect upon a thorough literature review; and to achieve the fourth and fifth, I record, through qualitative interviews, environmentally conscious South Africans' relationships with their memorabilia. It should therefore be noted that the study's scope includes an engagement with a societal group who was already actively engaged in pro-environmental behaviour and who self-identified as 'environmentally conscious'.[14]

Through undertaking this study, I establish how participants are entangled with environmental consciousness and sentimental objects. In the interviews, which form a core component of the new materialist research assemblage, each participant discussed his/her understanding of and engagement with environmental consciousness and memorabilia. I used these narratives to unpack, broadly, the following questions developed early in the study:

- How will the different components of the research assemblage, including myself as researcher, the participant, storytelling, physical objects, research tools, data visualisations, and so on, affect a new materialist research process?
- How will participants perceive environmental consciousness and what affective capacities will these perceptions bring about?
- How will participants perceive sentimentality and sentimental objects and what affective capacities will these perceptions bring about?
- How will an environmentally conscious lifestyle alter the participants' relationship with their sentimental objects? In other words, what de- and reterritorialising effects might occur upon plugging environmental consciousness into assemblages composed of participants and their memory objects?
- What tropes will emerge from the discussions and how will these relate to broader questions about the Anthropocene?

In my attempt to answer these questions, I give perspectives on how humans' relationship with their memorabilia could potentially change when they start thinking critically about

[14] I use sociologists Manuel Jiménez Sánchez's and Regina Lafuente's (2010) multidimensional model to measure each participants' environmental consciousness. This model is discussed in Chapter 5.

environmental issues, and how thinking critically about these shifts enhances an understanding of lived experiences in the Anthropocene.

1.4 LITERATURE OVERVIEW

In this study, I investigate a broad range of literature from various fields, notably the new materialisms, visual culture studies, memory studies, and Anthropocene studies. To establish the inter- and transdisciplinary nature of my research, I incorporate literature that already provides conceptual links between these fields. In this very brief introductory overview of literature, I highlight key insights and pertinent theorists in each field and, where applicable, in relation to one another.

1.4.1 The new materialisms

Objects have "spirit" because "they touch us in unimagined ways" (hooks 1990:104). In this study, objects are regarded through a new materialist lens, giving them renewed agency.[15] This acknowledgement is inspired by recent intellectual and theoretical developments aiming to move beyond the cultural turn that dominated the humanities since the 1980s (see Barad 2003:801, Boscagli 2014:3, Schouwenburg 2015:59).[16] The 'nonhuman turn' loosely constitutes of affect theory, animal studies, assemblage theory, cognitive and brain sciences, the new materialisms, new media theory, speculative realism, object-oriented ontology, and actor-network theory (Grusin 2015:viii).

These theories present, among others, "versions of the material as unruly: they refuse to play by the rules that define materiality as passive matter" (Boscagli 2014:3). *The Nonhuman Turn* (edited by Richard Grusin 2015:ix-x) contains essays by key theorists and insists that "we have never been human" (thus paraphrasing Latour's claim that 'we have never been modern') but that the

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[15] Materialism is not to be confused with 'economic' materialism (often used colloquially as 'materialism'), which is associated with "excess, collecting, hobbyism, fetishism, or even perversion" (Turkle 2007:6). According to Marx, the damage of the commodity form is primarily felt in humans who are deprived of sensuous relations with things and who have to succumb, instead, to crude fetish worship (Hawkins 2006:28). Especially during the last quarter of the twentieth century, awareness of the finite energy resources that have fuelled material expansion have grown (Csikszentmihalyi & Rochberg-Halton 1981:ix). Although colloquial materialism does link somewhat to themes treated in this study (for example, regarding over-consumption and minimalism), it is not discussed.

[16] Although a contested point, this recent shift has arguably been inspired by philosopher-sociologist Bruno Latour's 'actor-network theory' (ANT). Latour developed ANT in France in the early 1980s. It is a theoretical and methodological approach focusing on the constantly shifting networks of relationships between everything (Grusin 2015:xvi). Latour suggests that social and natural worlds exist in constantly shifting networks of relationships. Due to its "successful flattening of entities onto a single plane", ANT is described as "ontology rather than a metaphysics" (Harman 2014:221). Since then, many new materialist scholars have raised critiques against Latour's oeuvre for lacking a clear macro- and micropolitical power analytics.

"human has always coevolved, coexisted, or collaborated with the nonhuman". Although such varied theoretical formations diverge around many assumptions, objects, and methodologies, all draw attention to the nonhuman as critical to the future of twenty-first-century studies in the humanities. While emerging theories are unravelling binaries, such as human/nonhuman and culture/nature, by shifting attention from anthropocentrism to fluid materialities' traffic with the human, Latour (1993:133) argues that the need to do this is equally telling of (continuous) dichotomous social constructions.

This shift emphasises materiality that refuses the rules of modernity, defeating the "long western history of systematisation of the object" (Boscagli 2014:5). In this study, I employ the new materialisms and the Deleuzoguattarian assemblage. The first explicit mentioning of 'neomaterialism' can be found in the work of feminist philosopher Rosi Braidotti (2000) and philosopher and artist Manuel DeLanda (1996). Both were heavily influenced by the French philosophy of Deleuze (and Guattari) (van der Tuin 2018:277). The most notable (often feminist) new materialist theorists beyond Braidotti and DeLanda include Donna Haraway, Karen Barad, Quentin Meillassoux and the editors of *New Materialities: Interviews and Cartographies* (2012), Rick Dolphijn and Iris van der Tuin.

Since the mid-1990s, the new materialisms, as a conceptual frame, have increasingly been used to "stress the concrete yet complex materiality of bodies immersed in social relations of power", especially by challenging binaries between the natural and the cultural, mind and matter (Braidotti 2012:16). In his article entitled "The 'New Materialism' and the Fragility of Things", political theorist William Connolly (2013:399) describes it as the "most common name given to a series of movements" that

> criticise anthropocentrism, rethink subjectivity by playing up the role of inhuman forces within the human, emphasise the self-organising powers of several nonhuman processes, explore dissonant relations between those processes and cultural practice, rethink the sources of ethics, and commend the need to fold a planetary dimension more actively and regularly into studies of global, interstate and state politics.

While there is currently no single definition of the new materialisms, there exists several distinct trajectories. Communication studies theorists Christopher Gamble and Joshua Hanan, along with philosophy scholar Thomas Nail (2019:111) distinguish between three materialist strands that share at least one common theoretical commitment, namely to interrogate anthropocentric twentieth century theories. These strands include old materialism, vital new materialism – "by far

the most prevalent" strand and also the most prominent in the current study – and performative new materialism. Old materialism, further divided into ancient and modern materialism, has roots in pre-Socratic atomism with its later modification by Epicurus. It conceptualises of matter as essentially passive, non-performatively constituted, and discretely self-contained. In contrast, vital new materialist thinkers such as Colebrook, Braidotti, Bennett and Massumi, follow Spinoza, Leibniz, and Deleuze and Guattari as countertraditions to the linguistic turn. For them, matter is "the relations of forces" (Gamble, Hanan & Nail 2019:119). Performative new materialists such as Barad, Haraway and Kirby, have reread poststructuralism (Alaimo 2010:6). Together, these theorists, along with others, constitute the material turn that takes matter seriously.

Incorporating Deleuzoguattarian new materialism when looking at memorabilia in the Anthropocene supposes a "truly ecological approach that shifts attention away from discrete artefacts towards the continuous interactions between humans and nonhumans, between mediations and materialities, within particular social and physical environments" (Rigney 2017:475). The most prominent terminology associated with Deleuzoguattarian ontology is discussed in Multimedia Drawer 1.3.

Multimedia Drawer 1.3: Deleuzoguattarian terminology

This textbox outlines the most prominent terms associated with Deleuze and Guattari's collaborative work, especially in *A Thousand Plateaus* (1980), known for its emphasis on experimentation and improvisation.

DELEUZOGUATTARIAN ONTOLOGY: Focuses on processes and interactions by seeing all materialities as having no autonomous ontological status other than that produced through their relationship to other similarly contingent bodies, things, and ideas (Fox & Alldred 2015:401).

ASSEMBLAGE: Introduced in *Anti-Oedipus* as a 'desiring-machine' and elaborated on in *A Thousand Plateaus*, an assemblage consists of territories, lines linking these territories, and affective flow on these lines (Deleuze & Guattari 1987:3-4). Some flows stabilise an assemblage, while others deterritorialise it, bringing about new assemblages (Fox & Alldred 2015:401). Assemblages can thus be thought of as fluid relational networks.

ASSEMBLAGE THINKING: Allows researchers to reconceptualise the social by "moving away from tired dichotomies" (Hamilakis 2017:176). This approach favours an exploration of the entanglements of the material and the immaterial by focusing on the processes and the relationships that emerge "in the midst of things, senses, memories, and affects" (Hamilakis 2017:176).

TERRITORIALISATION: Social, cultural, and political practices consisting of habits and affective powers that stabilise an assemblage by asserting

Drawer 1.3 cont. ⟶

spatial boundaries and defining an identity and function (Deleuze & Guattari 1987:294). Or, how systemised daily life is constructed.

DETERRITORIALISATION: A coming undone of a territory through movements that produce change (Deleuze & Guattari 1983:322). In this process energy escapes or momentarily moves beyond normative strata, bringing about a shift in these practices' or beliefs' former positions.

RETERRITORIALISATION: A deterritorialisation necessarily reterritorialises. While some practices remain seemingly unchanged, others deterritorialise and reconnect with new ideas, usually in a new place, bringing about new understandings of the world (Deleuze & Guattari 1987:54).

"PLUG INTO": The process of 'plugging into' opens territorial assemblages to other assemblages (Deleuze & Guattari 1987:333). Plugging one assemblage into another produces comparative rates of affective flow that lead to variations, mutations, and novel interactions, or deterritorialisation. In short, the process captures the de- and reterritorialising capacities that come about when assemblages interact.

BODY WITHOUT ORGANS: The process of the body's deterritorialisation to create a "living body all the more alive and teeming once it has blown apart the organism and its organisation" (Deleuze & Guattari 1987:30). It is permeated by "unstable matters, by flows in all directions [and] by free intensities (Deleuze & Guattari 1987:40). The aim is not to escape the body, but rather to experiment with organs' functions in relation to other organs to deterritorialise the body's capacities.

RHIZOME: A philosophical interpretation of its botanical counterpart (a subterranean plant stem that sends out roots and shoots from its nodes) which opposes logical approaches to knowledge. Unlike 'traditional' arborescent structures, it has multiple entryways, ceaselessly establishes connections and never allows itself to be overcoded" (Deleuze & Guattari 1987:7-12).

AFFECT: Can be defined as "states of being" transferrable onto various objects, humans, and emotions through flows within assemblages (Hemmings 2005:551). Affective flow continuously and inevitably impacts the entire assemblage.

The recent proliferation of interest in Deleuze and Guattari's philosophical project has influenced scholars to produce diverse perspectives aiming to clarify or expand on the duo's shared endeavour. Due to the vastness and originality of their work, this task remains challenging, even 40 years after the publication of *A Thousand Plateaus* (*Milles Plateaus* 1980), the second part of their collaborative series *Capitalism and Schizophrenia,* in which the notion of the assemblage most prominently features.[17]

[17] The first part to the *Capitalism and Schizophrenia* series, *Anti-Oedipus* (*L'anti-Œdipe* 1972), is a philosophical and political critique of the traditional psychoanalytic institution, its interaction with the history of capitalism, and the collaborators shared basis in a philosophy of identity and a conception of desire as lack. This revolutionary project coincided with student and worker riots that erupted in France in May of 1968, while *A Thousand Plateaus*, which was published a few years later had more diverse, less militant aims. Thornton (2018:10) describes it as "a kind of field guide for a reinterpretation of the universe, covering a huge range of registers, including the cosmic, geological, evolutionary, ethological, mythological, anthropological, historical, economic, political, literary, and musical". Although the full collection of works authored by either Deleuze or Guattari (the works they produced together,

The assemblage is my preferred point of departure. It can be described as tetravalent system that functions along two distinct axes comprising four components, namely content, expression, territorialisation, and deterritorialisation. The tetravalent model is a useful starting point, but should be read alongside the assemblage's other scattered definitions in order to uphold a greater understanding thereof. Entwined with the theoretical treatment of the notions related to the assemblage, such as territorialisation, deterritorialisation, and affective flow, is its practical applications, namely assemblage-thinking and the research assemblage, which I discuss in Chapters 4 and 5.

Supplementing the general literature on the new materialisms and assemblage-thinking, I also refer to writings on materialities associated with environmentalism[18] and objects of memory. Particularly valuable is Boscagli's *Stuff Theory* (2014), because of her explicit focus, through a new materialist lens, on memory objects *and* waste, which dovetails with the environmentalist discourse discussed throughout this thesis. She strives to develop a new theoretical model to explain how humans live among things by exploring the radical potential and instability of everyday objects, or 'stuff'. She illustrates "intermittent flashes of 'minor' materiality" in twentieth-century modernity through 1) fashion, 2) memory objects, 3) clutter, 4) home décor, and 5) waste. These fluctuating 'flashes' foreground stuff's capacity to generate events and "promis[es] new versions of subject-object entanglements" (Boscagli 2014:3).

Conceptual links between fluctuating states of value come to the fore in writings on memory objects *and* waste. To discuss this, I read Boscagli alongside, most prominently, sociologists Elizabeth Hallam and Jenny Hockney's *Death, Memory and Material Culture* (2001), *The Ethics of Waste: How we Relate to Rubbish* (2006) by cultural theorist Gay Hawkins, anthropologist Mary Douglas' *Purity and Danger* (1966), and anthropologist Annette Weiner's *Inalienable Possessions: The Paradox of Keeping-While-Giving* (1992). I also refer to additional studies drawing on these works or their themes. I look at the contingency and liminality of (memory) objects' value and uselessness in the twenty-first century, which provides novel ways of thinking about the complexity of humans' daily interaction with seemingly static material objects. Such material objects also fall

that is, published collections of essays, interviews, and other books) amounts to up to 46 titles, my focus in this thesis is predominantly on *A Thousand Plateaus*.

[18] The terms 'environmentalism' and 'ecology' are often wrongly used interchangeably (Arnold 1993:9, Müller 1997:108). Wildlife ecologist Frank Mazzotti (2001:1) clarifies that the former is a multidisciplinary philosophy that hinges on the input of social and political movements and the latter a specific branch of biology that looks at how organisms interrelate with their environment.

within the domain of visual culture studies. I now turn to this dynamic and interdisciplinary field that serves as a further theoretical backdrop for this study.

1.4.2 Visual culture studies

Visual culture studies, an interdisciplinary field introduced as a reaction to the declining 'relevance' of art history in fast-changing societies, has been growing since the early 1990s. Through its development, visual culture studies theorists aimed to provide possible answers to the problems posed by the narrow conventions of art history (Cherry 2004:479). Such theorists intended to 'deal with images' by taking temporal and spatial frameworks into account in order to establish the importance of the social history and role of culture in visual reception and interpretation (Lauwrens 2005).

A distinction between terminology is warranted here. Since the emergence of visual culture studies, various terms, such as 'visual studies', 'visual culture', 'visual culture studies' and 'visual and critical studies', have been used (interchangeably) to designate similar kinds of discussions. For Mitchell (2002:237), 'visual studies' could include anything to do with vision whereas 'visual culture studies' more specifically refers to "the study of the social construction of the visual field, and the visual construction of the social field". I follow Mitchell (2002) and visual culture theorists John Walker and Sarah Chaplin (1997) in using 'visual culture studies' to refer to a discipline (all ambivalences about disciplinary boundaries taken into account) within 'visual studies'.

One of the field's most prominent concerns, which was already sharply highlighted by theorists in the well-known *October* "Visual culture questionnaire" (1996), is the problem of ocularcentrism, as the established centre of most western societies and equally central in visual culture studies. For this questionnaire, several questions concerning the field's interdisciplinarity, 'eccentricity', imperatives, object of study, the role of the 'image', and more, was sent to a range of art and architecture historians, film theorists, literary critics, and artists.

Since then, the field has undergone major shifts, largely influenced by broader turns in the humanities, which can be identified in terms of the historical events of the 'cultural turn', the 'pictorial turn', the 'material turn', the 'sensory turn' and the 'affective turn' (Shaw-Miller 2010, Duncum 2012, Lauwrens 2014). Broadly, the turn away from the 'objective' eye alone to the interconnectedness of the senses paves the way for a consideration of the human experience as

multisensory, that is, made up of an array of sensory inputs. Being an embodied human supposes that we perceive simultaneously with all our senses, even those beyond the haptic, aural, gustatory, olfactory, and visual (Duncum 2012:188).

Furthermore, subjective sensations and experiences change as the embodied human moves in and engages with her lifeworld. In this process, the body acts as an aspect of the self we live through, and does not merely amount to a container that we live in (Lagerkvist 2017:173). In many ways, the human body can therefore be seen as highlighting a major incongruency in visual culture's attitude towards the human/nonhuman relationship: the desire to transcend the human while at the same time reasserting the importance of the flesh and the materiality of lived experience (Ayers 2012:36).

I elaborate on this conundrum by exploring how the increasing critique of ocularcentrism has made way for more affective (new materialist) approaches. This rapid response to pressing questions in the twenty-first century, and the increasing engagement with a range of new materialist thought, further highlights visual culture studies' adaptive capacities. In what seems to be the most comprehensive book about this turn within visual culture studies – *The Art of the Real: Visual Studies and New Materialisms* – art history scholars Roger Rothman and Ian Verstegen (2015:1) describe the emerging new materialisms as "poised to don the mantle once worn by the likes of structuralism, poststructuralism, and the Frankfurt School".

Theorists agree that visual culture studies has an extensive and largely fluid study object domain (Tavin 2003:201, Cherry 2004:479, Bal 2003:8). Visual culture studies' scope includes many objects of study ranging from images, artefacts, and objects to instruments and apparatuses that form part of social life (Tavin 2003:201). In the present project, I argue that material objects – also those with sentimental value and those seemingly void of value and deemed 'waste' – that are entangled in assemblages with embodied humans, could potentially be situated as part of this dynamic field's domain of study. At the hand of this process, I aim also to explore the ways in which tools such as interviews and data visualisations, associated with visual culture studies to a lesser or greater extent can also serve as 'lenses' through which to 'see' and 'feel' the world. In the following section, I provide a brief introduction to the field of memory studies.

1.4.3 Memory studies

As a concept, 'memory' has diverse meanings in different fields of study.[19] In a social-sciences context, memory studies is a critical field that uses concepts surrounding memory to explore remembering and forgetting of diverse pasts through a range of interchangeable lenses (Erll at a roundtable with McIvor & Pine 2017:167). It is a "vital and vigorous interdisciplinary and international research field, which stretches across the humanities and the social sciences all the way to the natural sciences" (Erll 2011:4). Broadly, (cultural) memory studies has expanded in three (Erll 2011:4), or most recently four (Craps 2017a:3) phases. Of importance for the present study is the claim made by Craps (2017b:3) that "without meaning to suggest that the last word about transnational, transcultural, or global memory has already been said", a new "phase [of memory studies] prompted by our growing consciousness of the Anthropocene", is potentially underway (Craps 2017a:3). This study forms part of this (still contested) unfolding 'planetary' phase, which further highlights the contribution I endeavour to make to the humanities in the twenty-first century.

Early in the twenty-first century, cultural scholar Aleida Assmann (2002:28) described 'memory' as the new "leading term" in the cultural sciences and historian Gavriel Rosenfeld (2009:122-123) also noted that it "has risen to an extremely prominent position within the humanities and social sciences over the course of the last two decades". In his 2009 article entitled "A Looming Crash or a Soft Landing? Forecasting The Future of the Memory 'Industry'", Rosenfeld (2009:123) claimed that its current status within academia will eventually "be diminished by major changes afoot in the world today", since the "factors that initially helped elevate memory to unprecedented prominence have begun to fade in the last several years". Cultural theorist Astrid Erll (2011:5) disagreed and claimed that, in order to unpack massive world events, including issues emerging in the Anthropocene, "we cannot afford the luxury of *not* studying

[19] Again, clarification of the use of different terms, such as 'memory studies', 'cultural memory studies', 'cultural memory', 'individual memory', and 'collective memory' is needed. In practice 'memory studies' is approached from different perspectives and disciplines: where psychologists study the (individual's) mental capacity of recall and how this plays out over a person's lifetime, cultural historians or media scholars are generally more concerned about how memory is carried through media rather than brains, or 'cultural memory'. This process involves focusing on how ideas are transferred between individuals, groups, and generations (Rigney at a roundtable with McIvor & Pine 2017:167). Some disciplines, such as the neurosciences and psychotherapy, bridge divides between the humanities and the social sciences on the one hand, and the natural sciences on the other. For further reading, editors Erll and cultural theorist Ansgar Nünning's book entitled *Cultural Memory Studies: An International and Interdisciplinary Handbook* (2008) provides insights into memory studies as a fundamentally interdisciplinary field. I follow Rigney (at a roundtable with McIvor & Pine 2017:167) by considering 'individual', 'cultural', and 'collective' memory as "complementary rather than as competing terms", all of which poses useful questions under the umbrella term of 'memory studies'. In this thesis, I prefer to refer to 'memory studies' to account for psychological and neurological factors that impact individual memory, although I acknowledge that my point of departure from within the humanities is largely inspired by cultural memory studies.

memory". She admitted, however, the difficulty of addressing these issues with the current methodological tools employed by memory studies (Erll 2011:6).

This study explores two useful tools for memory studies in the Anthropocene. The first is to employ the new materialisms both theoretically and methodologically. Such as posthumanist approaches, this "reframes" memory studies by "bringing natural history and human history together" (Rigney 2017:476). Secondly, I document oral narratives. Historian Sean Field (2012:177) suggests that this methodology "does not constitute the golden road to alternative or popular historical truth(s) but it does have the potential to offer a plethora of new insights into differing and intersecting dialogues of memory".[20] This combination and application of tools augment this study's theoretical and methodological contribution to qualitative humanities research. In this section I have placed memory studies within the current ecological climate, which is discussed next.

1.4.4 The Anthropocene

In 2000, the term 'Anthropocene' was put forward by atmospheric chemist and Nobel laureate Paul Crutzen and biologist Eugene Stoermer.[21] It denotes a "new geological epoch defined by the transformative impact of human activity on the geophysical processes of the planet" (Craps 2017a:2). From the Ancient Greek word anthropos, 'human', this term poses humanity as major cause of the earth's current transformation (Blasdel 2017).[22] Since its coinage, this useful term has appeared in the titles of several academic journals, conferences, dozens of books, hundreds of articles in newspapers, magazines, blogs, art exhibitions, and novels (Sklair 2017:776).

The Anthropocene is a "moment of blinking self-awareness, in which the human species is becoming conscious of itself as a planetary force" (Blasdel 2017). Theorists such as historian Dipesh Chakrabarty (2015), cultural theorist Claire Colebrook (2017a), and Craps (2017a:2) agree that acknowledging humanity's geological impact could almost unimaginably collapse the distinction between humans and natural history, necessitating vaster global and historical thinking than the "narrow spatio-temporal confines of our ordinary daily lives tend to allow". Writer Katrina Dodson (2011:5) notes that concern for the planet's future is moving into

[20] Field (2012) speaks specifically of oral *histories*, although this statement also applies to oral narratives in general.
[21] For more on the origin of the term, see Bonneuil and Fressoz (2016 [2013]); Lewis and Maslin (2015); Parikka (2015); Groes (2016); Morton (2016), Emmett and Lekan (2016); Craps (2017b); and Sklair (2017).
[22] In Chapters 2 and 3 I refer pertinently to how the Anthropocene affects poor and marginalised communities.

mainstream consciousness, which necessarily leads to grappling with notions such as 'environmentalism'.

Environmentalism, a rising discourse since the 1960s, entails "a way of thinking" and "a movement of political activism based on a common conviction that our natural environment should be protected" (Mazzotti 2001:1). New materialist scholar Stacy Alaimo (2016:9) holds that a fundamental issue of early environmentalism was that it privileged nature's conservation rather than framing the human and nonhuman as interconnected. Material philosopher Jane Bennett (2010:111) also notes that, although this discourse raises useful questions, it remains centred around the 'protection' and 'wise management' of ecosystems, whereas a radical shift towards a more strategic engagement with materiality is necessary.[23] This conversation is central to this study.

Like these theorists, I address the complexities surrounding the discourse of environmentalism. Seemingly straightforward pro-environmental practices, such as the "three Rs" (reduce, reuse and recycle) (Wilson 2016:394), or more recently, the "five Rs" (refuse, reduce, reuse, recycle, and rot) (Johnson 2013:15) play an important and ambivalent role here.[24] Performing these actions in sequence and on a daily basis could, hypothetically, reduce landfill waste considerably (Johnson 2013:14). Although such advice is often framed as uncomplicated, extant literature highlights that human "identities have become confused and contradictory", veering between "a total surrender to a radical eco-friendly lifestyle" and a "complete effacement of the human altogether" (Groes 2016:143). Furthermore, the factors that mark environmental consciousness in the twenty-first century, such as a consensus that it is a combination of scientific insights and human values remain contested, since they are influenced by many unstable social, economic, and cultural concerns (Uekötter 2011:2). I now turn to the emerging literature that treat the relationship between memory studies and the Anthropocene.

1.4.5 Plugging memory into the Anthropocene

Around the time when the interdisciplinary field of environmental humanities started taking off in the early twenty-first century, theorists of memory argued that their field should become

[23] By means of her concept 'vital materialism', Bennett (2010) suggests that this radical shift in the way humans engage with 'nature' means engaging with assemblages consisting of heterogeneous materialities, which links to the new materialist underpinning of this study. With the term 'vibrant matter', Bennett (2010) further aims to enhance the perceptibility of nonhuman forms of agency, where 'agency' refers to the capacity to inflect the direction of events and to bring about different outcomes.

[24] The intricacies of the "five Rs" are discussed in depth throughout this study.

interdisciplinary to a greater degree. Erll (2011:5) suggests that the increasing synergies between memory studies and other fields seem ideal to address emerging questions. In a way, *Memory in the Twenty-First Century: New Critical Perspectives From the Arts, Humanities and Science* (edited by literary scholar Sebastian Groes 2016) responds to Erll's suggestion, because it discusses a "multiplicity of revolutions" such as globalisation, overpopulation, climate change, and new technologies through the lens of memory (Groes 2016:1). Similarly, from an environmental perspective, Dodson (2011:6), in a special eco-issue of *Qui Parle*, notes a "growing attunement to a newly foregrounded ecological context" in the humanities through interdisciplinary approaches around understanding how something called 'nature' is conceived. Although such enquiries are not new, they are taking on a "more recent ecological emphasis and disciplinary consolidation in scholarship" (Dodson 2011:6).

Literature on memory studies in relation to the Anthropocene includes individual essays by environmental historian Frank Uekötter (2011, 2013), literary theorist Axel Goodbody (2011), Groes (2014), memory studies scholar Richard Crownshaw 2014, 2017a, 2017b), environmental theorists Astrida Neimanis and Rachel Walker (2014), Colebrook (2016), Craps (2017a), Rigney (2017), Buell (2017), the chapters of Part III: Ecologies of Memory of Groes' book (2016), as well as Crownshaw's (2017c) chapter in the book *Memory Unbound: Tracing the Dynamics of Memory Studies* edited by Craps, and literary theorists Lucy Bond and Pieter Vermeulen. Humanities scholars also contribute to new collections that mark the shift in memory studies towards the 'planetary'. These include a special edition of the literary studies journal *Textual Practice* on 'Planetary Memory in Contemporary American Fiction', guest-edited by Bond, Ben de Bruyn, and memory scholar Jessica Rapson (2017), and a special issue of the cultural theory journal *Parallax* on 'Memory After Humanism' guest-edited by literary scholars Kári Driscoll and Susanne Knittel (2017).

Furthermore, several papers presented at a roundtable discussion entitled "Memory Studies and the Anthropocene", held in the United States of America in 2017, were published in the journal Memory Studies. Craps (2017a:1) explains that the event was sparked by the "increasing currency of the Anthropocene, on the one hand, and the observation that the field of memory studies has lately begun to grapple with its implications in earnest, on the other". In general, these publications contribute to the mapping and navigation of the 'fourth phase' in memory studies: the shift "from the transnational, transcultural, or global to the planetary; from recorded to deep history; from the human to the nonhuman" (Craps 2017a:3).

Although memory studies and Anthropocene studies are more frequently approached from interdisciplinary perspectives, literature of the two fields in relation to one another remains limited. There is as yet no formal literature on the impact of environmental consciousness on humans' interaction with memorabilia. Exploring this aspect in the current study can be considered to be one of its main contributions to extant literature.

Since the study's participants often referred to 'informal' sources on environmental consciousness and memorabilia, I briefly mention these here. Owing to the spectrum of emotions evoked by ecological awareness, many individuals have started sharing, commonly online, experiences of and suggestions of eco-conscious actions. These sources promote environmentally conscious lifestyles for ethical and/or (mental) health reasons. Conversely, others share ideas and relations with memory objects. Such sources often advise on what to do with sentimental objects, generally for mental health reasons: ridding oneself of guilt or 'clutter' to make space for "what's important" (Millburn 2011:24). Broadly, advocates of environmental consciousness do not discuss, or point to, its possible relations with memorabilia, and vice versa.

This introductory literature review engendered this thesis' focus on the new materialisms, memory studies and the Anthropocene, which is unpacked in more detail in subsequent chapters. It also informs this study's theoretical and methodological framework, to which I now turn.

1.5 THEORETICAL AND METHODOLOGICAL FRAMEWORK

1.5.1 The new materialist research assemblage

Theories concerned with the contemporary 'material turn' irrevocably challenge 'conventional' approaches to social enquiry and academic work (Kuntz 2019:42). The new materialisms' research foci, such as the entanglements of discourses in assemblages and consciousness beyond humans raise, according to education scholar Maggie MacLure (2017:50), an urgent question: "does qualitative enquiry, as the transformative work of interpretive, intentional, critical human agents", still have a place in the research process? She highlights that this turn has "powerful, but also powerfully dangerous, implications for qualitative research" which are "not always fully recognised by those […] who have embraced, and been embraced by, the new materialisms" (MacLure 2017:48). Grappling with these increasingly pressing concerns plays a central role in shaping my own research.

Towards addressing some of these concerns and uncertainties, I utilise the new materialisms as the main theoretical and methodological approach by expanding on innovations suggested in existing research.[25] Thus, I aim to think critically about the ways in which social enquiry must "adapt its methods to attend to affective flows and the capacities they produce" (Fox & Alldred 2015a:402). Using the new materialisms theoretically and methodologically provides insights on the shift from autonomous human agents to assemblages, the latter which consist of entangled materialities beyond humans (Figure 1.2).

Figure 1.2 | **new materialism: theoretically and methodologically**

Regarding its theoretical underpinning, this study is informed by perspectives gleaned from the fields of visual culture studies, the new materialisms, environmental humanities, and memory studies, as set out in the preceding section. I have noticed that scholars within these fields tend to focus on the theoretical underpinnings of the research assemblage, while few explore its practical implications. Therefore, concerning methodology, I first and foremost approach this study's research process itself as a new materialist assemblage comprising human and nonhuman

[25] See for example Fox and Alldred's (2015a) article entitled "New Materialist Social Inquiry: Designs, Methods and The Research-Assemblage".

elements including, among others, myself as researcher; extant literature; theoretical frameworks; the researched events and data collected; research tools such as questionnaires or interview schedules; recording and analysis technologies; computer software and hardware; the research context; ethics committees, and the paraphernalia of academic research outputs (Coleman & Ringrose 2013:126; Fox & Alldred 2017:152). Such an approach is concerned with affective flows that produce feeling and action between bodies, things, and social institutions (Deleuze 1988:124-125).

Seeing diverse relations as a research assemblage with its own affect economy entails that research becomes a territorialisation that shapes the knowledge it produces through affect flowing between its components (Fox & Alldred 2017:155). From this perspective, research (at least theoretically) is not at root an enterprise undertaken by human actors, but an assemblage of things, ideas, and social collectives and institutions. In engineering this research assemblage, I take my cue from a new materialist methodology first developed by Fox and Alldred (2017:175), namely "materialist analysis of research-assemblage micropolitics". They refer to their method simply as 'materialist' (losing the prefix 'new') (Fox & Alldred 2017:28). I prefer to call it New Materialist Analysis (retaining the prefix, capitalised and emphasising that it is a tool used to analyse), since I found that this facilitates its distinction from other methods, definitions, and notions in this study that denote the word 'materialist' (also in the Marxist sense). Henceforth, I refer to this tool as New Materialist Analysis.

By developing this tool, the collaborators aimed to provide students and researchers with the means "to translate ontological innovation into practical tools for social inquiry" (Fox & Alldred 2017:152). I further refer to Fox and Alldred's (2017:169) four phases of designing a research assemblage namely 1) research design (how the study is methodologically envisioned); 2) data collection (how and what kind of data are collected); 3) data analysis (how and in what ways data are organised); and 4) data reporting (how the research is presented). (Multimedia Drawer 1.4 provides further elaboration).

Various tools for the collection, analysis, and presentation of data form part of this research assemblage. These include, most notably, qualitative semi-structured interviews that I subject to New Materialist Analysis inspired by Fox and Alldred (2017), which allows me to focus on affects between the materialities in the assemblages. I further include a variety of media outside the verbal in my thesis, such as colourful and textured visualisations, photographs, and hand-

drawn graphs. This enlivens selected parts of the academic writing and interview data so as to communicate my findings in ways that the more common practices in the humanities may not always support.[26]

Multimedia Drawer 1.4: Designing a research assemblage

Setting up a research assemblage means attending to four main parts of the research process, namely the general design, data collection, data analysis, and data reporting.

1 | *RESEARCH DESIGN*

Firstly, the research assemblage attends to assemblages of human and nonhuman, animate and inanimate, material and abstract, instead of individual bodies, subjects, experiences, or sensations. Secondly, it explores how affects draw together the material and the cultural, and thirdly, it studies territorialisations and deterritorialisations within assemblages and the "consequent affect economies and micropolitics these movements reveal" (Fox & Alldred 2015:406). This study takes these criteria into account by incorporating literature that focuses on (de)territorialising flows between humans, objects and ideas.

2 | *DATA COLLECTION*

New materialist "data collecting machines" must, firstly, identify assemblages as set out above. Secondly, they should explore how "elements in assemblage affect and are affected" and assess the capacities produced by these affective flows (Fox & Alldred 2015:408). Finally, they must identify territorialisations and deterritorialisations and aggregating and singular flows. Dismantling dualisms of matter/meaning and micro/macro suggests collecting data from various sources using various methods. These imperatives could shift data collection's focus away from anthropocentric objectives of researching human experience, beliefs, and reflections, while eliding boundaries between the material and the cultural. This furthermore encourages "reflexivity about how research is assembled" (Fox & Alldred 2015:408).

My research consists of an eclectic combination of resources, including academic research, vernacular qualitative data via semi-structured interviews (Appendix A) with South Africans who self-identified as living in 'environmentally conscious' ways, and photographs of their memory objects. Engaging public participants not only affirms the study's transdisciplinarity, but also its new materialist nature. For example, Bryant (2014:4) notes that "ecotheorists" in the humanities generally prefer discussing "portrayals of the environment in literature and film, rather than the role that bees play in agriculture and the system of relations upon which they depend". I am engaging with real, embodied participants, their real lives, and their real objects, which moves closer to Bryant's call for novel ways of discussing the environment.

3 | *DATA ANALYSIS*

New materialist data analysis firstly, takes the assemblage as the primary focus for analysis (Fox & Alldred 2015:408). Secondly, it explores affect and the territorialising and deterritorialising capacities produced and thirdly, examines how

Drawer 1.4 cont. ⟶

[26] In Chapter 5 I elaborate on how this combination of materialities, alongside many others in this study's research assemblage, could simultaneously prohibit and enable new materialist enquiry.

affective flows within assemblages link matter and meaning, and 'micro' and 'macro' levels. Finally, it acknowledges the "affective relations within the research assemblage itself" (Fox & Alldred 2014:409). In analysing the interviews, I engage with environmental conscious practices, memory objects and participants' relations with them.

4 | DATA REPORTING

When it comes to presenting new materialist work to an audience/ reader/ viewer, researchers must acknowledge that a research report is the product of a "hybrid assemblage with an affect economy deriving from both the event and the machines of social research" (Fox & Alldred 2017:173). New materialists are well situated to produce necessary deterritorialisations through a multimedia approach: drawings, photographs, sound, colour usage, installation art, and so forth may connect readers and events in ways that could not be affectively produced through text alone (Fox & Alldred 2017:173).

Although I cannot escape the "highly ritualised conventions of academic research writing and publishing that transform multi-register event-assemblages into the unidimensional medium of written text" (Fox & Alldred 2015:410), I aim to expand this territorialisation with a multimedia approach: including photographs, data visualisations, and hand drawn graphs (drawing inspiration from artist Minjung Kim's works) using a variety of colours and textures to communicate narratives. In doing so, I focus not only on affective flows present during the research process, but also on lines of flight that could potentially foster new perspectives on the research experience, because such initiatives have the potential to alter the flow of affects in the research-assemblage between event, researcher and reader, and re-engage research audiences by drawing them into the research assemblage (Fox & Alldred 2017:174).

Broadly, the new materialisms are well-suited to produce novel theoretical and methodological approaches to data analysis: this study's multimedia approach has the potential to connect readers and events in ways that might not have been affectively produced if restricted to text alone (Fox & Alldred 2017:173). By entangling theory and practice throughout the research process, I aim to show how the new materialisms could potentially foster new perspectives on qualitative research in its broadest sense. Addressing the lacuna within visual studies research of the practical engagement with the new materialisms through applying research assemblage thinking, is one of the main methodological contributions of my study.

1.5.2 Ethical considerations

As part of this study's research assemblage, I incorporate qualitative interviews as a data collection tool. I conducted individual face-to-face interviews with 21 participants in their homes at the beginning of 2019, at the end of 2020, and at the beginning of 2021.[27] The same semi-

[27] As per the Research Ethics Committee's regulations, electronic and hard copies of the data will be safely stored at the University of Pretoria for 15 years for archival and further research purposes.

structured interview schedule was used throughout (Appendix A). As a researcher, I was aware of my ethical responsibility to respect each participant's confidentiality. Before commencing, I acquired ethical approval from the Research Ethics Committee of the Faculty of Humanities at the University of Pretoria and further followed procedures to ensure the anonymity and consent of each participant. In 2020 and 2021 the necessary COVID-19 precautions, such as social distancing and hand sanitising, were also followed to ensure the participants' safety. Participants were chosen based on their self-identification as 'environmentally conscious'. To establish how participants understand and engage with their environmental consciousness, we discussed their beliefs and practices on this topic during the interview, and they provided further specification in a standardised questionnaire afterwards. I initially envisioned reaching self-selected participants via an already existing Facebook group, Zero Waste Journey in Southern Africa.[28] Although input from every member of the Facebook group was considered as potentially valuable, since their presence on an environmentally conscious group implies, at least to some extent, their awareness of such matters, there was limited response on this platform. Finally, the invitation did not yield the necessary results: I managed to recruit only four participants from this group.

I opted for an alternative approach to reach more participants, namely purposive sampling.[29] Simply put, the "researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience" (Tongco 2007:147). To do so, the researcher must know about the chosen subject before sampling the population "in order to find knowledgeable and reliable informants most efficiently" (Tongco 2007:151). I used this non-random technique and deliberately approached participants in view of a specific quality they possess, that is, self-identification as environmentally conscious. I reached the 17 remaining participants through my own network of acquaintances and their acquaintances and confirmed their environmental consciousness beforehand. Potential participants who responded positively to the initial invitation were further informed of the nature of the research through an electronic consent letter stating the title and details of the project, as well as what would be expected from them (Appendix B). Only those who provided a signed copy of the consent letter participated in the study. The participants were fully informed about the study's

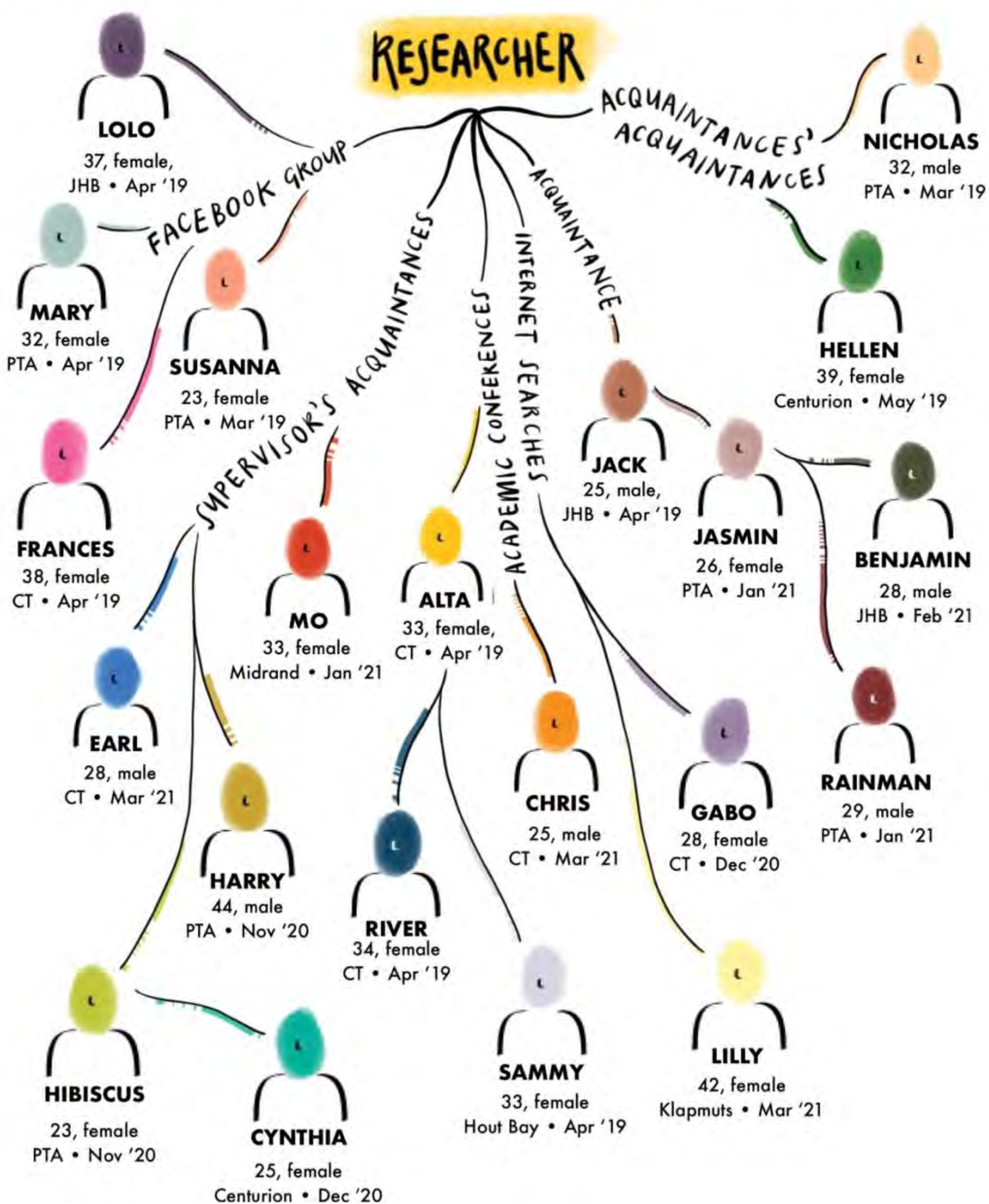
[28] A letter stating the title and nature of the study was sent electronically to the administrator of the above-mentioned Facebook group to obtain permission to recruit participants using this platform. The administrator provided permission to share an invitation to recruit participants on this group. An electronic consent letter explaining the project's nature and their role was sent to those who responded to the invitation. Only those who provided informed consent participated in the study.

[29] The validity of purposive sampling as a non-random technique, and the reliability of an informant, are discussed in detail by ethnobotanist Dolores Tongco (2007). I discuss this method in greater depth in Chapter 5.

aims and agreed to have our interview recorded and for photographs to be taken of some of their memory objects. Figure 1.3 traces how I reached each participant. Throughout the procurement process I remained dedicated to conducting my research in an ethical and respectful manner and with a view to providing insightful glimpses into how each participant fitted into the world of objects around them.

Figure 1.3 | **reaching the study participants**

I conducted 21 face-to-face interviews with participants, chosen based on their self-identification as 'environmentally conscious', in and around Johannesburg, Pretoria and Cape Town.



1.6 OUTLINE OF CHAPTERS

This thesis consists of nine chapters. The present chapter provided an overview of the main aim of the study, namely to emphasise assemblages consisting of a myriad of materialities including research participants and researcher, memory objects, memories, various beliefs and practices related to environmental consciousness, research tools, and research outcomes. It subsequently introduced the relevant literature as well as the study's theoretical and methodological framework.

Chapter 2: Four Theoretical Sets discusses the theoretical underpinnings of the new materialisms, visual culture studies, memory studies, and environmental humanities that are used to ground and develop this thesis. I conduct this by referring to the historical developments within each of these fields. I foreground the increasing prominence of terms such as 'affect' in visual culture studies research; the relation between memory studies and new materialist approaches and, finally, the relation between the Anthropocene and 'entanglement'. Here, I also situate South Africa's position within the global discussions on environmentalism. Together, these four sets provide a brief introduction to the new materialist underpinnings and theoretical basis of this study.

Chapter 3: Memory in the Anthropocene/ The Anthropocene in Memory examines the existing, relatively recent, academic literature on the intersection between memory and the Anthropocene. I firstly identify, the lack of reference in this literature to the contemplation of sentimental objects in the Anthropocene. On having identified and described this lacuna, I divide the prominent themes discussed in this literature into threads: firstly, a 'derangement of scale'; secondly, the redistribution of agency (which entails teasing out the dichotomous relations between rich/poor and human/nonhuman) and, finally, a broad consideration of questions centred on remembrance and extinction in the Anthropocene. These threads are useful indicators of the current academic discussions of this intersection and are revisited in the remaining chapters, once again, with a view to positioning this study's contribution to this broader and ongoing intellectual discussion.

I dedicate *Chapter 4: New Materialist Social Enquiry* to plotting the theoretical and practical implications of a new materialist approach for qualitative data enquiry. I point out the emerging challenges and liberations that the new materialisms pose for the humanities and tease out the ways in which anthropocentrism, 'objective' data, and logocentrism are problematised by new

materialist methodologies. I further conduct a detailed review of the diverse perspectives on Deleuze and Guattari's A Thousand Plateaus. This includes revisiting the concept of the assemblage, as briefly discussed above, by closely examining its origin, diverse definitions, and applications.

With this as a backdrop, *Chapter 5: Arranging the Research Assemblage* maps the ways in which I situate my study as a rhizomatic research assemblage, comprising of humans and nonhumans, including myself, the participants, the studied events, the data, the visualisation of data, used methods, and contexts. I provide an in-depth discussion of three new materialist data tools that form part of my research assemblage, namely New Materialist Analysis, interviews, and data visualisations. As part of this discussion, I tease out each tool's impact on the research assemblage and how these (often ambivalent) tools could simultaneously prohibit and enable new materialist enquiry.

Building on the review of scholarly literature, in *Chapter 6: Territorialised Assemblages* I turn to conducted interviews. I introduce, firstly, the participants; secondly, their beliefs and practices surrounding environmental consciousness and, finally, the assemblages between them and their memory objects. The emphasis on assemblages, rather than individuals or autonomous materialities is illustrated through various New Materialist Analyses of selected assemblages between participants and environmentally friendly actions; and between participants and memory objects. In this process, dominant tropes surface, including the complexities of pleasure, sense of responsibility, consumption patterns, value judgements, mourning, and family lineage. Together, these New Materialist Analyses provide a nuanced introduction to the benefits and challenges of this tool.

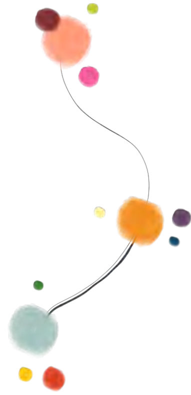
This leads into *Chapter 7: Deterritorialised Assemblages*, which opens with an overview of the diverse relationships between the participants and their memorabilia when looked at through an environmentally conscious lens. This approach provides perspective on how deterritorialisations impact assemblages or, simply, how changes in thought patterns might influence the way participants interact with their memorabilia. Here I again conduct several New Materialist Analyses to discuss the prominent tropes that emerge when environmental consciousness and memory are plugged into the same assemblage. In doing so, I refer to the theoretical chapters and add literature on the complexities of fluctuating value, ambivalent consumption, and

transience. Paying attention to how matter alters human attitudes and habits provides fruitful insight into the working of memory and eco-conscious practices.

In *Chapter 8: Reflecting on a New Materialist Approach*, I look back on the new materialist tools as laid out and applied in the preceding chapters. I will demonstrate that thinking critically with assemblages as virtual entities provides perspectives on the actual effects of their composition in the world. In return, these perspectives could facilitate understanding of the conditions of the Anthropocene. Firstly, the New Materialist Analyses in Chapters 6 and 7 set the scene for a detailed discussion of the tropes, connotations and myths prevalent in the interviews. Elaborating on these entanglements has the potential to untangle novel ways of thinking about human and nonhuman assemblages in the Anthropocene.

I thus draw together and elaborate on tropes that have become prevalent in the preceding two chapters. These tropes, as introduced earlier, include 1) myths associated with the distinct categorisation of nature, objects and immateriality (as opposed to culture, subjects and materiality); 2) the relation between (responsible) action and pleasure; 3) value as malleable; 4) transience; and 5) family lineage. Read together, these tropes foreground the de- and reterritorialisations that occur when one assemblage is plugged into another. In the final section of this chapter, I turn to my experience as a new materialist researcher caught up in a research assemblage with many other materialities that enable or disable certain capacities. This entails reflecting on the design of and the tools used throughout the research process by alluding to the restrictions and potentials posed by new materialist social enquiry.

Finally, in *Chapter 9: Conclusion*, I summarise the study's content and outcomes by critically reflecting on its challenges, pitfalls, and most prominent contributions. I also briefly elaborate on the considerable possibilities for further research.

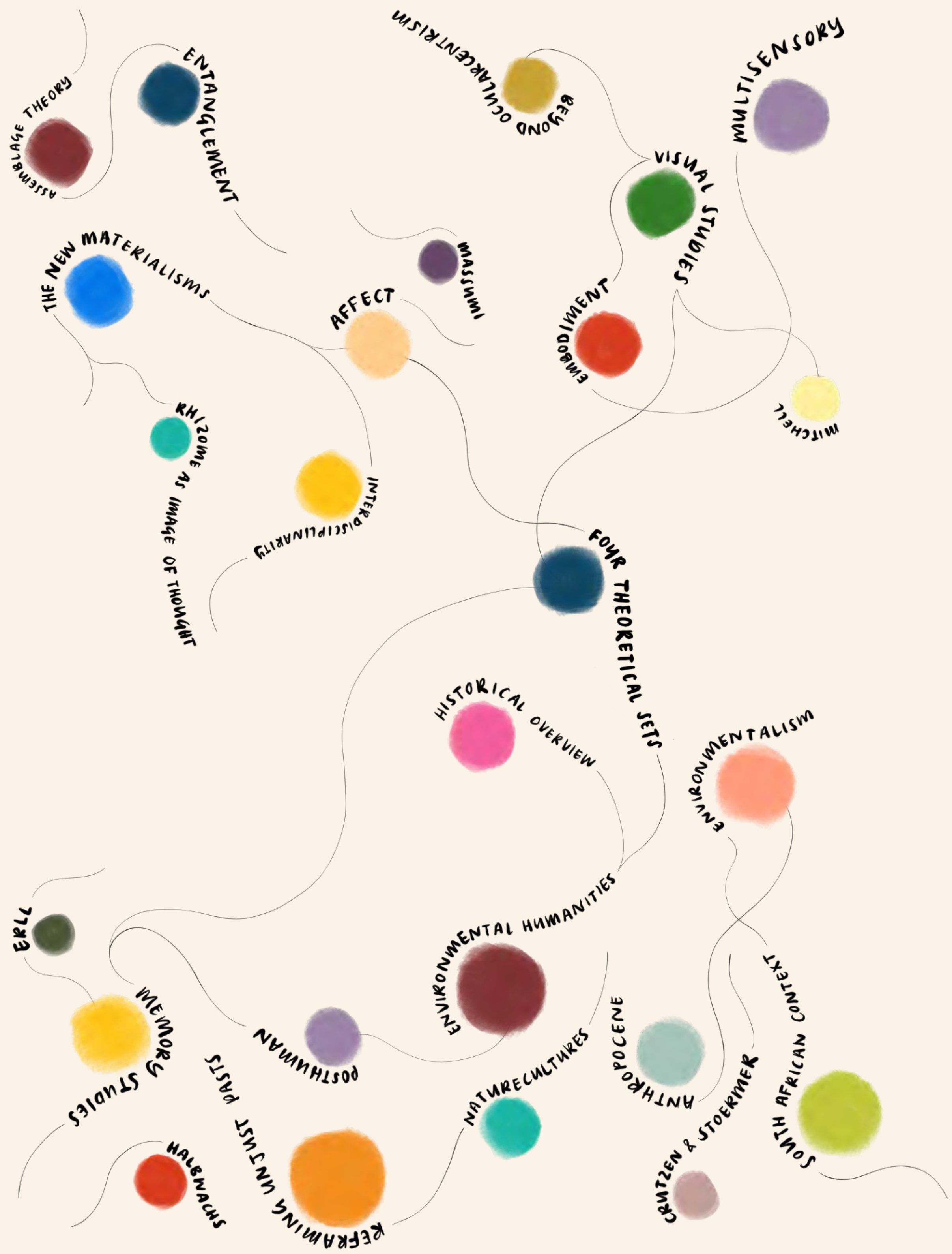


2 CHAPTER

four theoretical sets

The right to look […] refuses to be segregated, and spontaneously invents new forms.
- Nicholas Mirzoeff (2011:4)

Figure 2.1 | key concept visualisation



CHAPTER 2: FOUR THEORETICAL SETS

2.1 INTRODUCTION

In this chapter, I identify and discuss four sets that together form the theoretical core of this thesis, as depicted in Figure 2.1 on the previous page. The use of a Venn diagram[1] highlights how these sets – the new materialisms, visual culture studies, memory studies, and the Anthropocene – intersect and inform each other. The sets are used throughout this study to examine how the heterogeneous materialities within a given assemblage affect phenomena and are affected by them. The chapter highlights this thesis' interdisciplinary theoretical underpinning. To situate each set temporally, I trace the four fields' histories by referring to prominent shifts and key theorists. I then investigate how new materialist thought, with a view to terms such as 'assemblage', 'affect', 'posthuman', and 'entanglement', is increasingly introduced in various fields in the humanities, including those fields applicable to this study. By no means is this approach or combination of sets exhaustive. Rather, the chapter can be read as a recounting of the steps that I have taken in the research process to reach my current position: I stand at the intersection where the human, memory objects, and environmental consciousness affectively interact in shifting assemblages (Figure 2.2).

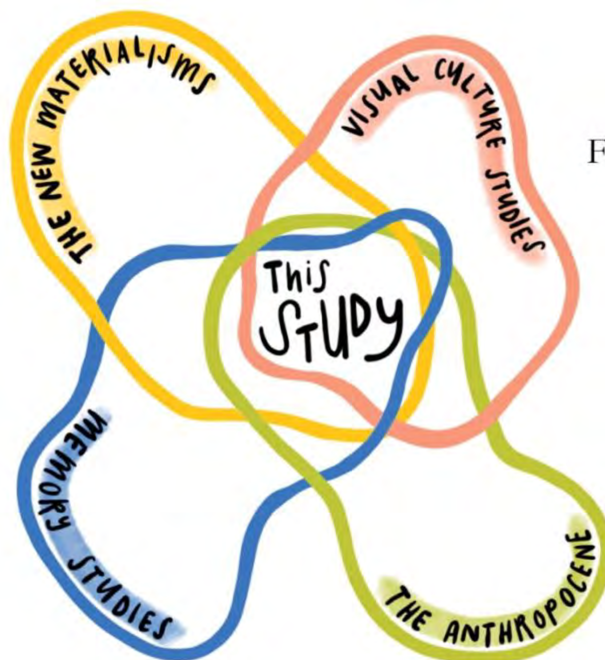


Figure 2.2 | **four theoretical sets imbricate**

[1] A Venn diagram is a method widely used to illustrate the relation between sets or groups of things through overlapping shapes. Its use was popularised by mathematician and philosopher John Venn in the late nineteenth century.

Firstly, I explore how the new materialisms grew out of closely related posthuman developments in recent decades that share a renewed interest in matter. I lay out the ways in which new materialists are dedicated to undoing longstanding dichotomies in order to provide nuanced perspectives on the rhizomatic functioning of reality. Here I specifically refer to Deleuze and Guattari's assemblage theory by tracing how they undo the concept of the 'discontinuity' (between the tangible and the intelligible) of the 'thing' central in western thought.

The second set is that of visual culture studies, a field with a broad and, in many instances, undefined study object domain. Firstly, I trace the major shifts that occurred within visual culture studies since its early stages in the early 1990s. Most notably, I elaborate on how the ocularcentrism in *visual* culture studies has been increasingly critiqued as the established centre of most western societies and how more inclusive approaches, including multisensorality, have made their way into academic discussion. This increasing engagement with notions central to new materialist concepts, such as 'affect', ultimately creates an opening for the study of affective flows in any assemblage. I argue that the study of material objects – also those with sentimental value – that are entangled in assemblages with embodied humans could potentially be situated within the ambit of this dynamic field's domain of study.

The chapter continues with a discussion of the third set, namely memory studies. This section includes an historical overview of the prominent phases that memory studies has passed through since its formal onset in the early twentieth century, followed by a discussion of some current challenges and possible future directions. Here I discuss how in recent years theorists of memory studies have been engaging increasingly with new materialist concepts such as 'posthuman' memory to reframe unjust (often forgotten or repressed) past experiences and to envision more just futures for the human and the nonhuman alike.

I then turn to the fourth and final set, namely the ecological state of planet Earth, that is, the Anthropocene. Here, I refer to the historical aspects of dominant environmental discourses such as the environmental humanities, environmental history, and environmentalism. I also situate South Africa within this discussion and explore the factors that shaped its environmentalism. By incorporating some of the most pressing and fundamental questions evoked in the Anthropocene, I further look at the ways in which these discourses suppose novel ways in which the human is entangled in assemblages with the nonhuman in the twenty-first century. Terms often associated with the new materialisms (such as 'entanglement' and 'naturecultures'), as well

as new materialist goals (such as undoing dichotomies) are increasingly used in theorising the environmental humanities, which evidently supposes increasingly strong ties with new materialist thinking. To my knowledge, this is the first thesis to study aspects of South Africa's environmentalism landscape through a new materialist lens. To conclude, I position my study where these four sets overlap by providing a brief summary of each.

Before commencing, it should be noted that the latter two sets separately relate to particular aspects of this study, namely sentimental objects (as part of memory studies) and environmental consciousness (as accompanying the Anthropocene). The theoretical relations between these two sets, with reference to the applicable literature, is discussed in depth in Chapter 3.

2.2 SET ONE: THE NEW MATERIALISMS

2.2.1 Historical overview

Moving beyond the cultural turn that dominated the humanities since the 1980s, a set of critical languages emerged that urged a (re)turn to materiality in order to understand the ontological significance of "new way[s] of being" and interrogating how we understand and shape these ways (Schouwenburg 2015:59, Boscagli 2014:3). Together, these theories reject economic and structuralist determinism as adequate vehicles by which patriarchy, rationalism, science, and modernism can be critiqued (Braidotti 2006:24-25). They further emphasise materiality that refuses to behave according to the rules, or systematisation, of objects and entities in modernity, as described prominently in philosopher Michel Foucault's *The Order of Things: An Archaeology of The Human Sciences* (1966). In his endeavours to excavate the origins of the human sciences, which have their root in life, labour, and language (that is: biology, economics, and linguistics), Foucault's central claim is that all historical periods have possessed certain underlying epistemological assumptions that determined what was acceptable for the time. In this sense, the current century is also systematically organised to uphold certain hierarchical structures, which the new materialisms aim to undo.

Here, a distinction between posthumanisms and the new materialisms is warranted. Posthumanism is an overarching term for theory that breaks from previous anthropocentric perspectives and entails a coextensiveness between the human and the nonhuman (Alaimo 2016:121). Building on the epistemological and political foundations of anti-humanism, postcolonialism, post-anthropocentrism, anti-racism and material feminism (Coole & Frost

2010) posthuman ethics deny to the human the "sense of separation from the interconnected, mutually constitutive actions of material reality" (Alaimo 2010:24).

The new materialisms, a specific domain within posthumanism that gives special attention to matter by avoiding binary understandings such as mind/body and human/nonhuman, developed from the linguistic turn which largely focused on discursive practices at the expense of the material world. From this grew a material-discursive philosophy where epistemology, ontology and ethics imbricate and entangle (Barad 2007). The current 'turn to matter' has plausibly, but not without debate, been propelled by Latour's actor network theory (ANT) developed in France in the early 1980s (Harman 2018:217; Alaimo 2016:77; Gamble, Hanan & Nail 2019:130-131; Dolphijn & van der Tuin 2012:86; Green 2013:2). The material turn has since, at least in in part, been informed by poststructuralist, feminist, postcolonialist, and queer theories, which are committed to a reconceptualization of the subject and the mapping of the 'ethics of relationality' (Braidotti 2006:24-25).

Generally, a collection of theories that focus on materialities beyond the human and that underpin this study to a lesser or greater extent, form part of a greater nonhuman turn.[2] These include the ontological turn, the posthuman turn, the speculative turn, and the affective turn. Among many factors, these turns are also marked by a view of human and nonhuman objects as inextricably linked on a small planet with finite material resources (Boscagli 2014:18). Although in diverse ways, the emerging theoretical formations contest the notion of nature as merely the backdrop for humanist adventures, or of matter as passive, until awakened to meaning by human interpretation. Equally, however, the movements that form the 'nonhuman turn' do not "fetishize matter" (MacLure 2015:98). Neither as backdrop nor bedrock then, matter does not submit to or anchor discourse.

Latour (1993:133) argues that undermining the "power of objects", also from a theoretical perspective, evidently says something about dichotomous social constructs in the world: that human life is 'more important' than other life forms. These constructs are being unravelled by emerging approaches that shift attention from human exceptionalism to materialities. Acknowledging and emphasising that materiality is 'put in place' by constructed binary relations between people and things has "far-reaching cultural, social, and political possibilities" (Boscagli

[2] The nonhuman turn is a general term used to refer to such approaches that engage in "decentering the human in favour of a turn toward and concern for the nonhuman (Grusin 2015:vii).

2014:14). Indeed, the emerging perspectives in the twenty-first century that call for a re-evaluation of humans' relationship to objects form part of a long history of engaging with matter. In Euro-American philosophical tradition, erecting divisions between the human and the nonhuman, or between knowing *subjects* on the one hand and *objects* of knowledge on the other, is not uncommon (Law 2004:132). These two "classes of entities" are taken to be different in kind. In particular, it is assumed that the wise subject can 'know' the object and predict its behaviour, "so long as it goes about it in the right way by disentangling itself and its methods from various illegitimate and distorting influences" (Law 2004:132).

Among the variety of emerging theoretical movements, I draw mainly on the new materialisms. Dolphijn and Van der Tuin (2012:16) explain that publications on the topic are increasing, especially in cultural and feminist theory. As introduced in Chapter 1, the term 'new materialisms' emerged in the mid-1990s as a method, conceptual frame, and political strategy (Braidotti 2012:16). Some theorists, such as Boscagli (2014:3), hold that a pivotal idea of the new materialisms is Latour's notion of the quasi-subject quasi-object (a radically other (dis)order of things in which friable subjects and mutable objects intervene in each other's being). Connolly (2013:399) describes the new materialisms as the "most common name given to a series of movements" that criticise anthropocentrism by rethinking human and nonhuman forces and processes, by exploring the dissonant relations between those processes and cultural practice and by rethinking the sources of ethics.

The new materialisms foreground "what it means to exist as a material individual with biological needs yet inhabiting a world of natural and artificial objects, well-honed micro-powers of governmentality, but no less compelling effects of international economic structures" (Coole & Frost 2010:28). Taking matter "more seriously" is one of the movement's chief projects (Adkins 2015:11). Since its coinage, this term has been used increasingly to "stress the concrete yet complex materiality of bodies immersed in social relations of power", especially by challenging binaries between the natural and the cultural, mind and matter (Braidotti 2012:16). Precisely because the new materialisms typically comment on crucial issues of materiality, embodiment, and subjectivity, it can contribute to the current renewal of interest in realist perspectives (that there exists a 'real' world independent from a human's perceptions, theories, and constructions of it) (Braidotti 2012:16).

The new materialisms see human bodies and all other social, material, and abstract entities in relation to one another, and therefore shifts away from conceptions of objects and bodies as occupying distinct space. This shift emphasises the flows produced *through* the relationship between bodies, things, and ideas (Deleuze & Guattari 1987:261).[3] Philosopher Brian Massumi (2002:4), noting the multiplicity of intellectual currents that flow through this work, takes issue with its characterisation as 'new', suggesting that theorists think instead in terms of 'conceptual infusions' into an emerging programme of materially-informed thought and practice.

Taking this into account, it becomes clear that the eclecticism and historically rich ideas that inform the new materialisms have the potential to productively dissolve (or at least soften) boundaries between the natural and the cultural, mind and matter. Because the new materialisms hold that social forces do not exist in themselves, it has paved the way to other theories that elaborate on fluidity, networks and, important for this study, assemblages. Precisely for this reason, I make use of the new materialisms and concepts as suggested by Deleuze and Guattari to engage critically with assemblages.[4]

2.2.2 Assemblage theory and the rhizome as image of thought

The presence of the term 'assemblage' in new materialist vocabulary can be traced back to Deleuze and Guattari's theorisation of 'agencement' in *A Thousand Plateaus*. The present section serves as an introduction to assemblage theory, which is explored in detail in Chapter 4 of this thesis. To begin with, it is useful to refer briefly to Deleuze and Guattari's presentation of an alternative image of thought – rhizomatic in *lieu* of the arborescent. Whereas most of Deleuze's work (with and without Guattari) represents a somewhat detached and cerebral activity of attempting to produce a 'thought-without-image' way of thinking, *A Thousand Plateaus* moves towards the creative and active process of producing an alternative image of thought.

The authors present the rhizome as such an image of thought, which emphasises fluidity, exchangeability, and multiple functionalities, in contrast to an arborescent or tree-like image of thought, that is, in the latter case, a structural model that gives determinate identities to things by

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[3] Already before they met, Deleuze and Guattari shared an "aversion to the centrality of the individual": for Deleuze, this was clear in his philosophical critique of the concept of 'identity', while for Guattari it was revealed in his attempts to develop a psychoanalytic theory and therapeutic practice that did not privilege the individual subject (Thornton 2018:9).

[4] Beyond assemblage theory, other strands in the new materialisms are related to artificial intelligence, biophilosophy, evolutionary theory, Foucauldian genealogy, neuroscience, posthumanism, quantum physics, and Spinozist monism (Deleuze 1988; Pearson 1999; Barad 1996; Best 1995; Braidotti 2006, 2013; Clough 2008; Coole & Frost 2010; Connolly 2011; Grosz 1994; Haraway 1991; Latour 2005; Massumi 1995).

using predicates to relate them negatively to one another, by extracting essential properties that determine essences of things, and by organizing all things into a hierarchy of genera and species based on these essences (Thornton 2018:185).[5] Multimedia Drawer 2.1 elaborates on the rhizome's principles, which emphasise its usefulness in providing an alternative model of thinking.

Multimedia Drawer 2.1: Six principles of the rhizome

The rhizome opposes logical approaches to knowledge, in contrast with a 'traditional' arborescent structure, and is therefore often used to show how everything can be multiple, interrelated, and connected to everything else (Deleuze & Guattari 1987:7-12). Its six principles make it a useful concept when studying assemblages (Fox & Alldred 2015a). These principles do not offer a definition, in the sense of picking out essential and stable traits of the rhizome, but instead outline the different ways in which it is possible to interact with the rhizomatic image of thought.

1 & 2 |

Connection and heterogeneity broadly describe how any point of a rhizome can (and, in fact, must) be connected to any other part of itself or something else. In effect, this quality is different from those associated with a tree or root (which plots a point and fixes an order), since it "ceaselessly establishes connections between semiotic chains, organisations of power, and circumstances relative to the arts, sciences, and social struggles" (Deleuze & Guattari 1987:7). In short, there is nothing genealogical or teleological about it.

3 |

The principle of multiplicity entails that a rhizome is subject- and objectless, and exposes "arborescent pseudomultiplicities for what they are" (Deleuze & Guattari 1987:8). There are no points or positions in a rhizome, such as those found in a structure, tree or root: there are only lines (Deleuze & Guattari 1987:8). Assemblage, as briefly mentioned earlier, links up with this characteristic, because it supposes an increase in the dimensions of a rhizome's multiplicity, which necessarily changes in nature as it expands its connections (Deleuze & Guattari 1987:8).

Drawer 2.1 cont. ⟶

[5] The arborescent model of thought has its roots in Aristotle's logic of definitions, and in particular his concept of 'categories' (Smith 2012:154,387). It can be seen in the many forms of classification across the social and natural sciences, most obviously in genealogical family trees and in phylogenetic trees. Deleuze and Guattari (1987:5) criticise this model (as might be expected from their broader critiques of structural psychoanalysis) for relying on a binary logic that creates nothing but a series of identities (instead of multiplicities). For more on Aristotle's logic and the use of Porphyrian trees, see Eco (1984:57-67).

4 |
The principle of a signifying rupture means that a rhizome can be broken off or shattered at any given point, but will start up again in a similar or completely different way, on one of its old lines or on a completely new one. Deleuze and Guattari (1987:9) explain that every rhizome "contains lines of segmentarity according to which it is stratified, territorialised, organised, signified, attributed, etc., as well as lines of deterritorialisation down which it constantly flees". What's more, a rhizome "never allows itself to be overcoded" (Deleuze & Guattari 1987:9). Whenever there is a rupture in the rhizome – for example, when segmentary lines "explode into a line of flight" – the broken lines will always tie back to one another, since lines of flight still form part of the rhizome.

5 & 6 |
A rhizome follows the principles of cartography and of decalcomania that evoke the image of a map that is always open and can always be entered from any point. Due to the rhizomatic model's ability to pick out transformations over identities, it is not possible to use it to create a representation of the world. Instead, rhizomatics operates by mapping connections, each of which is "open and connectable in all of its dimensions; it is detachable, reversible, susceptible to constant modification. It can be torn, reversed, adapted to any kind of mounting, reworked by an individual, group, or social formation. It can be drawn on a wall, conceived of as a work of art, constructed as a political action or as a meditation (Deleuze & Guattari 1987:12).

A rhizome is therefore susceptible to constant (albeit unpredictable, that is, non-structural) modification and growth. Deleuze and Guattari (1987:12) explain that a rhizome is not controllable, since it is a "stranger to any idea of genetic axis or deep structure". It fosters "connections between fields", removes "blockages on bodies without organs" and provides a maximum opening for the movement of bodies without organs (Deleuze & Guattari 1987:12).

Instead of following Plato's model of concepts as 'universal forms' or Kant's 'a priori ideas', Deleuze and Guattari (1994:15) treat concepts as complex bodies made up of components that cohere around a particular problem. Where concepts such as 'predicate', 'subject', 'object', 'genus', and 'species' all define an image of thought that is unable to think about the dynamics of change, Deleuze and Guattari (1987:6) aim to replace them with a selection of new concepts: "All we talk about are multiplicities, lines, strata and segmentarities, lines of flight and intensities, machinic assemblages and their various types, bodies without organs and their construction and selection, the plane of consistency, and in each case the units of measure". They pose this alternative list of concepts as the toolbox required for producing and then using the rhizomatic image of thought.

Here it is important to clarify that Deleuze and Guattari's (1987:25) claim is not that the world is made of rhizomes (or even that there are some things that are rhizomatic and others that are not). As a model for thought, the rhizome does not define the nature of things, but is a

methodology for thinking about things (Young, Genosko & Watson 2013:262-263). Deleuze and Guattari's (1987:25) substantive elaboration on the concept of multiplicity through the use of the rhizome as image of thought, allows them to show that the world is constituted of assemblages. Because assemblages have simultaneous tendencies towards relative stasis and relative change, whereas the arborescent image of thought is only capable of seeing the stratified and relatively static aspects of these assemblages, the rhizomatic image of thought steers the prospect of analysing the assemblage's tendencies towards change (Adkins 2015:13). In short, rhizomatic thought is a method for mapping the contingent connections that constitute material assemblages.

To tease out the rhizomatic image of thought and assemblage theory's most noteworthy contribution, I briefly refer to the prominent concept of 'discontinuity' in western thought. Plato's inaugural gesture of western philosophy has been the establishment of the disconnect between the sensible (matter existing around us that can be grasped with the senses) and the intelligible (that which is the essential form of something that can only be understood through reason). The sensible is regarded as subordinate to the intelligible.[6] This binary has been the dominant way of dealing with physical 'things', despite its paradoxical outcome: 'things' seem to combine two contradictory properties, namely intelligibility (stability) *and* sensibility (change):

> Identifying a thing as a table entails both the recognition that the object possesses some kind of permanence but also that it is also subject to modification. The desk in my office, for example, has numerous scars and stains on the top, and a couple of the drawers are missing their pulls. It's still recognisable as a desk, but it's also easy to imagine this sort of decay happening to the point where the desk is no longer recognisable as a desk. Furthermore, long before that happens, it will be no longer usable as a desk (Adkins 2015:10-11).

In modernist thought, a thing's stability is attributed to its intelligible nature (the idea and perceived function of the desk), while the thing's ability to undergo change is attributed to its sensible nature (the desk's physical materials that can be touched, scratched and broken off). For the most part, the properties related to the thing's intelligible nature are its essence ('good'), while the properties related to its sensible nature are considered its accidents ('bad').

Deleuze and Guattari's assemblage theory addresses this paradox of the 'thing' in a radically different way: they replace the discontinuity of the sensible and intelligible with a *continuity* of the

[6] That is why thinking "becoming" is such a remarkably difficult task: the entire history of western thought "serves to obscure becoming, not by eliminating it but by subordinating it to 'being'" (Adkins 2015:141). The subordination of becoming to being is one of the primary forms that the discontinuity thesis takes.

sensible (content) and intelligible (expressions) (Adkins 2015:11). Thus, instead of being two separate entities, 'stability' can be found on one end of the continuum and 'change' on the other: the difference between the two is merely a matter of degree. For Deleuze and Guattari (1987:41) this paradox is solved not by assigning stasis and change to two ontologically distinct properties that happen to come together in a particular thing, but rather by claiming that an assemblage always possesses tendencies towards *both* stasis and change as the abstract poles of a single continuum. In fact, philosopher Brent Adkins (2015:11) argues that one of the great virtues of *A Thousand Plateaus* (and of Deleuze's work in general) is its "creation of a philosophy that is predicated on continuity replacing discontinuity".

In this sense, matter and discourse are not two distinct entities but are "co-implicated in complex and shifting arrangements from which the world emerges" (MacLure 2015:96). Such arrangements – assemblages – consist of combinations of bodies, things, utterances, modes of expression and regimes of signs. The task becomes not to categorise science, for example, as either "royal" (which is dependent on strict, limited formulas) or "nomad" (which develops eccentrically and freely), but to recognise that all scientific practices will involve some *combination* of both royal and nomadic tendencies (Deleuze & Guattari 1987:361).[7] Thinking differently about this continuum ranging from stasis to change *specifically* in relation to the materiality of all objects, both miniscule and colossal and everything in between, could become a beneficial reterritorialisation for the twenty-first century.

Finally, not only new objects, but new *object formations* – from "frozen embryos to digital machines, from floating islands of plastic waste in the world's oceans to grim scenes on the same seas of refugees without papers crammed into leaky vessels, accompanied by a growing sense of imminent environmental catastrophe in a world overwhelmed by things" – call for theories capable of understanding the new assemblages of contemporary materiality (Boscagli 2014:18). Assemblage theory thus supplies, as Fox and Alldred (2015a:399) point out, a way of understanding agency *not* tied to human action, which shifts the focus for social inquiry from "an approach predicated upon humans and their bodies, examining instead how relational networks or assemblages of animate and inanimate affect and are affected" (DeLanda 2006:4, see also Youdell & Armstrong 2011:145).

[7] According to Deleuze and Guattari (1987:362), nomad and royal science develop and evolve in very different ways. Moreover, nomad science is continually "barred, inhibited, or banned by the demands and conditions of State [or royal] science" as the latter continually imposes its form of sovereignty on the "eccentric" inventions of the latter (Deleuze and Guattari 1987:362).

Adkins (2015:12) holds that Deleuze and Guattari's rhizomatic image of thought allows them to "reread not only the history of philosophy but the history of thought in general through a new lens". Through this lens, which allows for the study of both stasis and change, new affective flows can be mapped, which in turn enlivens new concepts and understandings of the world. In the current project, using a toolbox of Deleuzoguattarian concepts informed by a rhizomatic image of thought is useful for analysing and forging interconnected relations between environmental consciousness and memory. I now turn to the second set, namely visual culture studies, and the field's increasing engagement with new materialist thought.

2.3 SET TWO: VISUAL CULTURE STUDIES

2.3.1 Historical overview

To argue that the study of affective assemblages could form part of the domain of visual culture studies, one needs to take note of the emergence of and shifts within this discipline. These shifts can be identified through the specific historical events of the 'cultural turn', the 'pictorial turn', the 'material turn', the 'sensory turn', and the 'affective turn'.[8] Informed and influenced by broader turns in the humanities, the shifts within visual culture studies included an increased academic engagement with multisensorial approaches which finally led visual culture theorists towards an increasing engagement with 'affect', a notion central to new materialist vocabulary. This section discusses these shifts within the field by tracking visual culture studies' historical developments.[9]

Over the course of history, art history has been characterised by stark dichotomies between inside and outside, specifically in terms of its canon and object domain. In light of the declining 'relevance' of art history in changing societies, visual culture studies emerged as a discipline in the mid-1990s. This field served as a possible answer to the problems posed by the narrow, conventional procedures of art history, which focused mainly on connoisseurship and notions such as 'the good eye' (Cherry 2004:479). Visual culture studies intended to 'deal with images' within a broader temporal and spatial framework in order to establish the importance of social

[8] For a comprehensive analysis of these factors, see Lauwrens' doctoral thesis entitled "Beyond Spectatorship: An Exploration of Embodied Engagement with Art" (2014).

[9] For a detailed scope of visual culture studies in relation to art history and within a South African context, see Lauwrens (2005).

history and the role of culture in visual reception and interpretation.[10] Over time, this has taken place in various contexts.

One of visual culture studies' attempts is to make 'visible' that which was previously rendered 'invisible' by dominant discourses and academic structures (Mirzoeff 2002:191, Lauwrens 2005:70). According to visual culture theorist and visual activist Nicholas Mirzoeff (2011:1,3), visuality (an "old word for a new project") aims at making authority seem self-evident, meaning that it must always be updated and changing so as to seem natural and 'correct'. Similarly, visual culture studies scholar Jenni Lauwrens (2005:70) explains that this 'invisibility' is constantly reinforced because humans interact with a hegemonically, *seemingly* naturalised, social world.

In his article "Showing Seeing: A Critique of Visual Culture", visual culture scholar William John Thomas Mitchell (2002:179) describes visual culture studies as not merely a "dangerous supplement to the traditional vision-oriented disciplines", but rather an "interdiscipline that draws on their resources and those of other disciplines to construct a new and distinctive object of research". Tavin (2003:201) argues that visual culture studies explore a range of "images, artefacts, objects, instrumentia, and apparatuses", which includes an "enormous variety of two- and three-dimensional things that human beings produce and consume as part of their cultural and social lives". Lauwrens (2005:73) agrees that this is a very broad and undefined scope. It could therefore be said that the object domain of visual culture studies is perhaps not necessarily demarcated by some "collection of things", but rather by the specific questions asked about them or by the "practices of looking invested in any object" (Bal 2003:8, 11).

Visual culture studies' broad scope poses concerns regarding the central role of the visual as 'privileged' among the senses. Indeed, the emphasis on the *visual* in visual culture studies (at least in its various early formations) has evoked many critiques of alleged ocularcentrism, many of which can be traced back to the responses in the well-known *October* questionnaire (1996). Ocularcentrism is western society's privileging of sight above the other senses when it comes to acquiring knowledge of the world (Jay 1988:3, Mitchell 2002:179). The hegemonic visual model of the modern era, it has been argued, was produced through two systems of thought. Firstly, since approximately the birth of the Renaissance in the fifteenth century, the widespread use of

[10] The 1996 edition of the *October* questionnaire urged theorists to elaborate on their opinion of visual culture studies. It was found that the discipline was met with mixed emotions: some believed that visual culture studies is either uninterested in socio-historical context *or* takes it into account on too large a scale. Others said it was solely interdisciplinary, without being medium specific.

linear perspective[11] in western art has been regarded as foundational to the scopic regime of modernity. Secondly, this preference of linear perspective was furthered during western Enlightenment by thinkers such as René Descartes, who favoured empirical and scientific rationalism, which privileges the eye's skill of capturing 'objectivity' - 'freeing' the disembodied mind from the limitations of the sensual body (Lauwrens 2014:69,75).[12]

In his bronze sculpture entitled *The White Race* (1967), surrealist artist René Magritte captures, rather mockingly, not only the privileging of the eye but also the stark division and hierarchisation of the senses (Figure 2.3). In a deconstructed composition of the human face, he critiques western society's favouring of ocularcentrism in order to sustain existing power structures. Like Magritte's artwork, some theorists are sceptical of vision, because it has the potential to be deceitful, overpowering, imprisoning, or surveillant.[13] In her video installation entitled *As Inside as the Eye can See* (2009) (Figure 2.4),[14] artist Casilda Sánchez opts for an anti-ocularcentric aesthetic. Sánchez's video of two embodied eyes, with the skin and lashes around them visible, is a massive installation that confronts the viewer directly. The two eyes are captured in exquisite detail and in a sense become entities on their own. When the two human bodies are close enough for their eyelashes to touch, they are, ironically, looking at each other from a distance that denies coherent or distinct vision. They move so close to each other that

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[11] Linear perspective, introduced by architect and art theorist Leon Battista Alberti, is a technique used to create an illusion of depth on a flat surface through the use of lines that run towards the same vanishing point to converge as if extended to infinity (Lauwrens 2014:69). I want to take a moment to provide Deleuze and Guattari's (1987) view on linear perspective, which is a useful way in which to situate their rhizome model of thought. According to Deleuze and Guattari (1987:298), there is "no falser problem in painting than depth and, in particular, perspective" because "perspective is only a historical manner of occupying […] lines of flight" or in other words, "of reterritorialising the moving visual block". This suggests that linear perspective should be considered as an archetypal punctual system: it takes the vertical and horizontal axis of the canvas as a grid for determining the location of points, and uses diagonals, or converging lines, to connect these points in an attempt to simulate depth. They continue that the lines of flight are "suitable for many other functions besides this molar function": "far from being made to represent depth, [lines of flight] themselves invent the possibility of such a representation, which occupies them only for an instant, at a given moment. Perspective, and even depth, are the reterritorialisation of lines of flight, which alone created painting by carrying it farther". This also suggests that, despite the stratifying capacity of linear perspective, it is possible to use this system as a "springboard towards the multilinear, and towards the plane of consistency (Smith 2012:347). In the process, the aim is not to draw a line that flees over the horizon, but to detach the horizon from its fixed position, in order to put the whole space in variation (Thornton 2018:218).

[12] Jay (1988:4) has coined the term 'Cartesian perspectivalism' to denote the combination of Descartes' philosophical ideas of subjective rationality in philosophy and the Renaissance notion of linear perspective in the visual arts.

[13] For example, Sartre experiences sight as "traumatic", because it is based on conflict. Lacan sees sight as always "mediated" through a screen of social signs, which makes it untrustworthy (Lauwrens 2012:32).

[14] The seven-minute video opens with a white screen. After a few seconds, what appears to be fine hairs (depicted in extreme close-up) "hesitantly enter the left-hand side of the screen and move slowly and jerkily toward the right" (Lauwrens 2014:267). The moment an eyeball appears one realise that these are eyelashes. Before this eyeball and eyelid come into full view, another set of hairs has entered from the right-hand side of the screen. A few moments later, two huge eyes look "hesitantly at each other whilst slowly blinking and gently moving closer together" (Lauwrens 2014:267). The viewer does not see the bodies of which these eyes are part, but can imagine that the eyeballs belong to two separate bodies. The video can be viewed at http://www.casildasanchez.net.

they cannot focus clearly, but rather rely on touching each other to sense 'closeness' (Lauwrens 2012:33). Lauwrens (2012:33) argues that these types of artworks could be interpreted as rejecting the assumption that "seeing is accomplished by a passive spectator whose gaze on the world is from an outside, disinterested position".

Left:
Figure 2.3 | **hierarchisation of the senses**

René Magritte, "The White Race", 1967.
Bronze sculpture, 58 cm high.
(Artstack website).

Below:
Figure 2.4 | **anti-ocularcentrism**

Casilda Sánchez, "As Inside As The Eye Can See", 2009.
Video, 7 minute loop.
(Casila Sánchez website).

Depriving vision of distance, defamiliarizes seeing and shows how vision is also fallible, hostile, and alienating (Lauwrens 2012:34).[15] It also leaves room for ideas of intimacy and discomfort established through something other than seeing someone or something, suggesting that it may be situated in touch or any of the other senses, and that the smaller the gap between humans, other humans, and objects, the higher the intimacy level. Lauwrens (2012:38) concludes that seeing is a limiting experience and that the eye should be reconfigured as one sense among an array of others (Lauwrens 2012:27).

In his foreword to *Art, History and the Senses*, art historian Simon Shaw-Miller (2010:xv-xxiv) suggests that the individual sensory faculties – sight, hearing, smell, taste and touch – can be compared to the faculties that exist in a university. Considering the ways in which interdisciplinary, cross-disciplinary, and multidisciplinary research is gaining ground in institutional practice, this metaphor serves as a useful paradigm for thinking about the operation of the faculties of the senses within the human sensorium. The senses are increasingly recognised as interconnected rather than monosensory faculties.

To illustrate this point further, I refer briefly to Deleuze's (2003 [1987]) writings on the artworks of Francis Bacon, written at the same time as *A Thousand Plateaus* and covering many of the same themes. Deleuze (2003:49-52) clarifies that, in making oneself a Body without Organs[16] the aim is not simply to destroy the organs, but to create "transitory organs". Deleuze (2003:52) takes the act of viewing one of Bacon's paintings as his main example to explain how the eye "ceases to be organic in order to become a polyvalent and transitory organ". Beyond the eye's prescribed function of feeding visual information to the brain, the intensity of the painting also invites the viewer to feel the painting with other organs: the painting "gives us eyes all over: in the ear, in the stomach, in the lungs" (Deleuze 2003:52). This deterritorialisation of the body happens through the act of resisting the normal function of the organs (Thornton 2018:218). What happens when humans experiment with the possibilities offered by the body?

[15] Mitchell's (1994:13, 2002:172) 'pictorial turn', a turn towards the image resulting from an "anxiet[y] about 'the visual'", of the late twentieth and early twenty-first century is therefore not "unique" but is merely a circling back of 'old' paradigms (similar to how the new materialisms circled back to existing materialist traditions). Around the same time that Mitchell coined the 'pictorial turn', Gottfried Boehm (1994) coincidently coined 'ikonische Wendung' or 'iconic turn'. Boehm's iconic turn, in which he poses the image as equally important as language, can be seen as a reaction to the linguistic turn that preceded it. Although in different ways, the pictorial and iconic turns share an engagement with the visual that "exceed the possibilities of a semiotic interpretation" (Moxey 2008:132).

[16] Deleuze and Guattari use 'body without organs', 'Body without Organs' and 'BwO' interchangeably. I refer to 'Body without Organs' for the sake of consistency.

Increasingly, an expanded exploration of senses, or the 'sensory turn', is engaged by visual culture studies (Shaw-Miller 2010, Duncum 2012, Lauwrens 2014). This turn paves the way for a consideration of an array of sensory inputs beyond vision, in order to eventually study the human experience of events on a multisensory level.[17] The 'sensorium', according to visual culturist Paul Duncum (2012:182) in his article, "An Eye Does Not Make An I: Expanding The Sensorium", includes all the ways of sensing and perceiving the world. This supposes the total character of the sensory environment such as sensation, perception, and the interaction with information about the world. This term opens new possibilities and challenges for visual culture studies, mainly because it problematises the *visual* in visual culture (Duncum 2012:183).

In the process of reconceptualising the sensorium, some popular assumptions about the senses come undone (Duncum 2012:183-186). Firstly, it is commonly understood that there are only five senses, each connected to a specific organ, namely sight to the eyes, hearing to the ears, smelling to the nose, tasting to the tongue, and feeling to the skin. Yet, as Socrates already suggested, it is increasingly acknowledged – predominantly by psychologists – that there might exist a "potentially limitless" number of senses that could include aspects such as perceptions of space, heat, or lightness (Duncum 2012:184). The second assumption is that the senses are hierarchically ordered according to their importance in knowledge acquisition. Several theorists have discussed their thoughts on this hierarchy that assumes vision as primary sense, hearing as secondary and touch, taste, and smell as considerably less important than the first two (Howes 2005, Jones 2007, Duncum 2012). The last popular assumption is that the senses operate separately from one another. Rooted mainly in modernist ideals of classification and purification, the visual was isolated and favoured (Duncum 2012:186).

Recently, multisensorial theorists ranging from neuroscientists to philosophers have claimed that being an embodied human supposes that we perceive *simultaneously* with all our senses, including even those beyond haptic, aural, gustatory, olfactory, and visual ones (Duncum 2012:188).[18] In terms of memory, Jones (2007:26) notes that if "we are to consider remembrance as a dialogue, we need to think differently about the role played by the senses". The senses are crucial to the apprehension of the material world. The traditional idea that smell is "the most despised of the

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[17] Some sensory scholars would include Francis Halsall (2004), David Howes (2005), Caroline Jones and Peter Galison (2006), and Patrizia Di Bello and Gabriel Koureas (2010). Other noteworthy scholarship includes the *Sensory Formations* series (edited by Howes 2014) and contributions to the academic journal *Senses and Society*.

[18] Through such an approach, the study of occurrences such as, for example, synaesthesia, in which two or more sensory impressions are experienced at the same time (such as tasting a colour or hearing a shape), become possible. Although this is beyond the scope of this study, it could also be investigated in relation to objects of memory.

senses", has been replaced by appreciation of olfactory stimuli's key role in evoking memories of the past (Duncum 2012:186).

Furthermore, sensations change as the experiencing person moves within her lifeworld, and the body acts as an aspect of the self we live *through*, and not merely as a container we live in (Lagerkvist 2017:173, Lauwrens 2014:95). Therefore, the process of remembrance is constructed by the one who remembers, which supposes a "continual and dynamic encounter between the subject and the material world he or she inhabits rather than an abstract and dispassionate transaction between the external world and the mind" (Jones 2007:26). Finally, taking a closer look at multisensorial art, which celebrates an integrated mind and body through the marriage of visual art that envelops the entire human sensorium, reveals a considerable number of new directions in which visual culture studies are headed.[19] Through doing this, one can begin better to understand human experience holistically, as embedded in a variety of sensory experiences. In the process of engaging with embodiment and immediate bodily experience through the senses, discussion in visual culture studies has undoubtedly begun to enter the realm of affect.

2.3.2 Affect

One of the latest developments in visual culture studies, although still contested, forms part of the 'affective turn' – a turn to the "neurosciences of emotion" (Leys 2011:434) – that has swept the humanities in recent years. As mentioned, Rothman and Verstegen (2015:1) describe the emerging new materialisms as "poised to don the mantle once worn by the likes of structuralism, poststructuralism, and the Frankfurt School". In its most iconoclastic mould, they add, contemporary theory aims to "revive outmoded notions of materialist ontologies" (Rothman & Verstegen 2015:1).[20] One of the most influential affect theorists in the humanities and social sciences, Massumi (1995:88), claims that there seems to be a growing interest in affect within media, literary, and art theory, and its role in information and image-based late-capitalist culture.

When challenging ocularcentric scopic regimes, dynamic and action-orientated engagement with that which one is studying, is vital. For example, cultural theorist Sunil Manghani (2013:xxii) argues that we should not just focus on what is *in* an image, but also on what it *does*. In knowing this, it can be useful to look at the *affective* power of images. As responsive humans, we are not

[19] This includes art types where the visual and sounds are mixed, or where taste is favoured, or where feeling or smelling is highlighted.
[20] Such outmoded ontologies include theories dealing with matter, like the new materialisms, speculative realism, actor-network theory, and object-oriented ontology.

merely passive recipients of stimuli, but rather subjects who can be moved by materialities. This places humans in networks of heterogeneous materialities with affective flows between them. Affective or bodily responses are easily aroused by factors over which the individual has little control, since they purely are reactions.

Affect arises in the midst of *in-between-ness*: in the capacities to act and be acted upon (Seigworth & Gregg 2010:1). For education academic Eric Shouse (2005) and Massumi (1995), affect is not a personal feeling because, whereas feelings are "personal and biographical" and emotions "social", affects are "*prepersonal*". Feminist author Claire Hemmings (2005:551) defines it as "states of being" that can be transferred onto various objects, people, emotions, and other affects, rather than to their manifestation or interpretation as emotions. Affect, for Massumi (1995:85,88), is a non-conscious experience of intensity, a "moment of unformed and unstructured potential", which becomes emotions once recognised and owned.

He maintains that affect is usually directly manifested at the surface of the body – in the skin – as something that can be scientifically studied, where we are "directly absorbing the outside" (Massumi 1995:85,90). Massumi (1995:96) holds that affect is autonomous because it "escapes confinement in the particular body whose vitality, or potential for interaction, it is". He holds that there is no cultural-theoretical vocabulary specific to affect, because it exists outside of social signification (Massumi 1995:88). Hemmings (2005:549,563) disagrees, because she believes that it could be more useful when placed within the context of social narratives and power relations. She clarifies that she does not deem studies on affect unnecessary, but that she is unsupportive of the manner in which theorists assume affect takes place outside social meaning, since this has the potential of fixing relations of domination (such as race, class and gender) that eventually *strengthen* a certain social order (Hemmings 2005:549,551,565).

Taking these perspectives into account, I understand affect to be mediated and transmitted through an automatic sensory flow of uncontained energies that move across thresholds. I take engaging with affect as crucial in determining the relationship between bodies, environments, and subjective human experiences of the world. Like Hemmings (2005:565) I acknowledge that different materialities, including micropolitical habits and macropolitcal social relations of power, are at play when studying affect.

Speaking about affect as something that flows between materialities, also evokes ways of thinking and speaking about the human body as one such materiality. The body highlights one of the most common contradictions in visual culture's (and, more broadly, the humanities') attitude towards the human/nonhuman relationship: the desire to transcend the human while at the same time reasserting the importance of the flesh and the materiality of lived experience (Ayers 2012:36). In what has undoubtedly become one of the most frequently cited quotations concerning affect, Spinoza (2002:280) maintains that "nobody as yet has determined the limits of the body's capabilities: that is, nobody as yet has learned from experience what the body can and cannot do". A Spinozist reading of the human body as an object with undetermined limits, could be useful in addressing the contradictory desire for transcendence and fleshy materiality.

Deleuze (1988:45), following Spinoza, locates affect – and the capacity to be affected – in the midst of things and relations and, then, in the complex assemblages composed of bodies and ideas in the world. Affect becomes "persistent proof of a body's never less than ongoing immersion in and among the world's obstinacies and rhythms, its refusals as much as its invitations" (Seigworth & Gregg 2010:1). According to Massumi (1995:96), affect is a realisation of one's own aliveness, without having to think about it. He pleas for a new way of thinking about the body which, it becomes clear, is both actual, here and now, and virtual, as every moment is already in the past and implies a certain potential for the future (Massumi 1995:91).

Hemmings (2005:549) echoes that affect can be a way of "deepening our vision of the terrain we are studying" and of allowing for and prioritising its "texture". Although affect's effect differs from materiality to materiality, while there is no way of knowing exactly how and when energy moves, it is exactly these affective nuances that might be interesting when it comes to studying humans' relationship with objects that they feel sentimental about: social production unfolds rhizomatically (rather than linearly), and continuous affective flow between materials inevitably impacts the entire assemblage (Alaimo 2010:13).

I return to Rothman and Verstegen's (2015:1) book, to my knowledge the only existing book on the relation between visual culture studies and the new materialisms. The editors' main aim is to analyse the complicated receptions of 'new' ideas by prominent theorists in visual culture studies, similar to what the *October* questionnaire had done for art historians 20 years earlier. Their belief is that this reception within the field of visual culture studies has yet to be sufficiently comprehended (Rothman & Verstegen 2015:1). In their respective chapters, visual culture

studies theorists Deborah Haynes (2015:8) and Jason Hoelscher (2015:27) express their weariness of the "race for theory": the pursuit of the next paradigm that will save us if we only have the patience. For Haynes (2015:8-9), the new materialisms can reach its potential only if it weds theory and practice while respecting cultural difference.

In the concluding chapter of the book, which also serves as a note of caution to visual culture studies theorists, Verstegen (2015:174) warns that Deleuzian and Latourian materiality is strongly influenced by narrow French debates over immanence and that, by the time it arrived in visual culture studies, it placed impossible restrictions on theorising. This is because their interest in denying limits creates a radically flat ontology, which makes it difficult to create any more differentiations on matter than simply that they should be treated equally in an unprejudiced way (Verstegen 2015:172). In the end, such materialisms represent a kind of status quo that has more in common with previous trends in visual culture studies than anything one would propose to stand as its dialectical overcoming.

Rothman and Verstegen (2015:2), however, do point out some possibilities afforded by the new materialisms. These include, for example, a chance for art history and visual culture studies to engage with the latest philosophical discourses, "even a changed landscape of philosophy itself" (as per Latour, Bryant and Harman); a blurring of the "old division" of continental and analytical philosophy in favour of problem-based questions; an opening to attend to the politics of matter's arrangement rather than interpretation of those arrangements (such as Deleuzoguattarian assemblages); and, finally, a move beyond the emblematic use of theory – "art illustrating theory" – towards a more productive and practice-based engagement of art and theory (Rothman & Verstegen 2015:2).

To this list can be added art historian Susan Best's (2011:1) suggestion that the affective turn has the potential address art history's "theoretical blindspot": the discipline's lack of "interpretation of art's affective dimension". Yet, Hemmings (2005:548) warns that although the return to ontological demands of images and objects is useful, theorists should remain wary of the possible effects of positioning affect as *the* sole answer to contemporary problems. Engaging critically with affective bodily responses, always in relation to other tools and methods, may therefore prove useful when analysing memory objects and environmentally conscious practices in the current study.

Ultimately, Mitchell (2002:179) argues that, if the only thing that visual culture studies does is to revisit traditional disciplines of the humanities and social sciences with "fresh eyes, new questions, and open minds", it has done enough. The perspectives discussed above place this study within the field of visual culture studies by pointing out new ways of thinking about vision, visuality, the senses and, most recently, affect. It becomes evident that many theoretical developments have shaped this field, which serves as a useful backdrop for conducting the current study through the use of various methods, such as data visualisations and interviews. Memory studies is particularly applicable in the latter case and, as the third theoretical set for this study, is treated in the following section.

2.4 SET THREE: MEMORY STUDIES

2.4.1 Historical overview

Memory studies is a critical field that uses concepts surrounding memory to explore remembering and forgetting of diverse pasts through a range of interchangeable lenses. In other words, it examines how, what, and why individuals and societies remember by taking into account social, cultural, cognitive, political, and technological factors. Memory studies developed into a "vital and vigorous interdisciplinary and international research field, which stretches across the humanities and the social sciences all the way to the natural sciences" (Erll 2011:4). As a concept, memory has many diverse components and meanings in different fields of study. An abundance of extant work in memory studies occurs in an equally abundant number of fields. Here, I can only gesture towards these works, while emphasising the areas that are of particular relevance to the present argument.

From a humanities perspective, the term 'memory', according to philosopher Hans Ruin (2015:213), has become the "shibboleth and lingua franca of cultural studies, concerned in different ways with exploring and comparing how groups, communities, and nations live and enact their past". A prominent figure in the development of memory studies, historian Pierre Nora (1989:19), described memory as "life, borne by living societies", which remain in permanent evolution. It lives "in the concrete, in the space, gestures, images and objects", or lieux de mémoire (Nora 1989:19).[21] Historian Birgit Schwelling (2006:33) endorses this

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[21] Nora (1989) developed the term *lieux de mémoire* to refer to memory 'realms': monuments or things which remind us of the event (but which do not necessarily have a geographical link to where it took place). The memory sites discussed by Nora and his colleagues include places such as Reims, Paris, the prehistoric caves of Lascaux, buildings, and museums; rituals, festivals, and calendars; objects such as monuments, flags, and texts (Marcel Proust's

definition, adding that memory is "never unmediated, but always influenced by its cultural frames".

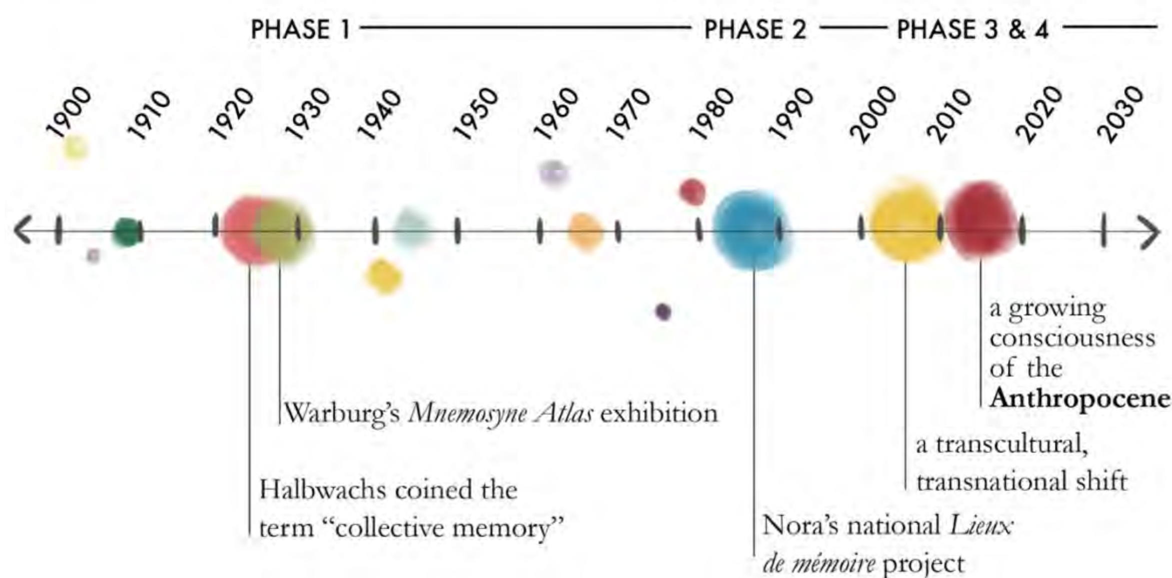
Around the turn of the twenty-first century, the term 'memory' was described as "leading" (Assmann 2002:28) and as maintaining an "extremely prominent position" (Rosenfeld 2009:123) within the humanities and social sciences. Bond, Craps, and Vermeulen (2017:1) hold that it has, in the last few years, increasingly been considered to be a "fluid and flexible affair", despite the fact that, in the past, it was thought to be anchored in particular places, "lodged in particular containers" such as monuments, texts, and geographical locations, while belonging to the (national, familial, social) communities that helped in the acquisition of a sense of historical continuity.

Over the course of the twenty-first century, memory has increasingly been defined in terms of a variety of new concepts that suppose its movement, such as 'cosmopolitan' (Levy & Sznaider 2006), 'multidirectional' (Rothberg 2009), 'global' (Assmann & Conrad 2010), and 'travelling' (Erll 2011). Describing memory in these and other ways emphasises that it is a complex and context-dependent term.

In westerns society, the history of thinking about memory and the creation of shared heritages can be traced back to antiquity, where thinkers such as Aristotle and Plato grappled with questions surrounding the workings of remembering and forgetting. Yet, it was only around the beginning of the twentieth century that a scientific interest in the phenomenon of memory emerged. While memory studies has typically been divided into three phases (Erll 2011:4) a fourth phase relating to an increasing awareness of the Anthropocene has recently been proposed (Craps 2017a:3) (Figure 2.5).

Remembrance of Things Past); real people (René Descartes and Joan of Arc); mythical ones (the Good Soldier, Nicolas Chauvin); events (the Battle of Verdun, the Tour de France); and concepts, mottos, and symbols. Whether they constitute physical locations of memory, or just its place in the social imagination – these are all approached as the result of an imaginary process that codifies and represents the historical consciousness of France (Goodbody 2011:60-61).

Figure 2.5 | **developmental phases of memory studies**



The first phase encompasses the pioneering work of early twentieth century memory scholars, most prominently sociologist Maurice Halbwachs (1925), who engendered the concept of 'collective memory' (Craps 2017a:3). According to Halbwachs' conception, memories are inevitably shaped by collective social contexts, such as one's family, religion, region, and profession. He referred to these contexts as social frameworks, or *cadres sociaux*. Similarly, experimental psychologist Frederic Bartlett (1932) showed that socio-cultural contexts, such as gender or education, were profoundly important forces in shaping remembering processes.

According to Erll (2011:11), memory studies' other founding father is art historian Aby Warburg, who focused on the movement or migration of memory symbols across time and space, especially in his Mnemosyne Atlas exhibition (1927) (Figure 2.6).[22] During this phase, scholars of different disciplines also showed interest in memory, most notably psychologist Sigmund Freud,

[22] *Mnemosyne Atlas* (1924 - 1929) was Warburg's attempt to map how images with great symbolic, intellectual, and emotional power emerge in western antiquity and are then reanimated in the art and cosmology of later times and places. The collection, named after the Greek goddess of memory, was left unfinished at the time of Warburg's death. It ultimately spanned 63 panels and encompassed almost a thousand individual pieces. The carefully curated panels contain a repository of condensed memory in complex constellations which, to the twenty-first century viewer, may simply resemble an internet search engine's flood of images (Johnson 2016). The Warburg Institute's interactive webpage presents ten of these panels selected to exemplify the cosmographical and art-historical content of the original exhibition.

philosopher Henri Bergson, sociologist Emile Durkheim, writer Arnold Zweig, sociologist Karl Mannheim, and visual culture theorist Walter Benjamin (Erll 2008:8, 2011:4).

Figure 2.6 | **the migration of memory**

Aby Warburg, "Bilderatlas Mnemosyne – The Original", 2020 [1925].
Photograph by Silke Briel, installation view from *HKW*.
(HKW website).
In recent years, the *Haus der Kulturen der Welt* in Berlin (Germany) recovered all 63 panels of the Atlas from Warburg's original images for the first time. The exhibition was open to the public in 2020.

The second phase started roughly with the publication of Nora's seminal seven-volume *Les Lieux de Mémoire* project (1984-1992) in the 1980s and early 1990s (Erll 2011:4). This phase, during which the 'new' memory studies ascended as a "cultural buzz word" (Rosenfeld 2009:124), put forward the "nation-state as the primary social framework of memory" (Craps 2017a:3). The shift towards the emphasis on culture, instead of society, was part of a general movement of refashioning the humanities as the study of culture (Erll 2011:6).

In 2011, Erll (2011:5) questioned whether a subsequent third phase was under way or whether the field was to continue "in the mode established since the mid-1980s". She did, however,

mention that a prominent shift away from "memory in culture" towards "memories of cultures" had taken place, once again as part of a larger movement towards 'transcultural studies' in academia (Erll 2011:6,8). Nora's project, she noted, served as a possible catalyst for this shift (Erll 2011:6). According to Craps (2017a:3), the turn of the twenty-first century undoubtedly did call for a third phase of memory studies, whose practitioners are "united in opposition to the methodological nationalism characterising the previous phase". Prominent theorists, such as Aleida Assmann and Sebastian Conrad (2010), Ann Rigney and Chiara De Cesari (2014), Craps (2017a:3), Michael Rothberg (2009), Hans Ruin (2015), Daniel Levy and Natan Sznaider (2006), broadly assert that memory "transcends such narrow boundaries and must therefore be studied from a transnational, transcultural, or global perspective".

Finally, Craps (2017a:3) argues that memory studies are evolving yet again, and that a fourth phase is potentially underway. He claims that, "without meaning to suggest that the last word about transnational, transcultural, or global memory has already been said", it can be argued "with some justification that what we are witnessing now is the advent of a new, fourth phase in memory studies: a phase prompted by our growing consciousness of the Anthropocene" (Craps 2017a:3). Increasingly, theorists are engaging with this latest phase. This phase is further enriched and developed through posthumanist and indeed new materialist perspectives (Knittel & Driscoll 2017, Colebrook 2016, Kennedy 2017b). Theoretical shifts in the twenty-first century, such as the new materialisms, engage memory researchers to think critically about how memory studies will be envisioned in the future. Chapter 3 is dedicated to a detailed treatment of the fourth phase, or the intersection between memory and environmental consciousness, as this phase forms one of the core components of the current study.

2.4.2 Beyond boundaries

Increasingly, memory (and the memory objects included in this discourse) is seen as forming part of larger networks and 'media ecologies' subject to boundless variations and remediations (Knittel & Driscoll 2017:381). The importance of interrogating dualisms (between cultural and individual memory, between science and the humanities, between thinking and feeling, between reason and emotion, and so on), also more readily comes to the fore in the field of memory studies (Groes 2016:6,7).

Roseanne Kennedy (2017b:455), a memory studies scholar who has increasingly been working within the environmental humanities, contends that memory could be "compatible with" a new

materialist reading *as an assemblage* constituted by a network of human and nonhuman actors exerting force in dynamic interaction. Crownshaw (2014:175) adds that memory studies needs to adopt a posthumanist stance, "otherwise it will be circumscribed by the normative theorization of memory's symbolic reconstitution of human life and human worlds". Amanda Lagerkvist (2017:173) emphasises a materialist perspective that makes it possible to read the human body itself as a memory medium. As such, memory moves beyond the "conventional limits of memory studies" of personhood, identity or the autonomous human (Kennedy 2017b:455). A benefit of the new materialisms for memory studies emerges in this context: as Rigney (2017:475) holds, it "provides conceptual grounds for recuperating these alternative traditions within memory studies and for linking the production of 'intangible' memory in the media and the arts to the more material- and artifact-based concerns of those working in the field of heritage studies".

In the past, memory studies often came close to entertaining new materialist and object-oriented facets without, however, "having fully embraced the theoretical tools and methods that these theories provide" (Knittel & Driscoll 2017:382). In embracing these tools, as is done in the current study, focus on memory might become even more useful in the Anthropocene, since the new materialisms has the potential to reframe the "object of memory studies by bringing natural history and human history together within the same frame" (Rigney 2017:476).

In some cases, as Knittel and Driscoll (2017:382) point out, these theories may be equipped to reveal questions or problems that memory studies has not adequately engaged with. For example, if memory is properly conceptualised, it may provide access to a "speculative experience of otherness in oneself", highlighting that humans are "not just the observers and judges of the past, but also the ones being judged by it" (Ruin 2015:206). Groes (2016:1) also mentions that a "multiplicity of revolutions"[23] are "radically reshaping the context of our thinking about what it means to be a human being" (Groes 2016:1). Indeed, narratives about the place of nonhuman beings in human stories of origins, identity, and futures "point to a possible opening for the methods of memory studies" (Kennedy 2017a:8). In similar vein, Erll (2011:5) suggests that we "must try to understand the different ways in which people handle time, and this refers not only to their 'working through the past', but also includes their understanding of the present and visions for the future". Almost a decade later, in the afterword of a series of

[23] Such a "multiplicity of revolutions" include, amidst the contexts of environmentalism and climate change, globalisation, large and ageing populations, geopolitical shifts, Artificial Intelligence, ongoing scientific breakthroughs, new technologies, the dominance of the internet, and the pervasiveness of social media.

articles on time in the journal *Memory Studies*, Erll (2020:861) reflects on how theorists are reframing their concepts of time and the past with specific reference to the COVID-19 pandemic.

She notes that, although memory studies has the potential to "keep generations of scholars busy", this reuse of 'memory' might only be "turning into a mere 'stencil'", and memory studies into an "additive project: we add yet another site of memory, we address yet another historical injustice" (Erll 2011:5). She does, therefore, hold that these issues are rather difficult to address with the current methodological tools employed by memory studies (Erll 2011:6). A further problematic is outlined by Ruin (2015:214), who avers that the whole theory of memory is trying to overcome the "object objectification of temporality and historicity". He consequently argues that memory should not merely be understood as "the subjective reflection of the past, or as the cognitive function whereby the past is conserved in the human mind", since these ways of describing it simply reinstate what it intends to debunk (Ruin 2015:214).

In light of these concerns, memory theorists are suggesting layered interdisciplinary approaches that interrogate memory studies' core methods. For example, Groes (2016:3) explains that the chapters in *Memory in the Twenty-First Century: New Critical Perspectives from the Arts, Humanities and Science* (2016) are the result of a "renewed interest in the changing nature of human character, of the mind and memory, and of social relations". Groes (2016:6) argues that the book reclaims, and broadens out, memory from its definition as a "deliberate, voluntary, archival, collective and unavoidably political act": he calls for a return to the idea that memory is an embodied process that takes place (quite often, spontaneously) in porous and changing human and nonhuman bodies.

In a similar vein, *Memory Unbound* (2017), edited by Bond, Craps, and Vermeulen, was also brought about by an awareness of these shifts. In the introduction, the editors note that memories travel "along and across the migratory paths of world citizens" and are "forwarded from cameras over smartphones to computers and back in unpredictable loops" (Bond, Craps & Vermeulen 2017:1). They therefore redefine the relations between different generations as geographical and medial transfers shape the uptake of memories by people who can no longer be said to simply inherit them. Meanwhile, the study of memory spans and complicates the boundaries between academic disciplines, generating a multifaceted and evolving field of research (Bond, Craps & Vermeulen 2017:1). These books could be said to respond to Erll's call

for new questions around memory. Like Groes (2016:4), I find that these new perspectives enable humans to "make more sense of how our lives are changing today". I also find it useful that these and similar writings suggest how fields might benefit from one another's knowledge and practices.

It is further important to situate sentimentality (and sentimental objects) within the field of memory studies, as memory and sentimentality are not synonyms. In the context of the current study, similar to philosophy scholar Guy Fletcher's (2009:55) undertaking, 'sentimental' stretches beyond mere mnemonic factors and conveys a further "connection with sentiment or emotion-involving" relationships, objects or experiences. Sentimentality can be seen as sitting at an intersection between 'emotion', 'memory' and 'the self' (Hatzimoyis 2003:373). A sentimental human has the tendency to feel emotionally attached to objects due to the memories associated with them (Lacine 2011:11). A thing is sentimentally valuable if and only if it is

> valuable for its own sake in virtue of a subset of its relational properties, where the properties include any or all of having belonged to, having been given to or by, or having being used by, people or animals, within a relationship of family, friendship, or romantic love, or having been used or acquired during a significant experience. This is not comprehensive, not least because it leaves unanswered the important question of why it is that the relational properties sometimes generate sentimental value and other times do not. (Fletcher 2009:56)

In other words, an object can be seen as having sentimental value due to its symbolic meaning and its ability to evoke emotion due to its association with an important person or event (Kwok, Grisham & Norberg 2018:1132). During the research process, I delved into work done on individuals' memory objects, which repeatedly led me to research in the field of psychology. Fox and Alldred (2019:21) similarly point out the academic barriers that treat the individual's memories as the "territory of psychology". Here, I note persisting anthropocentric approaches to objects.[24] In the field of psychology, theorists tend to focus on 'possessions' (that are distinguishable from other objects by the characteristics and values 'owners' imbue in them) rather than human/objects relations. This means that objects' characteristics are studied mostly based on their owner's experience of them (Cushing 2013:1732).[25] Although psychologist Mihaly Csikszentmihalyi and sociologist Eugene Rochberg-Halton (1981:1) claim that to "understand what people are and what they might become, one must understand what goes on between

[24] Turkle (2007:6) notes that anthropologist Claude Lévi-Strauss and psychologist Jean Piaget "contributed to a fundamental revaluation of the concrete in the mid-twentieth century", but their work simultaneously undermined the concrete thinking they promoted.

[25] This generally includes serving as evidence of that person's existence, representing identity and providing a sense of bounded control (Cushing 2013:1732).

people and things", studies predominantly focus on humans, and not the affective flows *between* humans and objects.

This includes, for example, studies by Furby (1978), who considered the meaning and motivation of possession attachment; Csikszentmihalyi and Rochberg-Halton (1981), who investigated the meaning of treasured objects in the domestic environment; Ahuvia (2005), who elaborated on identity construction and objects as an extended self; Cushing (2013), who focused on attachments to digital possessions; and Roster (2015), who focused on excessive attachment and hoarding. Although these studies do not follow a new materialist approach to the engagement with objects, I take them into account, since they provide an enriched understanding of how researchers and social groups – also the participants in this study – continue to view objects through a persisting anthropocentric lens.[26]

In this study, I suggest that it would be useful to explore sentimental objects through the use of a new materialist lens in order to enliven an understanding of human/nonhuman relations in the Anthropocene. Rigney (2017:474) claims that materialities have an "active role to play in the production of memory, triggering and shaping recollection and linking people" across time and space. She adds that objects' materiality often secretes more meaning than that which is consciously inscribed in them. Already in 1990, feminist author bell hooks (1990:104) proclaimed that "objects are not without spirit", because "they touch us in unimagined ways". The current study therefore approaches memory objects by focusing on the relations that emerge among humans and objects. I focus on the assemblages composed of such objects, memory practices, memories, and humans. The memory objects discussed in the interviews include heirlooms such as furniture, quilts and rings; travel souvenirs such as mugs, earrings and fridge magnets; found objects such as coins and glass bottles; self-actualising objects such as paintings, flutes and diaries; spaces, such as gardens and cities; and experiences, such as holidays or family rituals.

Rigney (2017:475), however, reminds one that, although objects have become a "red-hot topic" in the field of cultural research and in cultural practices, they were "always already a central concern in heritage studies, museum studies and archaeology". This material-based tradition therefore does form part of the memory studies discourse. She warns against the "historical fault-line between the study of material and the immaterial" which "runs very deep" (Rigney

[26] Within this context, I elaborate in Chapter 6 on how this study's participants often described sentimental objects as companions, reminders or carriers of their identity.

2017:475). The divergence between memory studies' "fissuring of document-based history" and heritage studies' material-based fields of antiquarianism and archaeology, as well as between natural history and human history, dates from the beginning of the nineteenth century (Rigney 2017:475). This divergence between 'material' and 'immaterial' memory, according to Rigney (2017:475), has arguably brought about the "tunnel vision" of, respectively, memory studies as practised in departments of literary and cultural studies on the one hand, and heritage studies on the other: both parties address similar issues but often operate with different concepts and refer to a different canon of disciplinary authorities.

Theorists disagree about what will constitute the future of memory studies. Some argue that, despite its prominent place within academia, memory studies' "current status eventually will be diminished by major changes afoot in the world today", since the "factors that initially helped elevate memory to unprecedented prominence have begun to fade in the last several years" (Rosenfeld 2009:123). In contrast, Erll (2011:5) points out that massive world events rooted in unjust and discriminatory pasts do not afford researchers "the luxury" of *not* studying memory. She claims that after a "two-decade frenzy of research", memory studies has charted a variety of spaces of memory worldwide, which have lead us to "deeper insight into issues of war, genocide, trauma, and reconciliation with a specific focus on memory" (Erll 2011:5).

Humans are indeed challenged to think about themselves and their worlds as part of increasingly bigger social, spatial *and* temporal frameworks. This confrontation ultimately also evokes questions about where memory studies fits in and what its future entails. Due to the synergies that have come to exist between disciplines with memory studies as a link, it "seems ideally suited to address new questions emerging from new developments and challenges – questions, for example, about the relation of nature and culture, about globalisation and its discontents, and about the futures that we envision" (Erll 2011:5). Another way in which humans are challenged to rethink themselves and their worlds is through the onset of the Anthropocene, which is discussed as the fourth and final set in the subsequent section.

2.5 SET FOUR: THE ANTHROPOCENE

2.5.1 An historical overview

The current section is informed by numerous imbricating fields and discourses surrounding the Anthropocene, including environmental humanities, environmental history, and environmentalism, all of which have been persistently using and shaping the term. I trace the

historical events that led to and the theoretical developments that grapple with the current state of planet Earth. The last century has seen major shifts, generally brought about by humans, on the surface of the planet: human actions have changed the planet's air, soil, seas, and weather to such a degree that it has become common to refer to the present age as the Anthropocene. This epoch is thus most prominently marked by the transformative impact of human activity on the planet's geophysical processes (Craps 2017a:2). As mentioned, 'Anthropocene' is a term put forward in 2000 by the atmospheric chemist and Nobel laureate Paul Crutzen and the biologist Eugene Stoermer (Bonneuil & Fressoz 2016 [2013]; Groes 2016; Emmett & Lekan 2016; Lewis & Maslin 2015; Parikka 2015; Sklair 2017; Morton 2016).

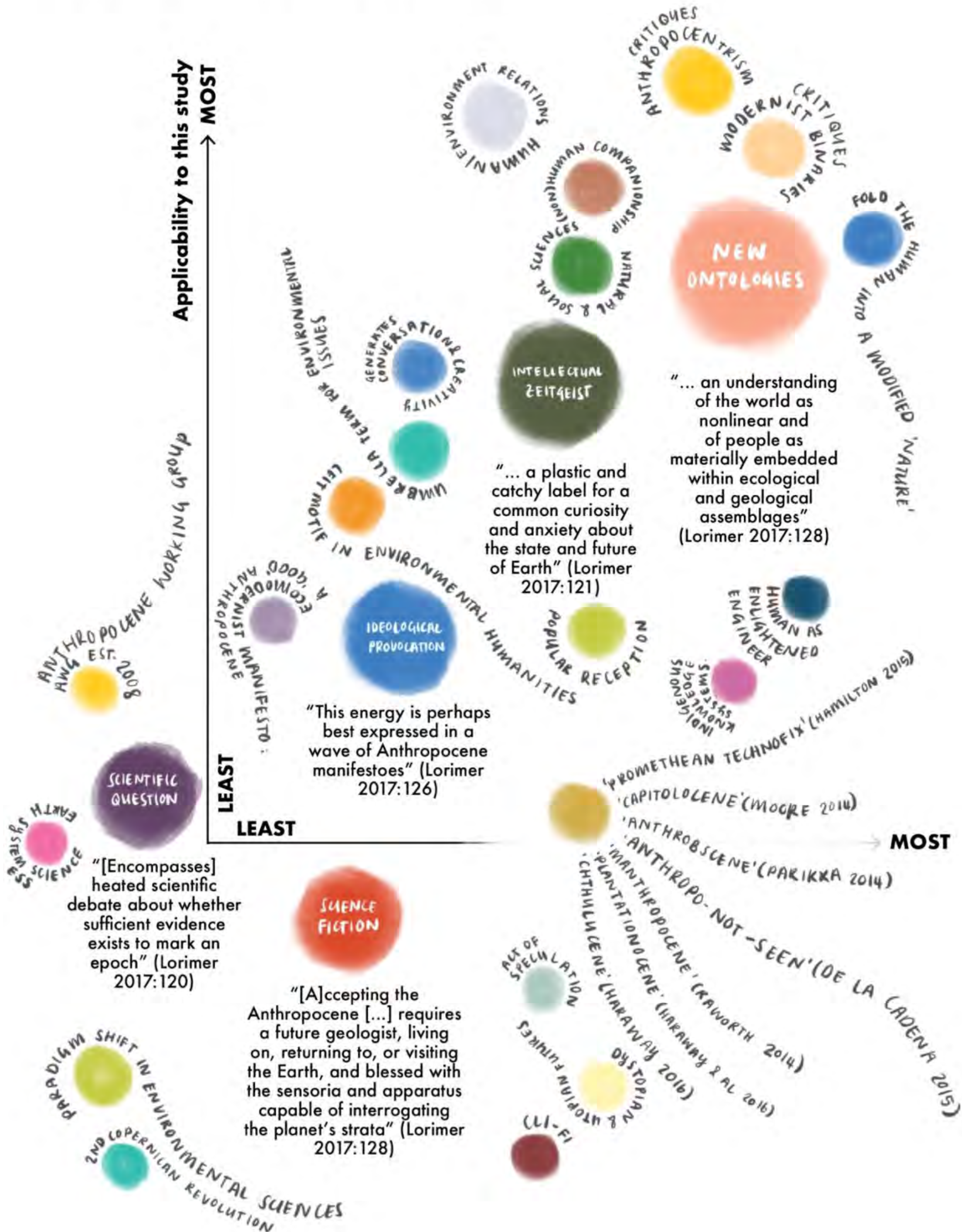
Since its coinage, once more, the term has been continuously contested, debated and discussed in several academic journals dedicated to this topic, most notably *The Anthropocene*, *The Anthropocene Review* and *Elementa* (Lewis & Maslin 2015:171). It has also been used increasingly in the titles of conferences, dozens of books, hundreds of articles in newspapers, magazines, websites and blogs, as well as art exhibitions and novels (Sklair 2017:776, Lewis & Maslin 2015:171). The concept of the Anthropocene, Lucci (2018:1) notes, was initially "debated, criticised and re-signified within many fields of the natural sciences", but was "ultimately met with great success in the social sciences and, more generally, in the field of humanities".

In his article entitled "The Anthropo-scene: A Guide for the Perplexed", author Jamie Lorimer (2017:117) identified five ways in which the concept has been mobilised by different groups of academics, artists, and policymakers.[27] These include, but are not limited to, mobilisation as 1) a scientific question, 2) the intellectual Zeitgeist, 3) an ideological provocation, 4) a series of new ontologies, and 5) a science fiction genre. (These five mobilisations, along with where this thesis fits in, are reflected in Figure 2.7.) It can therefore be said with some justification that academic *and* popular usage of the term has rapidly escalated early in the twenty-first century.

[27] The subtitle to this review, "A Guide For The Perplexed", refers to economist Ernst Schumacher's book (1977) with the same title in which he reflected on what he considered to be the deficient organisation of western knowledge and its relationship with an earlier juncture with the environmental crisis in the 1970s (Lorimer 2017:118).

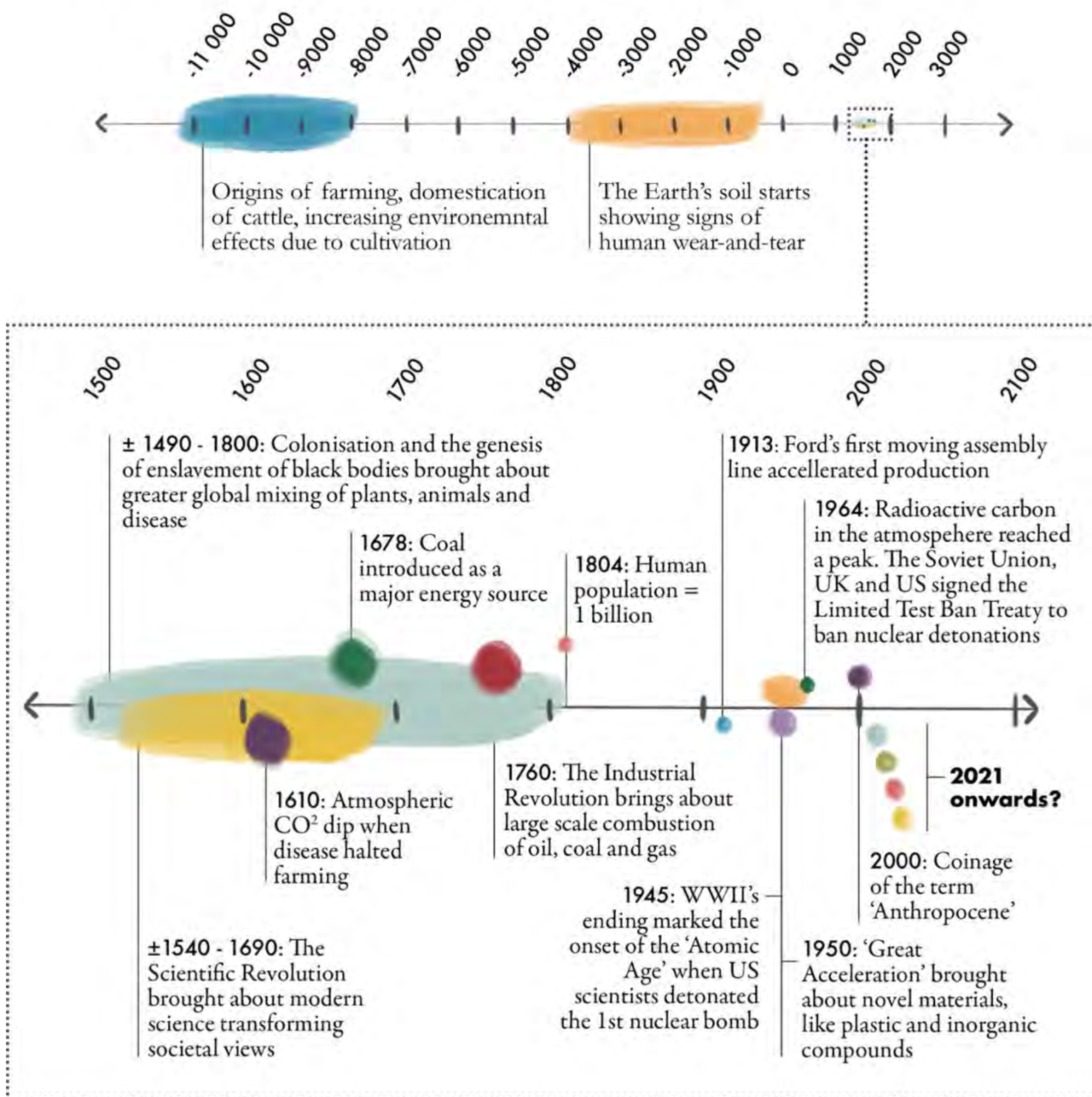
Figure 2.7 | **the anthropo-scene**

This visualisation shows five prominent ways in which the Anthropocene has been mobilised. The dots outside the scale on the bottom left is generally less applicable to this study. This study could most aptly be situated in the top right corner.



Scientists disagree about the epoch's onset (Figure 2.8). Some suggest it began around 8000 years ago with the "extinction of megafauna and the rise of agriculture", others claim it to be located in 1610 with an "unusual drop in atmospheric carbon dioxide and the irreversible exchange of species" (Craps 2017a:2, Lewis & Maslin 2015:171). Crutzen and Stoermer (2000:17) argue that it originated in the latter part of the eighteenth century around the invention of the steam engine while others, again, claim it could have occurred over the course of the twentieth century, specifically between 1945 and 1964 with the dawn of the atomic age and the start of the 'Great Acceleration' – a huge data spike in the graph of human involvement in Earth systems and increased greenhouse gas emissions (Craps 2017a:2, Lewis & Maslin 2015:171, Morton 2016:29).

Figure 2.8 | **possible onsets of the anthropocene**



Craps (2017a:2) claims that human impact is so profound that "our existence will be discernible as a distinct geological layer long after humanity has gone extinct" (Figure 2.9). Lewis and Maslin (2015:171) agree that the "impacts of human activity will probably be observable in the geological stratigraphic record for millions of years into the future". They note that the event or date chosen as the onset of this epoch "would probably affect the perception of human actions on the environment", since it evidently "affect[s] the stories people construct about the ongoing development of human societies" (Lewis & Maslin 2015:177-178). Historians Christophe Bonneuil and Jean-Baptiste Fressoz (2016:14) describe the planet in the Anthropocene as

> an Earth whose atmosphere has been damaged by the 1 500 billion tonnes of carbon dioxide we have spilled by burning coal and other fossil fuels. It is the impoverishment and artificialising of Earth's living tissue, permeated by a host of new synthetic chemical molecules that will even affect our descendants. It is a warmer world with a higher risk of catastrophes, a reduced ice cover, higher sea-levels and a climate out of control.

Figure 2.9 | **overwritten palimpsest**

Edward Burtynsky, "Overburden 2" as part of "The Human Signature" series, 2017.
(*The Guardian*).
The Chuquicamata copper mine in Calama, Chile. Burtynsky's unsettling large-scale images of industrial-scale extraction, urbanisation and deforestation reveal humanity's devastating impact on the planet.

Sociologist Leslie Sklair identifies three major narratives in seven books on the Anthropocene published in 2015 and 2016.[28] He notices that, firstly, the Anthropocene is often depicted as a "'great opportunity' for business, science and technology" (Sklair 2017:775). This sentiment is shared by theorists such as the authors of "An Ecomodernist Manifesto" (2015) who claim that they, as scholars, scientists, campaigners, and citizens, "write with the conviction that knowledge and technology, applied with wisdom, might allow for a good, or even great, Anthropocene". This perspective frames the Anthropocene as a 'positive' development.

The second narrative recognises that "the planet and humanity itself are in danger", but that "if we are clever enough we can save ourselves and the planet with technological fixes" (Sklair 2017:775). This view is commonly shared by more reserved theorists who believe that humans can resolve the environmental crisis by modifying anthropocentric attitudes and by reforming laws, government policies, co-operate behaviour, and personal lifestyles to be more considerate of the environment (Atkinson 1991:27, Caldwell 1990:85-86, Müller 1997:108).

Finally, Sklair (2017:775) identifies a third narrative, which holds that humans are "in great danger, humanity cannot go on living and consuming as we do now, we must change our ways of life radically – by ending capitalism and creating new types of societies". In *Staying with the Trouble: Making Kin in the Chthulucene*, multispecies feminist Donna Haraway (2016:3-4) suggests a future shaped by adaption, co-habitation, and "making oddkin", meaning that "we require each other in unexpected collaborations and combinations, in hot compost piles". Haraway's (2016:1) proposal requires "learning to be truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures, but as mortal critters[29] entwined in myriad unfinished configurations of places, times, matters, meanings".

As a development concerning the 'environment', the Anthropocene can be contextualised within the field of environmental humanities, which brings into play a multiplicity of disciplines. Environmental studies scholars Robert Emmett and Davis Nye's book entitled *The Environmental*

[28] The books that Sklair reviewed included *Facing The Anthropocene: Fossil Capitalism and the Crisis of the Earth System* (Angus 2016), *The Birth of the Anthropocene* (Davies 2016), *Systemic Crises of Global Climate Change: Intersections of Race, Class and Gender* (Godfrey & Torres 2016), *The Anthropocene and Global Environmental Crisis: Rethinking Modernity in a New Epoch* (Hamilton, Bonneuil & Gemenne 2015), Fossil Capitalism: *The Rise of Steam Power and the Roots of Global Warming* (Malm 2016), *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism* (Moore 2016), and *Molecular Red: Theory for the Anthropocene* (Wark 2015).

[29] Haraway's (2016:169) use of 'critters', "an American everyday idiom for varmints of all sorts", is to gain distance from the idea of 'creatures' or 'creation'. It is used to refer "promiscuously to microbes, plants, animals, humans and nonhumans, and sometimes even to machines" (Haraway 2016:169).

Humanities: A Critical Introduction (2017) and the broader text entitled *A Companion to Global Environmental History* (2012) edited by environmental historians John McNeill and Erin Mauldin, are fruitful texts in this regard. The authors survey key concepts, influential theories, and central debates of the rapid evolutions in environmental humanities and environmental history by offering multiple points of entry into these fields' pasts, current controversies, and potential future developments.

By the early twenty-first century, the environmental humanities had found expression on every continent (Emmett & Nye 2017:117). The field's origins can be traced back over a century, but it originated mostly at the confluence of simultaneous developments during the 1970s and the 1980s in literature, anthropology, philosophy, history, geography, and gender studies departments (Emmett & Nye 2017:3). More recently, even more varied disciplines including biology, chemistry, architecture, and design inform the environmental humanities, making it "an interdisciplinary encounter" that works to develop theoretical apparatuses "capable of defining new realities, situations and concepts" (Lucci 2018:2).

Around the turn of the century, environmental scholar Kobus Müller (1997:118) noted that environmental issues were increasingly "anchored in wider debates about the future shape of our society". This growing awareness of environmental problems and an array of other factors are firmly rooted in the ambivalent discourse of environmentalism which has been on the rise since the 1960s.[30] Environmentalism, now a globally decentralised movement, entails "a way of thinking" and "a movement of political activism based on a common conviction that our natural environment should be protected" (Mazzotti 2001:1). Hawkins (2006:101) and Houze (2016:7) hold that a fundamental issue of early environmentalism is that it was framed as the privileging of nature's preservation rather than the interconnectedness of the human and the nonhuman. Bennett (2010:111) notes that, although this discourse raises useful questions, it remains centred on the 'protection' and 'wise management' of ecosystems, whereas a radical shift towards a more strategic engagement with materiality is necessary.

Dodson (2011:5) notes that concern for the planet's environmental future is moving into mainstream consciousness most markedly with regard to issues of climate change,

[30] This growing scholarly engagement with environmental concern further leads theorists to grapple with concepts such as pro-environmental dispositions and action, which in turn leads to an increasing development of (transnational) models for the study of environmental consciousness. Dunlap and Van Liere's (1979, 1980) research as a duo and in collaboration with Mertig and Jones (2000) is seen as seminal in this regard (Sánchez & Lafuente 2010:733, Shedlovska 2013:79). Tools for measuring environmental consciousness are discussed in Chapter 5.

overconsumption of limited resources, and the "toxic saturation of everything from industrialised food systems and children's toys to Hungarian villages". Yet, cultural researcher Lucy Neville (2010:4) notes that climate change has only recently enjoyed global priority, because it was originally communicated as a "scientific problem", making it "complex, confusing" and resulting in "a slow public and political response". Similarly, Groes (2014:8) finds it highly problematic that climate change has "suffered" from 'scientification', since a "vast series of complex problems has been reduced to just the scientific questions". More pressing is that in most countries – including South Africa – scientific communities have remained unwilling to "acknowledge, much less explore, its connections to the racialised history of claims to authority" (Green 2020:17). The twenty-first century is marked by a "broad consensus that environmentalism is based on a combination of scientific insights and human values", but both factors remain contested, since there is a "multitude of social, economic and cultural concerns at stake when we talk about the environment, and these concerns are anything but stable over time" (Uekötter 2011:2).

Modern environmentalism has led the way to contemporary neoliberal sustainability discourses attempting to restore a semblance of balance between human activity and the 'natural world', while depoliticising environmentalism and extinction discourses, integrating them within capitalist and neocolonial cultures (Alaimo 2016:9, Neilson & Tulloch 2014, De Massol de Rebetz 2020:879). In *A Billion Black Anthropocenes or None* (2018) geography theorist Kathryn Yusoff reframes the emergence of the term Anthropocene that proclaims the language of species life – *anthropos* – through a "universalist geologic commons". This approach "neatly erases histories of racism that were incubated through the regulatory structure of geologic relations" (Yusoff 2018:14, Alaimo 2016:11, Green 2013:1). She draws further attention to the proximity of black bodies to environmental harm, or what she calls 'Black Anthropocenes'. This inhuman proximity is organised by "historical geographies of extraction, grammars of geology, imperial global geographies, and contemporary environmental racism" and is predicated on the "presumed absorbent qualities of black and brown bodies to take up the body burdens of exposure to toxicities and to buffer the violence of the earth" (Yusoff 2018:11).

In other words, Yussoff (2018:11) plugs the Anthropocene into other assemblages, such as Black Anthropocenes which, she claims, subtend "White Geology as a material stratum". She teases out how geology is being re-elaborated in the Anthropocene to "consider what historicity would resist framing this epoch as a 'new' condition that forgets its histories of oppression and

dispossession" (Yusoff 2018:15). Moreover, an increasing knowledge of historical inquiry regarding indigenous people's manipulation of landscapes has undone the ideal of 'nature' as something unaltered by (western) humans. Not only have many of the environments that especially European settlers considered 'wild' or 'pristine' already been fundamentally transformed by indigenous peoples for millennia before colonisers' arrival, but consider also that the pervasive impact of environmental degradation makes return to past ecosystems impossible.

If these oppressed perspectives are to be rightfully acknowledged, environmentalist narratives in the coming years cannot but accommodate environmental, capitalist, and colonial 'slow violence' (Nixon 2011): "insidious, incremental and protracted violence often occurring out of sight, bypassing generational timescale and affecting communities which are made vulnerable by imperialist extractive cultures" (De Massol de Rebetz 2020:882). To think through violence requires repositioning ourselves philosophically, legally, politically, and ethically "in the space between certain extremes" built upon violent historical categorisations and exclusions such as human/nonhuman, subject/object, culture/nature, active/passive (Sheikh 2018:448). Environmentalism needs to be deterritorialised to include postcolonial and non-western perspectives so as to not reinforce exclusionary and marginalising historical and systemic structures of inequality (De Massol de Rebetz 2020:882). This includes focusing on the material realities of indigenous communities exposed to toxic pollutants, populations suffering from the environmental heritage of slave economies and colonialism and the loss of land, and heritage to rising seas and desertification. These pressing issues also have an impact on the people and spaces in South Africa.

To situate this study, I provide a brief historical overview of South Africa's contested environmentalist landscape that, in many cases, reflects its painful journey through eras of colonialism, segregation, apartheid, and democracy. Environmentalism in South Africa is inextricably linked to socio-political factors that often overlap with broader global ideologies such as eurocentrism and a tendency to idealise and 'preserve' the natural environment (Anderson & Grove 1987:4-5). Many environmental distresses, including water scarcity, sanitation provision, land degradation, soil erosion, industrial pollution, reliance on fossil fuel, biodiversity conservation and hunting, have played a key role in South African environmentalism history and features prominently in twenty-first century public discourse (Death 2014:1216).

A seminal work in this context is environmental historian Jane Carruthers' *The Kruger National Park: A Social and Political History* (1995), a standard global reference. Carruthers' work includes the themes of environmental justice; the origins of conservation areas, wildlife management and game ranching; land restitution issues; landscape design and ecology; heritage; cartography, and transnational history. Precolonial environmental practices have a long, rich history predating the formation of conservation organisations in South Africa, and are deeply embedded in customary tradition (Khan 2000:157). In the late nineteenth century, the first formal conservation organisations in the country, which laid the foundation for the development of national parks and game reserves, were established (Khan 2000:157-158). The establishment of protected natural areas and environmental organisations has occurred in response to various factors, including Afrikaner nationalism and elitism, capitalism, ineffectual legislation, and the exploitation of black bodies (Carruthers 1995:1).

The protection of 'nature' commonly went hand in hand with the forcible eviction of African residents in those areas (Ngobese & Cock 1995:262, Müller 1997:114). National park policies excluded indigenous people (who were perceived as environmentally destructive), except for serving in menial roles (Khan 2000:158). The cumulative effect of racially discriminatory laws, punitive conservation regulations, and exclusionary practices that continued and intensified throughout apartheid South Africa, has brought about the gradual but relentless alienation of many South Africans from the environmental sphere.

Yet, more recently, historian Jacob Dlamini's *Safari Nation: A Social History of the Kruger National Park* (2020), provides novel insights into often unexplored layers of the South Africa's (black) environmental and social history. The displacement of Africans from natural parks during the twentieth century "did not mean the end to their connection" to the space, as many historians (including Carruthers) frame it: it "only marked a beginning of a new phase in this relationship" (Dlamini 2020:1). Of further importance for this study is Dlamini's (2020) focus on the Kruger National Park as a tourist destination – especially also for blacks, not only whites as often stipulated in older engagements. This connection between the environmental discourse (the conservation of a 'natural' area) and memory practices (through touristic experiences) can be seen as forming part of this thesis' distinct approach.

Although Khan (2000:170) notices that it is "inevitable that, for much of the twentieth century, the major focus of blacks in [the country] was political liberation, not environmental

conservation", South Africa nonetheless has a "rich history" of rural and township-based environmental activism. The late 1980s and the 1990s in fact saw a resurgence of protests undertaken at a grassroots level in rural and urban areas, including action against plans to site nuclear power stations, the cultivation of indigenous plants for use as traditional medicine, and the establishment of food gardens (Khan 2000:171). Steyn and Wessels (2000:211-212) mark the inception of this 'new' environmentalism as the founding of Earthlife Africa in 1988, which "appealed to a wider audience because its focus was not only on the natural environment", but also on community empowerment, women's roles in these communities, the redistribution of resources, occupational health and safety, and the living conditions in township.[31]

Although many parts of the world do not consider social and environmental justice to be separate phenomena, attempts to rectify South Africa's "turbulent socio-economic past have resulted in social justice being wedged at the forefront of post-apartheid plans and policies" and, consequently, environmental concern has fallen subsidiary to 'more pressing' social issues such as housing, service delivery, cultural expression, and employment (Simon 2016:1). In her article entitled "Understanding the Polarisation of Environmental and Social Activism in South Africa", Simon (2016:2) highlights three key variables that illustrate the contrasts between environmental and social activism in the public eye. These include time scale (on average, social reform operates over much shorter time frames than environmental intervention),[32] tangibility (generally, social justice offers tangible solutions while environmental activism prioritises something that is relatively esoteric), and culture (many cultural practices in South Africa are considered environmentally unfriendly).[33] Broadly, theorists agree that environmentalism should include discussions on the structures of South African society as social and environmental struggles are inseparable, but debates continue as to whether this can be done in practice (Müller 1997:114, Death 2014:1215).[34]

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[31] The mentioned reasons why Earthlife Africa was more successful than preceding organisations is evidence of the complex relationships between environmental and social activism in South Africa (Simon 2016:1).
[32] For example, within a single month in late 2015, South Africa witnessed one of its biggest student uprisings since Soweto 1976. The #FeesMustFall and #RhodesMustFall movements, active across most of the country's universities, made socio-economic demands that were recognised and addressed almost immediately (Simon 2016:1).
[33] Simon (2016:1) notes that rearing livestock, for example, has been "heralded as one of the largest sources of greenhouse gases, the most prominent water pollutant and the key driver of biodiversity loss". Often, environmentalists worldwide encourage a shift from meat-eating towards a plant-based diet, which is then not well received in a society such as South Africa with a deeply embedded meat-eating culture (Simon 2016:1).
[34] According to Death (2014:1227), daily struggles over issues such as housing, water, electricity, land, and transport, can be seen as environmental in nature: although they have come to be referred to through the shorthand of 'service delivery', they are in reality about the "provision of clean water, decent sanitation, reliable and affordable electricity, safe roads, and so on". Similarly, housing can be seen as an "obvious environmental issue": "insecure housing means an insecure environment, and poorly planned and located housing causes serious ecological problems"

Whereas it is valid to voice challenges around these practicalities, humans and nonhumans have long intermingled on much deeper, oft-unacknowledged ways: oppressed black bodies have repeatedly been castigated by oppressive power structures as inhuman matter and treated as property, commodities, or tools without subjective agency.[35] To trace "racial matterings across the category of the inhuman, and specifically the traffic between the *inhuman as matter* and the *inhuman as race"* means examining how the concept of the inhuman is a "connective hinge in the twinned discourses of geology and humanism" (Yusoff 2018:16, emphasis in original). The inhuman, as "geologic property and mode of subjective relation in chattel slavery" rendered a "coercive interpenetration between human and inhuman categories" that foreshadowed the 'new' imagined subject of the Anthropocene (Yusoff 2018:64).

In the "skin of a differently narrated geology", Yusoff (2018:70) argues, "we get a broken event, subjects that have emerged through and in that break […] and survived despite the genocidal rage directed at them". The repressed histories of black and brown bodies are strenuously contrived into an oversight of civilisation in the same ways that the detrimental environmental effects of colonialism and industrialisation have been (Moten 2003). More specifically, colonial and apartheid South Africa were among the most extreme and definitive experiments in modernity: the active production of a binary world of subjects (white citizens) and objects (nature and black bodies) (Green 2020:20). It must thus be accounted for that, through the historical 'forced alliances' with the inhuman, a very different subjective relation is forged between the human and the nonhuman: in many ways it is hard to imagine why black bodies – who have long been forcefully excluded from the category of 'human' and are now *finally* granted this opportunity – would surrender this new position in favour of a project such as *post*humanism.

Due to these historical and racial elements, South African environmentalism faces the challenge of a "continuing perception of environmental issues as concerns for well-off white people, and the 'frivolity' of caring about butterflies and rhinos" (Death 2014:1216). In the South Africa

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(Death 2014:1228). In South Africa, the historic legacy of racist urban development combined with extreme inequality continues so as to divide populations into secure (indeed, often securitised) and extremely insecure housing (Death 2014:1228). There exist many organisations across South Africa that protest such issues and such movements can therefore be regarded as part of the environmental movement.

[35] The first 'geological subjects' of the Anthropocene – indigenous and black bodies – were produced with the colonisation of the 'New World'. In this sense, the extraction of geologic resources and bodily resources (through racialised slavery) were born simultaneously (Yusoff 2018:65). Race is thus intrinsically tied to (racialised) processes of extraction, fossil narratives and "in modes of racial discourse in relation to ideas of property, possession, and land use" (Yusoff 2018:16-17).

Talks Climate report of 2010, it becomes clear that most South Africans tend to view climate change as a 'green' issue that "only the wealthy can afford to worry about" (Neville 2010:5). Yet, it is not only South Africa's post-apartheid political context and the "cultural associations of environmentalism with white elitism" (Death 2014:1227) that have produced a "fractured and segregated" environmental movement, but also the very fundamental questions of the majority of the country's black citizens who carry deep-rooted *forced* alliances with the inhuman as a category.[36]

Locally and globally, the changes in Earth's infrastructure have had "increasing philosophical, social, economic and political implications" over time (Lewis & Maslin 2015:178). These recent implications do not detract from the fact that the Anthropocene has a long, mostly obscured and discriminatory history rooted in Eurocentric projects of progress. The Anthropocene is a "moment of blinking self-awareness, in which the human species is becoming conscious of itself as a planetary force" (Blasdel 2017). In a major shift of perspective, a new range of concepts have emerged that provide a framework for environmental humanities, such as 'ecoracism' (Bullard 2005), 'environmental justice' (Alston 1993), 'naturecultures' (Haraway 2003), the 'environmentalism of the poor' (Martinez-Alier 2002), 'slow violence' (Nixon 2011) and the 'posthuman' (Barad 2003, Harman 2008, Bryant 2011, Grusin 2015). These terms result from a drive to tease out the ontological significance of overcoming difficulties in the Anthropocene. Entangled with a range of other factors and drivers, theorist grapple with (and shape) the Anthropocene by employing the thoughts of recent theoretical movements such as the new materialisms.

2.5.2 Entanglement

Emerging ontologies offer a politically differentiated model for humans who, in the Anthropocene, emerge as "much more vulnerable, material and asymmetrically entangled within the nonhuman and inhuman forces of an unruly planet" (Lorimer 2017:128). Before commencing, it is necessary to define my use of 'entanglement'. I follow cultural studies theorist Sarah Nuttall (2009:1) in using the term to describe a condition of "being twisted together or entwined, involved with" that "speaks of an intimacy gained, even if it was resisted, or ignored or

[36] South Africa "lacks a strong centre or unified framing" for a "popular 'green' movement" (Death 2014:1215, Müller 1997:117). While it is important to ensure that environmentalism does not become "inward-looking and nationalistic", a strong movement is nonetheless "essential for driving a political transformation" (Death 2014:1215).

uninvited". In this sense, 'entanglement' may gesture towards a "set of social relationships that is complicated, ensnaring, in a tangle, but which also implies a human foldedness" (Nuttall 2009:1).

Through surveying extant literature, it becomes apparent that intellectual turns such as posthumanism or, more generally, the move to decentre the liberal human subject in relation to other species, machines, objects, and systems, are increasingly shaping environmentalist discourses. Theorists are increasingly urged to change their vantage points radically, since they are compelled to think "within the conglomerate of various human and nonhuman actors" (Lucci 2018:1). This includes the large network that connects animals, plants, atmospheric and geological phenomena, artificial products, and rituals. The 'new' in the new materialist turn, according to Emmett and Nye (2017:144), can be attributed to the "sophistication of critics' concept of matter as continuous with structures of feeling and power". With this has come an opening of critical attention to wider aesthetic categories inherent in a less idealised sense of environmentalism: some aspects of such categories of filth, waste, noise, and ugliness are discussed later in this thesis.

Theorists such as Dipesh Chakrabarty (2015), Colebrook (2017a), and Craps (2017a:2) argue that the realisation of humanity's geological agency has the potential to almost unimaginably collapse the distinction between human and natural history, "necessitating new ways of thinking that are vastly more global and historical in scope than the narrow spatio-temporal confines of our ordinary daily lives tend to allow". According to Grusin (2015:vii), the Anthropocene participates almost inevitably in the nonhuman turn: humans are now understood as "climatological or geological forces on the planet that operate just as nonhumans would", independent of human will, belief, or desires. Critical responsibilities confront scholars reaching out to other fields trying to consolidate transformative possibilities emerging at the edges of the humanities, the social sciences, and the natural sciences (Nixon 2011:31).

The concept of the Anthropocene therefore puts particular pressure on human thought and behaviour, because the affective power of human action is "unlike any other force of nature, because it is reflexive and therefore can be used, withdrawn or modified" (Lewis & Maslin 2015:178, Lucci 2018:1). Morton (2016:29) considers "how personal this can get":

> There you were, shovelling coal into your steam engine, that great invention patented in 1784 that Marx hails as the driver of industrial capitalism. The very same machine that Paul Crutzen and Eugene Stoermer hail as the instigator of the Anthropocene.

Deeming the steam engine as a "great invention" in the eighteenth century and castigating it as an instigator of the Anthropocene around 200 years later, were ideas shaped by the dominant ideological structures of the time they came into being. From an ecological perspective, another example of such an influential ideology is the nature/culture dichotomy that was common during much of the nineteenth and twentieth centuries. Though this dualism "makes no sense" it remains one of the "most powerful conceptions of nature" (Emmett & Nye 2017:10). Morton (2016:28) claims that humanity continues to think of two levels of matter – geology and humanity – as distinctly different. The Anthropocene supposes an entanglement of these matters, because humans and other aspects of the planet entwine in increasingly strange and unprecedented ways. This awareness "does not go away":

> It's there not only when politicians gather to discuss international environmental agreements, but when we do something as mundane as chat about the weather, pick up a plastic bag at the supermarket or water the lawn. We live in a world with a moral calculus that didn't exist before. Now, doing just about anything is an environmental question. That wasn't true 60 years ago – or at least people weren't aware that it was true. Tragically, it is only by despoiling the planet that we have realised just how much a part of it we are (Morton in Blasdel 2017).

The Anthropocene surpasses the human/nonhuman distinction and "binds together human history and geological time in a strange loop, weirdly weird" (Morton 2016:28). Therefore, a key debate within discourse of the Anthropocene has become the question of humanism and, subsequently, the interconnected relations among everything on the planet. This implosion of distinctions is a key factor of the Anthropocene and the new materialisms, and is central to this study. For new materialists, the environment signifies not 'nature' in the sense of a living system out in the world: rather, matter is an "assemblage, a becoming-with-the-human, a 'mesh' in which people are biologically entangled" (Emmett & Nye 2017:141, Alaimo 2016:11).

2.6 CONCLUSION

The current chapter has been dedicated to laying out this study's four theoretical sets. Although I barely scratched the surface of each of these sets' underpinnings and developments, the superficial contextualisation provided here is nonetheless necessary. In other words, I cannot do justice to the entire scope of the literature or to the full range of issues that I find interesting; instead, I focused on topics that speak most directly to the development of this study. As I read the materials it became clear that the eclecticism in the new materialisms has the potential to productively dissolve constructed boundaries between the natural and the cultural, the human and the nonhuman, and mind and matter.

Firstly, I described here the theoretical developments of the 'nonhuman turn' with special reference to the new materialisms. It is apparent that renewed interest in materiality highlights and enlivens matter's role in human experience. I further discussed Deleuze and Guattari's assemblage theory. Through suggesting the rhizome as image of thought – as opposed to arborescent modes of thinking prominent in western thought – Deleuze and Guattari create an opportunity to address dualistic paradoxes in a radical way (Adkins 2015:11). The possibility afforded by rhizomatic thinking allows one to engage with a *continuum* between change and stasis, as found in any assemblage. Such thinking guides my own research process in that it allows me to foreground the fluctuations between stability and instability of humans and nonhumans that structure habits and daily life.

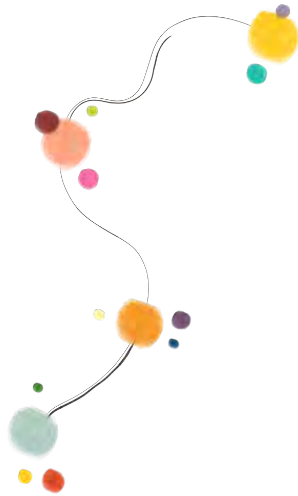
I subsequently discussed the development and object domain of visual culture studies. The historical shifts within visual culture studies, as influenced by turns in the broader humanities, include increased academic engagement with multisensorial approaches that finally led visual culturists towards an increasing engagement with 'affect', a notion central to new materialist vocabulary. Especially because visual culture studies has evolved beyond a strict ocularcentric approach towards a more recent foregrounding of the affective flows between bodies, it has become evident that assemblages consisting of various materialities can be analysed within the framework of this field.

Subsequently, the chapter has introduced memory studies and the Anthropocene as important additional sets for studying assemblages in the twenty-first century. Memory studies' rich history has been discussed along with its potential futures. Finally, I agree with Erll (2011:5) that "we cannot afford the luxury of *not* studying memory", since it gives us critical insight on massive world events in the current century. In answer to her call for additional methodological tools to do so, I use the new materialisms theoretically and methodologically. The ways in which this is done are discussed in Chapters 4 and 5.

Lastly, I have discussed the ecological state of planet Earth. This includes, firstly, a historical background of this epoch and an in-depth discussion of the philosophical questions evoked by it. This relates predominantly to questions surrounding the implosion of distinctions between human and nonhuman as well as between anthropocentrism on the one hand, and increasingly incorporating interdisciplinary approaches to twenty-first century issues on the other. To situate

this discussion, I have incorporated a broad overview of South Africa's contested environmentalism history, especially around the fracture between environmental and social justice. It is clear that, in the twenty-first century, government and activist groups persistently focus on social issues rather than environmental issues, the latter which is still predominantly associated with wealth and privilege as many black citizens in South Africa continue to carry deep scars of a *forced* alliances with the inhuman.

Given that so many twenty-first century problems entail engagement with nonhuman phenomena – from climate change, drought, and famine to biotechnology, intellectual property, and privacy to genocide, terrorism and war – there seems to be "no time like the present" to turn attention, resources, and energy towards the nonhuman, as broadly understood (Grusin 2015:vii). By challenging deep humanistic traditions, the new materialisms and other post and nonhuman approaches offer a difficult but potentially rewarding path forward for the humanities (Emmett & Nye 2017:8). Discussing these sets here paves the way for the subsequent chapter, which focuses exclusively on recent literature that centres on memory in relation to the Anthropocene.



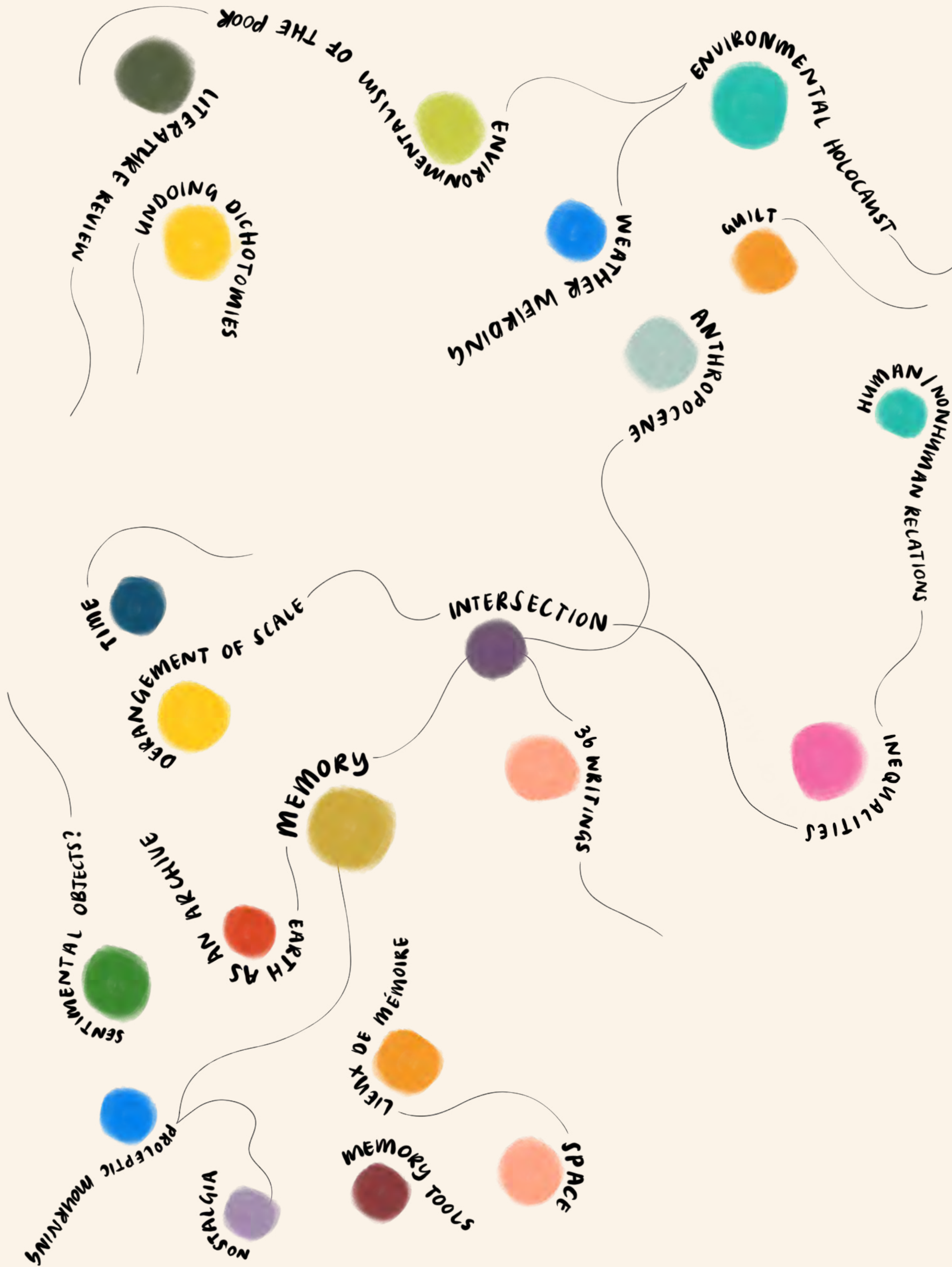
3 Chapter

memory in the anthropocene/ the anthropocene in memory

What are the implications of the notion of the Anthropocene for memory studies? How, if at all, does the awareness of living in a new geological epoch defined by the actions of human beings affect the objects of memory, the scales of remembrance, and the field's humanist underpinnings?
- Stef Craps (2017a:2)

There are continuities, but there are also breaks. We have been here before, but never like this.
- Lucy Bond, Ben de Bruyn and Jessica Rapson (2017:862)

Figure 3.1 | key concept visualisation



CHAPTER 3: MEMORY IN THE ANTHROPOCENE/ THE ANTHROPOCENE IN MEMORY

3.1 INTRODUCTION

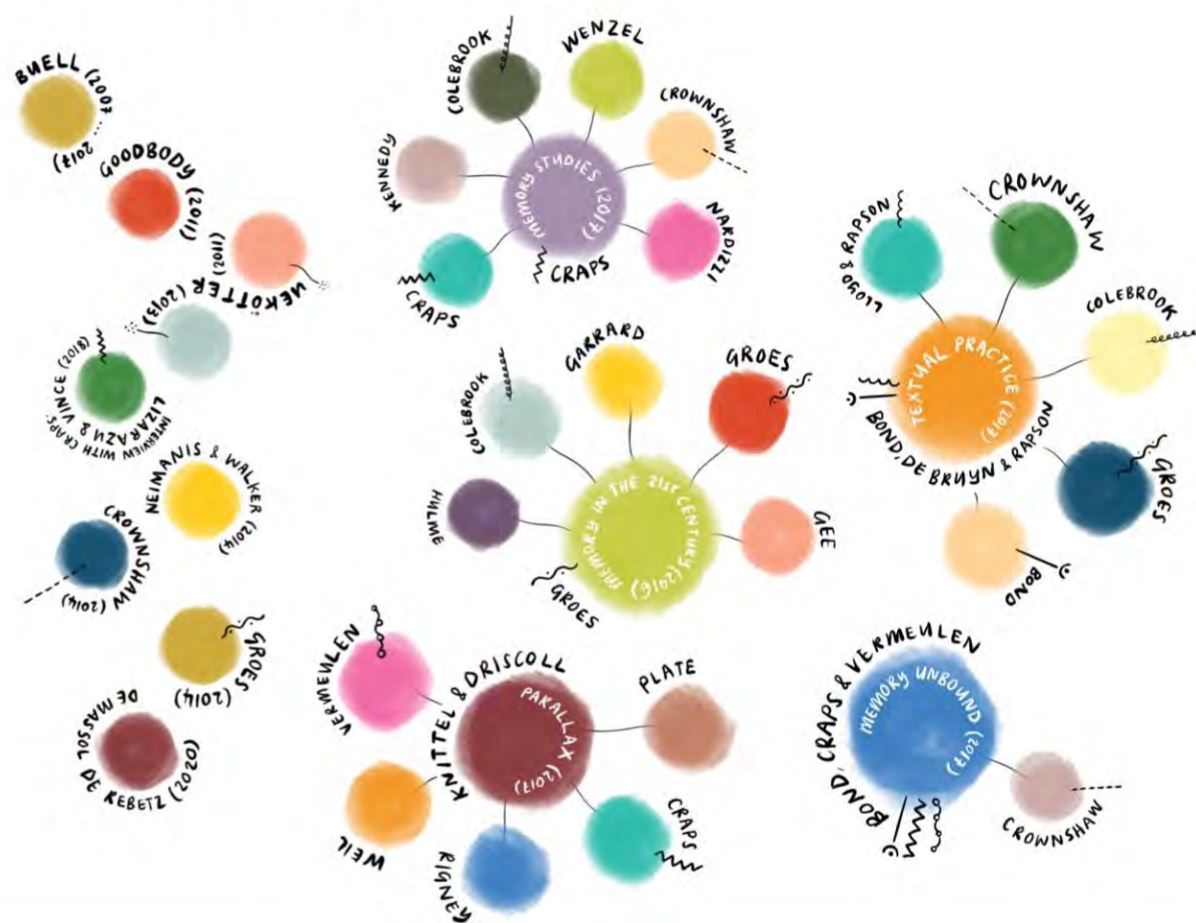
Around the time at which the environmental humanities emerged as an interdisciplinary field in the early 2000s, theorists of memory studies argued that, in order to address pressing twenty-first century questions with the applicable tools, the field must become more interdisciplinary. Over the short course of the twenty-first century, and specifically in the last decade, a limited – yet fast-growing – body of literature has arisen on the intersection between memory and the Anthropocene. This research has been conducted mostly by leading scholars in the fields of memory studies and/or the environmental humanities, but occasionally also other disciplines and fields within the humanities such as literature studies, trauma studies and cultural studies. This chapter focuses on this interface between memory and the Anthropocene by referring to this existing literature (Figure 3.1 as seen on previous page).

As can be seen in Figure 3.2 below, extant literature includes an array of documents; among others, special editions of journals, journal articles, books, chapters in books, and a roundtable discussion.[1] I first introduce the relevant literature by tracing the earliest writings at the intersection of the two worlds as they started appearing a little longer than a decade ago, through to the series of writings from the past few years in which various perspectives rapidly unfolded.

These theorists scrutinise twenty-first century issues and mull over questions about future paths for the human and the nonhuman alike. In a self-reflective manner, remaining aware of the risks of "writing to the moment" (Erll 2020:862), they do not claim to have answers, but often provide suggestions for scholars of memory and the environmental humanities by cross-fertilising ideas and exchanging tools from various disciplines including literature studies and animal studies.

[1] I have contained my search to writings done in the humanities and, occasionally, the social sciences. In other fields, such as biology (see for example Schweiger *et al* 2019 or Hughes *et al* 2019) or thermodynamics (see for example Szerszynski 2016) further insightful work has been conducted but these fall outside the ambit of this study.

Figure 3.2 | **the literature at the intersection**



Theorists with more than 1 publication treated in this chapter:

• CRAPS • CROWNSHAW • COLEBROOK • GROES • BOND • VERMEULEN • RAPSON • UEKÖTTER •

After having introduced this literature, I briefly point out the lack of reference to memory objects in these writings and, simultaneously, argue that my emphasis on memory objects in relation to environmental degradation to showcase the new materialisms potentials can thus be seen as one of this study's most prominent contributions. This is followed by a discussion of the prominent threads that come to the fore in the literature, introduced by a series of questions theorists have asked throughout the different projects. I restrict the discussion to three key threads that can be drawn from this literature. These include 1) an engagement with a 'derangement of scale' (Clark 2012); 2) the inequalities between firstly, rich/poor, white/black, global North/ global South and, secondly, humans/nonhumans; and 3) a broader consideration of the questions and tools surrounding remembrance, life, and extinction in the Anthropocene

with reference to (ambivalent) terms such as 'planetary memory', 'trauma', 'future's pasts', 'preliminary mourning', and 'environmental holocaust'.

Where applicable, the threads are enriched with sources that do not necessarily treat memory in relation to the Anthropocene (and vice versa), but rather offer valuable insights to situate my study within the broader humanities. The chapter concludes with a brief synthesis of extant literature's current position and how my study contributes to this conversation.

3.2 DWELLING AT AN INTERSECTION

3.2.1 Extant literature

On a "blissfully lovely" November day in 2007, literary scholar Lawrence Buell jokingly opened his public lecture entitled "Environmental Memory and Planetary Survival" at the University of California with a comment on the pleasant weather in Santa Barbara in comparison to the Frost Belt, known for its extreme cold weather conditions, where he came from: "I'm in awe. How do you get anything done in this environment?" Working within the discipline of literature studies, he noted that his paper's "hubristic title" derived from an engagement with "the forms, stakes and larger implications of the distinctly memoire-ish cast" of environmental literature across the globe. At that stage, 'environmental memory' was a term "seldom [employed] and with no canonical usage" (Buell 2007).

He added that his work at that stage might offer, "by way of interdisciplinary exchange and also beyond academia to public discourse about environmental concern", ways to "get through this tricky multifold, consequential set of issues that are entailed and coming to terms with how artistic acts, literature especially for my purposes, create environmental memory" (Buell 2007). Buell's lecture in 2007 – available for viewing online[2] and later revised as a chapter in *Contesting Environmental Imaginaries* (edited by Hartman 2017) – is the earliest source that I include in this chapter among those that refer to the discourses of memory studies and the Anthropocene.

The first published work that treats this intersection dates back to 2011. In his chapter entitled "Sense of Place and *Lieu de Mémoire*: A Cultural Memory Approach to Environmental Texts" in the book *Ecocritical Theory: New European Approaches* (Goodbody & Rigby 2011), literary scholar Axel Goodbody (2011) develops Buell's point by pointing out the differences and similarities

[2] A video of the lecture is available on the University of California Television website at https://www.uctv.tv.

between ecocriticism and cultural memory studies. As approaches to the study of culture, these two fields differ in their principal concerns: the former examines cultural constructions of the natural environment, the latter representations of the social in relation to time. Yet, they share an interest in how writers critique contemporary western socio-political structures and how they envision alternatives by foregrounding the interaction between personal experience on the one hand and collective values on the other. Their interests, Goodbody (2011:54) holds, converge in *place*. His essay is the first to argue that ecocritics may profit from the insights in the cultural and textual construction of places that memory studies affords (Goodbody 2011:54).

In the same year, project director Frank Uekötter (2011:1) introduced *Environment and Memory* (*Umwelt und Erinnerung*), a Rachel Carson Centre for Environment and Society (hereafter RCC)[3] flagship project with the overarching goal of providing a deeper understanding of environmental memories and their meaning for environmentalism in the twenty-first century. Situated in Germany, *Environment and Memory* is a work-in-progress and "probably will always be" (Uekötter 2011:1). In an introductory workpiece (2011) as well as a more elaborate overview of the project (2013), Uekötter maps how *Environment and Memory* provides a platform for multiple perspectives, since it links academic debate and public outreach in a way that is mutually beneficial.

In 2014, as part of a series of lectures that together formed the "Memory Network @ Cheltenham Events", Groes wrote a blog post for the British Arts and Humanities Research Council (hereafter AHRC) as part of the council's Science in Culture theme. The AHRC's themes are identified as emerging areas of interest to arts and humanities researchers and deemed to be likely to shape or change aspects of multiple research fields in future years. Indeed, since then, literature on the relation between memory studies and the environmental humanities has expanded increasingly.

This body of work currently includes individual essays or journal articles by Crownshaw (2014); Neimanis and Walker (2014); an interview with Craps conducted by Lizarazu and Vince (2018); and most recently, Clara De Massol de Rebetz's award-winning paper (2020) and book chapters by Buell (2017) (a reshuffling of his ideas of ten years earlier as mentioned); the writings by

[3] Marine biologist and author Rachel Louise Carson (1907 – 1964) is best known for her influential book, *Silent Spring* (1962), which is considered a major impetus to the advancement of the global environmental movement. The RCC, located in Germany, is an international, interdisciplinary centre for education and research education in the environmental humanities and social sciences.

Colebrook, literary theorist Greg Garrard, geographer Mike Hulme, author Maggie Gee, and Groes that make up *Part III: Ecologies of Memory* of Groes' (2016) book on memory in the twenty-first century; as well the introduction to *Memory Unbound: Tracing the Dynamics of Memory Studies* (edited by Bond, Craps and Vermeulen 2017), and Crownshaw's (2017c) chapter in this book.

Papers read at a roundtable discussion entitled "Memory Studies and the Anthropocene" at the Modern Language Association Convention in Philadelphia in January 2017, by Craps, Crownshaw, Kennedy, Colebrook, Jennifer Wenzel, and Vin Nardizzi were published in *Memory Studies* (2017) after the conference. Craps (2017a:1) explains that the event was sparked by the "increasing currency of the Anthropocene, on the one hand, and the observation that the field of memory studies has lately begun to grapple with its implications in earnest, on the other". In general, these writings elucidate the mapping and navigation of memory studies in the twenty-first century, which is marked by an increased consciousness of the Anthropocene.

In the same year, theorists contributed to two academic journal collections that marked the shift in memory studies from the transnational, transcultural, or global to the planetary. These include a special edition of the literary studies journal *Textual Practice* on "Planetary Memory in Contemporary American Fiction", guest-edited by Bond, De Bruyn, and Rapson (2017) with relevant essays by Christopher Lloyd and Rapson (2017), Crownshaw (2017b), Colebrook (2017b), Groes (2017) and Bond (2017), and a special issue of the cultural theory journal *Parallax* on 'Memory After Humanism', guest-edited by Susanne Knittel and Kári Driscoll (2017), including essays by Liedeke Plate (2017), Rigney (2017), Craps (2017c), Vermeulen (2017), and Weil (2017).[4]

This growing body of writings – of which I will discuss all 36 as introduced above – also point to increasing collaborations across disciplinary lines in the twenty-first century. Erll (2011:5) suggests that the synergies that have come to exist between memory studies and other disciplines seem ideal to address questions emerging from new developments and challenges. One such challenge is the Anthropocene. Colebrook (2016:150) explains that it is "only recently that climate change has started to operate as a figure for the imaginary of human memory". This is because socially constructed dichotomies are increasingly being undone and 'nature' (which is

[4] In writing this chapter I only focused on the articles in these special editions that explicitly mention the Anthropocene (or related terms) *and* memory studies.

seen as the passive binary to culture) is no longer simply a "comfortingly cyclic […] timelessness against which time [can be] posited" (Colebrook 2016:150).

Among other issues, these sources investigate how environmental degradation has introduced a multiplicity of new complexities into our thinking about time, history, and consciousness. It becomes clear that these writings increase the visibility of this topic and contribute to the generation of new ideas within this critical discourse. These new ideas have the possibility to move humans to "think and remember climate more – and remember to save our memory for the future" (Groes 2016:186). Furthermore, projects such as the RCC's *Environment and Memory* investigate the idea that "our understanding of environmentalism has become unclear and the term is conveniently used to cluster many other issues". Uekötter (2011:2-3) explains that precisely this identity crisis experienced by environmentalism makes way for such and similar projects. These projects ultimately create spaces to have conversations surrounding these and other issues from a variety of perspectives.

It can be argued, as Craps (2017a:3) notes, that what we are witnessing now is the advent of a new, fourth phase in memory studies. This phase, marked by a growing consciousness of the Anthropocene, takes the "gradual scalar expansion characterising the previous phases to a whole new level – travelling memory on steroids – while calling into question the humanist assumptions undergirding these phases" (Craps 2017a:3).[5] This consciousness indeed poses many new challenges to humans in the current age. Broadly, it drastically alters the relationship between humans (who often think that they are becoming more considerate towards the world) and the world (which is generally seen as a stable, mediated milieu) (Colebrook 2016:153).

After several decades of intensive debates, it has become difficult to talk about environmental issues *without* evoking memories. Yet, since we live in an "increasingly chaotic, uncontrollable world", Groes (2014:2) argues that it is possible that "memory is less and less useful to predict our way out of the mess". Broadly, memory studies is challenged to think differently about memory objects and practices and general awareness of the past. It is being pushed from various sides to "delimit" its field of study or to "adopt a post-humanist stance" (Crownshaw 2014:175). Kennedy (2017a:7) argues that, while some critics have begun to cross-fertilise memory studies

[5] This new consciousness does not, however, disregard the usefulness of notions such as transnational, transcultural and global memory that highlight an increased inclusivity of previously marginalised perspectives. Such terms continuously assist thinking about pressing social matters (such as discrimination) and memory in the twenty-first century (Erll 2011:5).

and environmental humanities, this developing field has "yet to engage significantly with […] the threat of mass extinction – only the sixth such event in the Earth's history, and a predicted effect and marker of the Anthropocene".

Rigney (2017:476) points out that practitioners of memory studies therefore have a responsibility to think about memory in relation to broader issues, such as, in this case, the Anthropocene. Yet, it should be noted that the temporal horizons of environmental memory studies should not be limited by the onset of the Anthropocene, since it can have a much further reach into the past and into coming futures, opening up possibilities for memory studies to become even more useful (Crownshaw 2014:175).

3.2.2 Sentimental objects?

In general, extant literature mostly refers to objects of memory in in passing and usually in the form of a list so as to point out the relations, or "complicated ties", between 'things' in the current geological epoch (Bond, De Bruyn & Rapson 2017:856). These objects typically include combinations of, for example, 'humans', 'nonhumans', 'animals', 'practices', 'media', 'agency', 'technologies', 'apparatuses', and 'machines'. Few theorists allude *specially* to sentimental objects kept by individual humans as a form of remembrance of something or someone. It should be acknowledged that earlier phases of memory studies engendered useful writings on humans' relations with memory objects (see for example Weiner 1992, Burton 2003, and Jones 2007). In this chapter, however, I focus on literature pertinent to the *fourth* phase of memory studies (often with a new materialist underpinning).

As mentioned in the introductory chapter of this thesis, the most deliberate comment on memory objects is by Craps (2017a) in the form of a question. He asks how the Anthropocene might affect "the *objects of memory*, the scales of remembrance, and [memory studies'] humanist underpinnings" (Craps 2017a:2, my emphasis). It might be useful here to refer to other questions posed in scholarship. Although each of these questions has not been responded to in the writings (or, if they were touched on, discussions are still ongoing), they nonetheless introduce the major topics discussed at this intersection. Figure 3.3 includes the most prominent questions posed. These imply, among others, that the current ecological climate forces memory studies, such as all other fields, to be rethought in multifaceted ways. Inversely, theorists are also teasing out how memory studies might be useful for grappling with problems posed in the Anthropocene.

Figure 3.3 | **questions in the literature**

As indicated, Boscagli's *Stuff Theory* (2014) proves useful for my study because of its explicit new materialist focus on two types of 'stuff' that relate to practices of memory and environmental degradation more broadly, namely memory objects and waste. Boscagli (2014:14) proposes looking at 'stuff' as a test case for the new materialist designation of matter as "liminal, active, rhizomatic and emergent" by emphasising flux and liminality.[6] The book's development of a new materialist theoretical model to explain humans' entanglement with unstable and affective objects makes it a highly suitable source for the current study. I return to *Stuff Theory* in Chapter 7, but here Multimedia Drawer 3.1 provides a brief introduction. The subsequent section centres on the prominent threads that come to the fore in extant literature. Dividing it into these threads facilitates an overview of the main discussions that theorists are having.

Multimedia Drawer 3.1: Introduction to Boscagli's *Stuff Theory*

Boscagli's Stuff Theory (2014) proves to be useful because of its explicit focus on memory objects and waste as seen through a new materialist lens that emphasises flux and liminality. Boscagli (2014:14) proposes 'stuff' (an "already existing form of liminal objecthood") as a test case for the new materialist conception that all matter is liminal, active, rhizomatic, and emergent.

Informed by the new materialisms, stuff theory explores the radical potential and instability of everyday objects in a culture of consumption and spectacle. Boscagli (2014:2-3) holds that stuff is "protean, volatile, always on the verge of becoming valueless while never ceasing to be commodified, awash with meaning but always ready to become junk or to mutate into something else":

> Its instability in the everyday makes the conventional split between subject and object impossible. It implies scenarios in which material stuff and human subject make contact in ways that are intensely intimate, somatic, and unpredictable. Stuff in this sense is a materiality out of bounds, which refuses to be contained by the western philosophic, scientific, and semiotic order of things. It is a hybrid objectivity that declines its role as the eternal sidekick of the subject, the role to which that order has confined it historically. This is unruly stuff, intruding in works of culture, which radically recasts fundamental questions of human and material agency in modernity.

She calls such things "stuff" and strives to develop a new theoretical model to explain how humans live among things. She does this by illustrating five "intermittent flashes of 'minor' materiality" in twentieth-century modernity: through fashion, memory objects, clutter, home décor and waste. These fluctuating 'flashes' foreground stuff's plasticity, transformative power, capacity to generate events and "promis[es] new versions of subject-object entanglements" (Boscagli 2014:3). Boscagli (2014:5) claims that matter, hybrid materiality, or 'stuff', is no longer contained by epistemological fields or "taxonomies of knowledge", because it defeats the "long western history of systematisation of the object" with their plasticity and unceasing traffic with the human. This provides novel ways of thinking about the complexity of humans' daily interaction with material objects.

[6] Hawkins (2006:76) claims that, while transformation in uses, significations, and values have always been a central concern in material studies, recent writing on material culture focuses on the "conversion processes from valued to valueless".

3.3 A KNOT OF PROBLEMS

As the questions in Figure 3.3 above already suggest, memory studies is repeatedly confronted with the same challenges, including "moving beyond human parameters, thinking along geological lines and scaling up remembrance without, however, losing sight of the smaller picture" (Craps 2017c:485). Over time, memory studies scholars have increasingly joined conversations around the Anthropocene that revolved around a "similar set of forms and themes" or, "a knot of problems" (Bond, De Bruyn & Rapson 2017:862, 863). The most prominent concerns imbricate in variegated ways and include deranged multiscalarity; discourses that cross boundaries of time, space and matter; discourses that challenge anthropocentrism through posthumanist approaches; and blurred distinctions between humans, animals, media, and ecologies.

In the body of extant literature many diverse themes come to the fore. To gain further insights in the frequency of terms' usage, the body of literature was analysed as a unit in the qualitative software program, Atlas.ti (Atlas-ti Qualitative Data Analysis 2020) using the relevant coding. Because I used Atlas.ti to analyse the interview data as well, this software is discussed in Chapter 5. I identify two prominent threads, namely the 1) 'derangement' of spatiotemporal scales (Clark 2012) and 2) the unequal relationship between humans and other humans, humans and nonhumans, and humans and the planet. In almost all the writings, at least one but, in many cases both of these threads, are foregrounded and negotiated. In this chapter I discuss, firstly, how the Anthropocene changes anthropocentric scales of time, space, and memory. Secondly, I turn to issues of inequality that become particularly apparent in the Anthropocene of social relations and memories in different human societies (considering class, race, location, and so on) as well as between humans and nonhumans. The combination of these threads ties in closely with fragmented and diverse memories of the past and imaginings of the future, which foregrounds theorists' plea that memory studies must expand its frames of reference while becoming less anthropocentric.

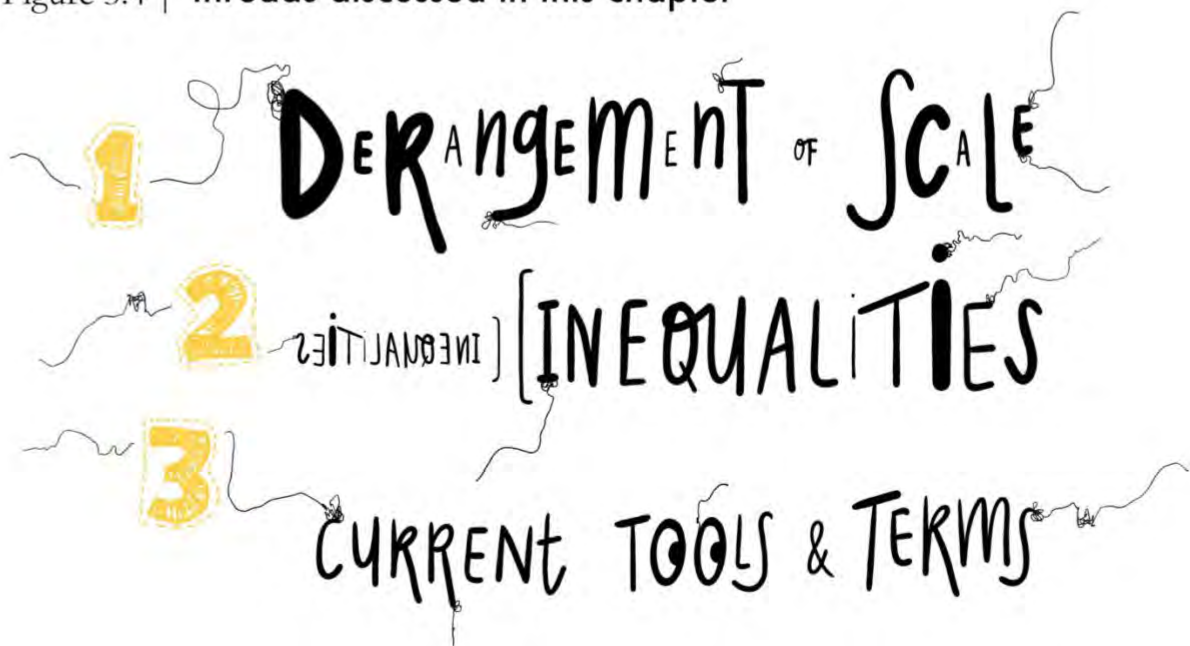
Once these two threads have been discussed, the subsequent section turns to the tools and terms that bind memory and the Anthropocene in the twenty-first century. Careful reading shows that these themes are generally less prevalent in extant research than questions of scale and inequality, while they are equally significant. In most cases, the concepts discussed imbricate and can be read as enriching the first two threads of scale and inequality. The present section includes discussing the words, phrasing, and memories often used to elicit environmental awareness, such

as the rhetoric of guilt or moralism; the nostalgic tropes of longing for *something* undefinable that is/ will be lost; and how times past, present, and future loop together in strange new configurations.

A key concept here is the threat of extinction of humans and nonhumans, which evokes a sense of "preliminary" or "proleptic mourning" (Colebrook 2017a). As some of the writings are located in the disciplines of literature and film studies, I explain these insights by referring to novels and films often analysed through ecocriticism as sources of 'planetary', 'speculative', or 'anticipatory memory'. Beyond the insights provided by ecocritical perspectives, I turn to three additional connections found in extant literature. This includes a brief discussion on firstly, the use (and abuse) of the concept of the holocaust (more recently rhetorically used to evoke an 'ecological holocaust'); secondly, the relation between weather and embodied memories; and thirdly, the (re)turn of some theorists to Nora's *(mi)lieu de mémoire* project, referred to in relation to environmental consciousness by means of the phrase '*environmental* sites of memory'.

Discussing the literature in this particular manner is but one of many possibilities, as many alternative threads and thread compositions are equally possible. By way of a visualistion, Figure 3.4 introduces these themes' entanglement, which is to be in the remainder of this chapter.

Figure 3.4 | **threads discussed in this chapter**



3.3.1 A derangement of scale

There is consensus among theorists that the Anthropocene alters everything known about the human world and the way it has functioned up until the current age. In particular, the

Anthropocene "enacts the demand to think of human life at much broader scales of space and time" while, simultaneously, acknowledging individual human and nonhuman experiences (Bond 2017:995). In fact, Crownshaw (2017a:3) contends that the reiteration of the problems of scale is becoming "something of a mantra". In grappling with the notion of scalarity, theorists refer to what environmental humanities scholar Timothy Clark (2012:147) terms a 'derangement of scale' brought about by environmental awareness (Bond, De Bruyn & Rapson 2017, Lloyd & Rapson 2017, Crownshaw 2014, 2017a, Craps 2017a). To recalibrate the precise scale of critical enquiry, theorists must begin by acknowledging that theoretical responses to climate change "ha[ve] drastically modified earlier conceptions of spatio-temporal relations, and the established imaginaries that attend to them" (Bond, De Bruyn & Rapson 2017:855).

Due to such alterations in temporal and spatial scales, there is a general pull in the humanities towards a planetary perspective on the global past, present, and future. This perspective requires new paradigms of critical enquiry that are able to "address the lengthy prehistory of global warming, make visible the current geological impact of human activity, and imagine the various environmental futures that might constitute its afterlife" (Bond, De Bruyn & Rapson 2017:853). Colebrook (2017a:10) agrees that acknowledging the Anthropocene implies acknowledging a reconfigured planet *caused* by humans, by way of industrial, nuclear, colonising, and plundering pasts. The Anthropocene, she argues, can be seen as an expansion of memory that takes us beyond our own humanness and towards a new 'memory' where we "will have been an agent in an epochal shift that we only recognised after the event" (Colebrook 2017a:10).

Memory studies theorists often still find it hard to let go of the comfortably anthropocentric scale of their studies. Yet, Crownshaw (2014:175) suggests that "memory studies is better positioned to remember" the Anthropocene if it makes an effort to temporalise and spatialise its objects of remembrance through deranging scale. He suggests that memory studies should refrain from demarcating that "which is to be remembered as a discrete and static object", since a variety of subjects (across medial and nonhuman lines) could and possibly should be considered when speaking about memory studies (Crownshaw 2014:175). These approaches could be informed by, for example, the study of geology as a key component of cultural understanding (Crownshaw 2017c:243). Such altered spatiotemporal parameters invite theorists to consider cultural memory, understood as the ways in which cultures confront the present through their ongoing reimagining of the past, in the "context of other planetary storage systems and technologies of transmission": the atmosphere, the cryosphere, and the surface of the Earth

are "so many archives that record and preserve the deep history of the species" (Vermeulen 2017:384). This point of view suggests that memory studies is better equipped to handle unfathomable scales of change, such as those encountered during the Anthropocene, if it adapts its objects of study.

Beyond recent centrifugal directions of memory studies,[7] the emergent geological shift thus demands vastly different axes of expansion to accommodate these new multiscalar referents (Crownshaw 2017a:3,4). Bond, De Bruyn, and Rapson (2017:859,860) explain that the media of planetary memory do not necessarily "assume the familiar forms of orthodox memorial culture (memorials, archives, monuments, etcetera)", but require us to consider "other traces of human history, such as carbon dioxide levels in the atmosphere and the chemical composition of our seas and soils". Craps (2017c:479) finds it useful that recent academic and literary projects that focus on undermining the conventional parameters of memory, in terms of scale and direction, resonate with calls for memory studies to become more future-oriented. Due to expanded notions of 'planetary memory', humans are increasingly confronted with their role in environmental degradation *and* their uncertain future. According to Colebrook (2017a:10), this means that humans might either continue as ongoing geological agents who cause harm to the planet, or as beings who might think in terms of much broader frameworks of existence.

Crownshaw (2014:175) notes that multiscalar dynamics of environmental degradation are unfolding across time, space, life, and matter in predictable, unpredictable, and mutating ways. Climate change, indeed, would seem to play a significant role in the development of and growing consensus on expanded views of memory: remembering involves material-neural processes implying relational, cultural, and vast planetary settings and attributes (Plate 2017:494). Many theorists note that climate change is putting more strain on our imagination and abilities to shape ideas (Gee 2016:173, Groes 2014:9, Craps 2017c:485). Groes (2014:9) goes so far as to say that "none of us are equipped to imagine" the full scope of environmental changes. New scales of events surpass our understanding, since we generally "lack the imagination to actually comprehend such vast temporal scales" (Groes 2014:4). Furthermore, future societies "that we can't imagine" will have to grapple with the havoc wreaked in the present (Blasdel 2017). The combination of such rapid change on such a large scale therefore makes environmental issues almost incomprehensible for individual humans. As can further be seen around the coining of

[7] These decentralised suggestions for memory studies include, for example, cosmopolitan (Levy & Sznaider 2006), multidirectional (Rothberg 2009), global (Assmann & Conrad 2010), travelling (Erll 2011), postcolonial (Craps 2013) and transnational (Rigney & De Cesari 2014) memory.

terms such as 'planetary memory' in ecocriticism – which enables a joining of macro-, meso-, and microscopic perspectives – novel assemblages brought about by the Anthropocene urgently call for much larger frames of reference than what most humans are generally comfortable with (Bond, De Bruyn & Rapson 2017, Lloyd & Rapson 2017, Groes 2016, De Massol de Rebetz 2020).

The concept and understanding of time play altered roles in the Anthropocene. Since the latter confronts humans with new attitudes and sensibilities, our thinking about time and memory becomes more complex (Groes 2016:140). 'Our' time is no longer our own: the past that "had appeared to be one of increasing mastery and universality increasingly appears to be a steady and irreversible destruction that shortens and delimits our future" (Colebrook 2017b:1017). Broadly, the scale of history we have confidently come to know, is unfathomably altered (Bond, De Bruyn & Rapson 2017:853; Wenzel 2017:5). Human time is no longer homogeneous, "in which moments follow after each other like beads knotted on a string", but rather strange and unpredictable (Wenzel 2017:5). The "Anthropocene's timeline is not that of European 'man', but of the earth, an earth that – despite the differences of the past – will ultimately subsume (and thereby constitute) us all" (Colebrook 2017b:1020). The very concept of the Anthropocene is premised on the idea that "there will be a time after the end of humans when, due to our profound impact on the planet, our existence will be discernible as a distinct geological layer" (Craps 2017c:484). Since climatological and geological memory is now far more central to human consciousness, time and memory are being rethought in these terms (Groes 2014:4).

The chief reason that we are waking up to our entanglement with the world we have been destroying, Morton (2011:167) holds, is our encounter with the reality of 'hyperobjects' – the term he coined to describe things such as ecosystems and black holes, which are "massively distributed in time and space" when compared to individual humans. Hyperobjects might not seem to be objects in the way that chairs or houses are, but they are "equally real, and we are now bumping up against them consciously for the first time" (Blasdel 2017). Global warming might have first appeared to us bits of strange local weather, then as a series of independent manifestations (an unusually torrential flood here, a deadly heatwave there), but now we see it as a unified phenomenon, of which extreme weather events and the disruption of the old seasons are only elements (Morton 2011:167). We can experience hyperobjects such as climate in their local manifestations, or through data produced by scientific measurements, but their scale and

the fact that "we are trapped inside them means that we can never fully know them" (Blasdel 2017). Because of such phenomena, we are living in a time of quite literally unthinkable change.

As has been briefly indicated, an undertone in many of these writings is the idea that the Earth is a subject who records and archives what is happening to it. In fact, according to Colebrook (2017a:10), it "would not be too radical to claim that at the level of geology, the Earth has a memory". Already, the Anthropocene is legible in the geological record that is being left by humanity's collective geophysical agency. Nardizzi (2017:13) also argues that it may be useful to think of natural layers on the earth's surface, such as ice and rock strata, as inhuman archives that record events regardless of human interference, but which may record human entanglement with nonhumans and technologies that have terraformed the planet.

From this perspective, the inscriptive event of the Anthropocene can be seen simply as an *extension* of the already existing archive of the Earth (Colebrook 2017a:10). These recordings could then possibly be entangled with human memory and activity, but do not depend on them. In more general terms, Crownshaw (2017a:3-4) argues that the unfolding geological record of humanity's inscriptions on the planet's surface through a variety of damaging activities, can be thought of as an archive which remembers the past and future history of the Anthropocene. He suggests that the Anthropocene's geological inscriptions might be "curated and archived by the work of cultural memory as the material of memories to come" (Crownshaw 2017a:4). Naturally, the concept of memory is pertinent in this context, as it captures the "dynamic of the past's return and so the cultural apprehension of geology" (Crownshaw 2017a:3-4).

Similarly, Groes (2016:141) notes that Earth "is an evolutionary mystic writing pad, or a deep time palimpsest, into which memories are inscribed to be read". He then summarises our ironic human perspective: who is witnessing the archiving of human activity? Are we "busying ourselves with memorialising ourselves" (Groes 2016:141)? Thinking about it in this way is useful for memory studies in the Anthropocene due to the much-needed focus on different forms of remembrance (in this case, terrestrial) as well as *who* is remembering and, ultimately, *which* Anthropocene is remembered (Crownshaw 2017a:5). Being aware of this may add a new layer of understanding of memory, which exceeds human or collective memory and includes a much larger scale of subjects, including the Earth itself.

Conversely, theorists are grappling with the reconciliation of massively increased senses of scale, or 'bumping up against hyperobjects', and individual, embodied memories on a minute scale. Groes (2014:9-10) also points out the contradiction of scales that surface in the Anthropocene. The increasing awareness of 'climatological memory', 'geological memory', and perhaps 'cosmological memory' "dwarfs the individual, embodied memory that is part of anthropocentric thinking" (Groes 2016:141). In his most recent work on the Anthropocene and literary criticism, Clark (2015:72) also demonstrates ambivalence towards his initial suggestion of a 'derangement of scale', or at least how it might be achieved in theory and practice. He admits that the everyday practices by which we have habitually made sense of the world now have planetary implications, effecting a 'transpersonal agency' – agency that is mostly indiscernible at an individual level but more apparent at the collective level (Clark 2015:72).

On the one hand, a "terrifying weight of human numbers" impacts the physical environment enormously and, on the other, we are unsure whether "I, as an individual, matter" (Groes 2014:9-10). The aetiologies of environmental degradation are complicated by the combination of the effects of everyday practices, magnified by the scale on which they are practised, on emergent environmental conditions which, in turn, intensifies those effects in feedback loops (Crownshaw 2017:893-894). Individual unaccountability, when 'collectivised', leads to the magnification of inertia, the "accumulation of our self-perceived insignificance as political and moral actors in scenarios of environmental destruction of our own making" (Crownshaw 2017:893-894). Precisely because the human impact is based on "exponential increase in our numbers, it also dilutes our agency", even up to the point that individuals wonder whether it matters "whether I switch the lights on or off" (Groes 2014:9). This awkward contradiction between the individual and the collective is one of the most dislocating effects of climate change.

The spatiotemporal planetary scale, then, as Colebrook (2017b:1017) notes, is at once expansive, related to thinking about time and space beyond that of a human lifetime, nation and species, and parochial, which holds that it is "*our* history that delimits *this* planet". Bond, De Bruyn, and Rapson (2017:859) argue for large-scale thinking without losing sight of the smaller, more detailed picture. In a sense, Buell's (2017:97) work highlights how thinking through vastly different scales simultaneously might be possible. Assessing what he calls "environmental memory" across four different spatiotemporal scales (including the vast planetary *and* individual

human lifelines),[8] he shows how memory and environmental problems can be addressed on any scale and equally contribute to a better understanding of life in the Anthropocene.

Critical enquiry into the massive geological scale of the Anthropocene should therefore not let theorists "lose sight of the manifold layers of temporality, spatiality, and experience that link the micro and the macro" (Bond, De Bruyn & Rapson 2017:859). When such attention to detail is lost, "particular instances of suffering, eliding the inequitable distribution of human and environmental violence, and occluding a valuable opportunity to map the intersections of global upheaval and personal trauma" might be overlooked (Bond, De Bruyn & Rapson 2017:859).

It becomes clear that questions of scale – in particular attuning to much larger planetary scales *without losing sight of the smaller picture* – are affecting memory studies in a variety of ways.
The scale and materiality of the emerging catastrophic environmental processes demand of memory studies a truly transdisciplinary approach. The challenge here is how to keep the 'familiar' alongside the planetary in the articulation of catastrophe in sight (Crownshaw 2017b:898). The framing of environmental futures needs to stage a "negotiation" between "expansion and contraction" to give both ends of the scale meaning and form in relation to each other (McGurl 2012:540). One infers, as Crownshaw (2014:175) suggest, that memory studies is better positioned in the Anthropocene by temporalising and spatialising its "objects of remembrance through a derangement of scale" – both massive and minute. Having discussed the ambivalences of scale, I now move to the closely related and uncanny theme of inequality and, consequently, agency, with which memory theorists are increasingly confronted by in the Anthropocene.

3.3.2 Inequalities: whose Anthropocene?

In the humanities, another major point of discussion concerning the Anthropocene – as a fast-growing body of literature indicates – is the unjust relations between humans and other humans and humans and nonhumans. To tease out possible ways forward, it is necessary to take the existing societal and spatial structures of the twenty-first century world into account.

[8] These four scales are 1) "biogeological" time (human life is imagined as participating in an ongoing process of planetary unfolding ever since time began); 2) individual lifelines (imagined as shaped through symbiotic relation to specific places; 3) narratives of communities; and 4) of nations (memories as formatively shaped by social or collective processes that highlight the interdependencies between people and physical environment) (Buell 2017:97).

It is common knowledge that parts of the planet and its local humans, fauna, and flora feel the devastating effects environmental degradation more than others (Figures 3.5-3.7). This inequality – most notably between the global North and the global South – is continuously present due to long histories of oppression, colonialism, and discrimination. Further, environmental issues evidently intertwine with social issues, such as those of ethnicity, class, and gender (Gee 2016:172,173). Generally, poorer countries have been infiltrated by richer countries' problems (Nixon 2011:41, Davis 2015:351).

Figure 3.5 | **A recycling centre outside Beijing, China**
2019.
Photograph by Fred Dufour.
(*The Guardian*).

Figure 3.6 | **An illegal gold mine in a ravine in the Pará state, Brazil**
2020.
Photograph by Lucas Dumphreys.
(*The Guardian*).

Figure 3.7 | **A fisher boat amid mostly plastic waste in Manila Bay, the Philippines**
2016.
Photograph by Erik de Castro.
(Vaughan 2016).

The Anthropocene, a product of "western humans, mostly Americans", is frequently accused of obscuring inequalities in the global distribution of responsibility for and vulnerability to environmental degradation because the term "unfairly lumps together the whole human race" (Morton 2016:41, Green 2020:5). The fact that the poor are "least to blame but suffer the most" is obscured from view by the developing Anthropocene narrative with its species-level understanding of the human (Craps 2017a:2, Bonneuil & Fressoz 2016). Moreover, the global South often relies on extractive mining economies or (e-waste and other) recycling initiatives that happen at a cost to human lives and general environmental health of that space (Reading 2014:750). The toxins and waste associated with such capitalist practices simultaneously cause illness in the bodies of labourers and irrevocable toxic environmental changes (Davis 2015:351).

A phrase coined by Yusoff (2018:12), that of the 'Black Anthropocenes', gives a name to all the "many *voidings* of experiences that span multiple scales, manifestations, and ongoing extractive economies, in terms of the materiality and grammars that inculcate antiblackness through a material geophysics of race". Yusoff (2018:11) argues further that the sudden concern about exposures of environmental harms brought about in the Anthropocene simply marks the exposure of white liberal communities to these. For centuries, they been knowingly exported to black and brown communities "under the rubric of civilisation, progress, modernisation, and capitalism":

> The Anthropocene might seem to offer a dystopic future that laments the end of the world, but imperialism and ongoing (settler) colonialisms have been ending worlds for as long as they have been in existence. The Anthropocene as a politically infused geology and scientific/popular discourse is just now noticing the extinction it has chosen to continually overlook in the making of its modernity and freedom (Yusoff 2018:11-12).

Memories, also 'environmental memories' (Uekötter 2011:4), are visibly fragmented along these societal, spatial, and racial lines. As Davis (2015:351) notes, living in a place such as Wen'an in China which, "after 25 years of operating as a plastics recycling village, is effectively a dead zone with rampant and pervasive negative health effects for the population and local ecology", would impact one's memory in ways unimaginable to those not in that position. Here waste is sifted, filtered through, and recognised for its worth by "those who cannot afford to participate in th[e] throw-away culture" that brought the waste about in the first place (Davis 2015:351). These divergent experiences bring about radically different affective memories.

Environmental humanities scholar Rob Nixon (2011:2-3) claims that the "long dyings – the staggered and staggeringly discounted casualties, both human and ecological that result from war's toxic aftermaths or climate change" are underrepresented in human memory, certainly also in memory studies. Moreover, because the primary texts of fields such as memory studies or trauma studies marginalise or completely ignore the traumas suffered by members of non-western and minority groups, traumatic memories of events such as the deep scars left by slavery and colonialism, the catastrophic experimentations of communism and socialism, the shrinking of the Aral Sea since the 1960s, the nuclear disaster as Chernobyl in the 1986, continued racism, and the dark underbelly of China's industrial revolution, are often obscured or left undocumented. As a result, the foundations of memory studies risk "perpetuating the very beliefs and structures that underlie existing inequalities and injustices instead of challenging them" (Craps in an interview with Lizarazu & Vince 2018).

Nixon's (2011) oft-cited concept of 'slow violence' gives some perspective in this regard (Hulme 2016; Bond 2017; Bond, De Bruyn & Rapson 2017; Crownshaw 2017a, 2017b, De Massol de Rebetz 2020). Slow violence, generally generated by global capitalism, is a "violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all" (Nixon 2011:2). Nixon (2011:2) explains that one way in which slow violence happens is when rich-nation toxins are dumped onto the world's poorest continent, Africa, most notably since the 1990s onwards. What further complicates this skewed relation is that this act helped to ease the "growing pressure from rich-nation environmentalists who were campaigning against garbage dumps and industrial effluent that they condemned as health threats and found aesthetically offensive" (Nixon 2011:2).

The issue stretches beyond misuse of poor countries: it includes the recognition that rich countries and elite environmental movements who are supposed to deal sufficiently and on a large scale with such global matters simply pass on the problem. Corrosive transnational forces[9] therefore "disproportionately jeopardise the livelihoods, prospects, and memory banks of the global poor" (Nixon 2011:5, Alaimo 2016:175-176). Wenzel (2017:7) argues that addressing inequalities between races, classes, and genders is a main concern for Anthropocene discourse: she finds it problematic that the current "fascination with these big new shiny scary objects – the

[9] Such forces include (but are not limited to) petro-imperialism; the megadam industry; outsourced toxicity; neocolonial tourism; antihuman conservation practices; corporate and environmental deregulation; and the militarisation of commerce (Nixon 2011:5).

deep past and the deep future" trump "more mundane questions of the present, of inequality, and of justice", which "tend to fall through the cracks or be forgotten" (Wenzel 2017:7). Although Wenzel (2017:7) maintains that such issues of inequality fall outside "the context of memory studies", I argue that precisely such factors link the Anthropocene and memory: human memories are shaped by lived experiences that are inseparable from gender, class, and race (Hallam & Hockey 2001:24-25).

According to Wenzel (2017:7), one unremarked aspect of the derangements of historical time at work in the Anthropocene is "a strange inversion of colonial-era developmentalist progress narratives in which Europe and the West were said to offer to the rest of the world an image of its own future". She proposes thinking about the 'future's pasts' of the Anthropocene as echoing an "inverse colonial fear: that an ominous Third World present offers an image of the First World's future" (Wenzel 2017:7). She explains that this "emergent mode of Anthropocene futurity offers a dark future anterior, what we might think of as a *future inferior*, in which 'Third World problems' will have arrived in the First World" (Wenzel 2017:7). For many around the globe, this "dark future anterior" is, and has been for quite some time, a stark reality.

An apt portrayal of this is Gee's science fiction novel, *The Ice People* (1998).[10] It is the year 2050 and a new ice age has set in. Inhabitants of 'developed' countries are flocking to Africa that, despite its ample social, political and economic challenges, is the only place on earth with a temperate climate. Groes (2016:144) notes that the novel portrays "how we need to confront and shed the myths which we use to justify our own behaviour, and which prevent us from a genuine commitment to stopping global warming". In this sense, the concept of the 'first world' is removed and 'third world problems' become global problems (Gee 2016:172-173). Such dystopian narratives highlight that all humans inhabit the same moment in time (Wenzel 2017:7). Wenzel (2017:7) claims such thinking to be an "unremarked aspect of the derangements of historical time at work in the Anthropocene".

Nixon (2011:24) includes references to authors – also the South African academic and author Njabulo Ndebele and activist-writer Nadine Gordimer – whose writings assist in "fortifying embattled 'socioenvironmental memory'". This includes critiquing an "international nature industry propelled by a romanticised colonial history and by neocolonial fantasy" (Nixon

[10] Gee's novel should not be confused with the 1968 French science fiction novel by René Barjavel entitled *La Nuit des Temps*, which was translated into English as *The Ice People*.

2011:24). In doing so, they pose questions about "long-term ecologies of social injustice" (Nixon 2011:24). Finally, Bond, De Bruyn, and Rapson (2017:860) insist that we must adopt a perspective closer to Nixon's 'socioenvironmental memory'. Even such a phrase, they admit, might perhaps fail to "capture the ways in which climate change alters the very parameters and possibility of cultural [and] personal memory" (Bond, De Bruyn & Rapson 2017:860). Postcolonial and non-western perspectives must be included to avoid reinforcing marginalising systemic structures of inequality (De Massol de Rebetz 2020:882).

Against this sketch of the current state of affairs between humans, I turn to the unequal human/nonhuman relationships that theorists are increasingly aiming to unravel in the twenty-first century. Although with greater emphasis on some or the other objective, new materialists (among others non- and posthuman theorists including speculative realists and object-oriented ontologists) have called for revised models of agency and accountability that extend beyond the human (Bond, De Bruyn & Rapson 2017:853). Such contemporary philosophies reject anthropocentrism – the privileging of human existence – and shift the focus from the autonomous human experience of things to the interconnectedness of all things.

Anthropocentric discourses, in which western humans are the exceptional species and the measure against which life is understood, is rooted in the onset of modernity that was structured by discreet dichotomous thinking. In *We Have Never Been Modern*, Latour (1993:13), points out that defining modernity in terms of *humanism* makes it easy to overlook the "simultaneous birth of 'nonhumanity'" (things, objects, or "beasts") and the "equally strange beginning of a crossed-out God, relegated to the sidelines". He explains that modernity arises from the creation of those three separate entities, then the masking of this conjoined birth and, finally, the separate treatment of the three (Latour 1993:13). As an effect of this false separation, hybrids "multiply" and the separate categories must be reconstructed (Latour 1993:13). The work of Craps (2017c:489) resonates with this: that humanity's failure to adequately address environmental problems can be read as a symptom of the "struggle for the domination of nature made possible through Enlightenment". Grusin (2015:ix-x) holds that the nonhuman turn foregrounds that "we have never been human" (to paraphrase Latour), but that the "human has always coevolved, coexisted, or collaborated with the nonhuman – and that the human is characterised precisely by the indistinction from the nonhuman".

Over the past few years, a considerable number of theorists have increasingly commented on the necessity of incorporating multispecies or posthumanist thinking into discussions of matters of environmentalism and memory. Scholars of memory studies have been shifting their attention to these matters, especially because contemplating the human within broader temporal, spatial, and species-specific scales has become an increasingly prominent theoretical perspective in the humanities. Such theorists have called for an erosion of human exceptionalism (Kennedy 2017a; Colebrook 2016), a break in the assumption that only (some) human fates matter (and that they matter more than those of nonhumans) (Groes 2016), critical nonhumanist or posthumanist perspectives (Crownshaw 2014) and "truly ecological" approaches within particular social and physical environments that value the interactions between materialities (Rigney 2017:475). Rigney (2017:476) argues that such ecologically adapted approaches would imply theoretical *and* methodological innovation, increasingly including "multi-sited dynamic interplay of persons, objects and creatures as our object of research".

This also applies to the theories and methods of memory studies. Craps (2017a:3) notes that, for memory studies to start thinking "ecologically" (rather than merely socially), the field "may need to break with the persistent humanism that can be seen to prevent it from adequately addressing the vast spatiotemporal magnitudes of the Anthropocene". Similarly, Crownshaw (2017c:244) argues that the radical changes in atmospheric, hydrospheric, lithospheric, and biospheric conditions caused by climate change calls for a radically reconfigured memory studies. Theorists must move beyond the narrow focus on *human* experience of environmental degradation in which humans are framed as perpetrators, victims, and saviours (De Massol de Rebetz 2020:878). Instead, memory studies must "account for the wider, ecological dimensions of human actions" that stretch beyond anthropocentric views and experiences (Crownshaw 2017c:244).

Kennedy (2017a:9) presents the concept of 'multidirectional eco-memory'. She argues that this concept would "link human and nonhuman animals and their histories of harm, suffering and vulnerability in an expanded multispecies frame of remembrance". This could facilitate new visions of justice that hold humans responsible and accountable for their actions towards nonhuman species (Kennedy 2017a:9). Doing so will reveal the "interconnectedness of human and more-than-human worlds through their mutual devastation" (Crownshaw 2017c:244).

Kennedy (2017a:9) points out a pressing challenge for memory studies (and the humanities more broadly): she questions how its current resources and tools would "push the field beyond its anthropocentric focus […] to incorporate nonhuman species as objects, if not subjects, of memory".[11] To this end, she suggests that memory critics could begin by "extending their objects to include the memory of nonhuman species" (Kennedy 2017a:9). Although Craps (2017c:485) views this suggestion as an enriching and potentially useful response to environmental issues, he warns that working solely with 'radical' methodologies threatens to discount the human subject, "throw[ing] the human baby out with the anthropocentric bathwater".

Vermeulen (2017:385) suggests returning to existing (anthropocentric) memory banks to tease out how modern archives that chronicle the emergence of the modern subject can potentially "remember modernity differently": as an anxious effort to police the borders between the human and the nonhuman, as a tenuous balancing act between human agency and the forces and afflictions that assault it. Similarly, Bond (2017:1009) suggests that opening the past and its texts to revision "offers the possibility that renewed attention to the uneven and unequal trajectories of different memorative velocities might facilitate, in turn, the emergence of a literary counter-memory of modernity". The return to early modernity might reveal that Vermeulen's (2017:385) concept of humans' vulnerable 'creatureliness' has a history.

Bond, De Bruyn, and Rapson (2017:862-863) stress that any human account of planetary memory will always be partial, contingent, and open to revision. This resonates with a point made by Craps (2017c:485), that conceiving of memory in strictly nonhuman terms, free from human modes of experience and representation, might risk making memory "a mere metaphor". It is therefore still important to question whether it is indeed possible to think about memory (or the 'planetary') outside of anthropocentric modes of representation and cognition. Kennedy (2017a:9) admits that her proposition of 'multidirectional eco-memory' is inevitably anthropocentric, since humans remain the animating agents of cultural memory, but adds that, at the very least, it "encourages memory scholars to explore the entangled relations between human and nonhuman species in their struggle for survival, recognition, and justice".

[11] An example of how anthropocentric historical accounts can be enriched by focusing on history from an animal perspective, is historian Sandra Swart's article, "The World the Horses Made': A South African Case Study of Writing Animals into Social History (2010). Swart (2010:241) argues, from an equine perspective, that horses changed human history on the macro and intimate level of the bodily, while showing how taking animals seriously might offer a "fresh dimension" to our understanding of historiography.

Crownshaw (2014:175) argues that, due to the increasing awareness of the overlap between human and nonhuman systems, memory studies needs to adopt a posthumanist stance, "otherwise it will be circumscribed by the normative theorisation of memory's symbolic reconstitution of human life and human worlds". Evidently, memory studies could begin to incorporate narratives about the place of nonhuman beings in human stories of origins, identity, and futures (Kennedy 2017a:8). Craps (2017c:479) notes that this might already be taking place, since scholars increasingly seek to make memory studies relevant by forging more robust links between memory and transitional justice or human rights discourses.

Craps (2017a:3) argues further that, only by going beyond anthropocentric modes of cognition and representation will memory studies enjoy the possibility of participating in the 'nonhuman turn' currently sweeping the humanities and social sciences. Memory studies therefore has an opportunity to become even more 'multidirectional' by developing a perspective that is attentive to the overlapping histories of human and nonhumans. Again resonating with Craps's work, Ruin (2015:206) holds that memory, if properly conceptualised, has the potential to "provide an access to precisely th[e] speculative experience of otherness in oneself", which is, among other things, what the new materialisms do. Broadly, what is needed is an "attentiveness to all living creatures, coupled with new efforts and ways of reading and sensing those memories that are stored in the bodies of other animals, as in our own" (Weil 2017:401).

Clearly, the Anthropocene poses questions about the place and the role of humanity – which consists of diverse humans with diverse lived experiences influenced by their entanglement in the world around them. Weil (2017:399-400) suggests that attention should be drawn not only to the 'exposure' of nonhuman animals to issues such as climate change, habitat destruction, and threatened extinction, but also to "the extent to which humans are responsible, even if such loss was not planned or foreseen". In the end, as Kennedy (2017a:8) notes, one of the main drivers of memory studies becomes the "issue of value": what stories are being told, by whom, and for what end? In the section below, I combine and discuss additional themes often discussed in relevant extant literature. These can be seen as enriching the two threads concerning multiscalarity and inequality discussed above.

3.3.3 Now (or future's pasts)

As can be seen already in terms of the threads discussed above, the humanities has begun to explore, scrutinise, assess, and theorise the limits and possibilities of representing and

conceptualising life in the Anthropocene and, consequently, has in many ways "found itself theoretically depleted" (Crownshaw 2017c:242-243). Climate change is in other words altering how humans remember and conceive memory which, according to Plate (2017:494), calls for new or renewed concepts. As Colebrook (2016:153) states, the Anthropocene is a serious event that is forcing us to "revise the very way in which we think about concepts, and revision [itself]". Nardizzi (2017:14) calls for further philological attention "to the proliferating nomenclatures that we use to describe environmental conditions, past, present, and future". He suggests that, if we delve into the slumbering "archive of words" to productively activate a renewed attention to its content, we might see that human and nonhuman relations have existed all along (Nardizzi 2017:14).

This section looks at the ways in which cultural memory studies have been, or might further be, recalibrated in relation to the Anthropocene by turning to theories, terms, and methods that theorists are suggesting and deploying in grappling with memory in the face of extreme and rapid environmental degradation. In extant literature on the intersection between Anthropocene and memory, I have come across terms such as 'grief', 'embarrassment', 'guilt', 'trauma', 'mourning', 'nostalgia', each of which supposes a sense of radical rupture brought about by loss or the loss that comes from anticipating it, or a sudden realisation that something is not, or *will not be*, as it seems. As Buell (2017:97) notes, the "awakening of environmental memory exacts a high price".

These terms were often used by the literary theorists, most prominently Craps (2017a, 2017b), Crownshaw (2017a, 2017b, 2017c), Groes (2016, 2017), Lloyd and Rapson (2017), and Vermeulen (2017), who engage with novels and films. Their analyses span diverse artistic representations in various genres that fall under the broader headings of climate-fiction or 'cli-fi', including sci-fi, (post)apocalyptic fantasy, dystopian futures, stoic sublime, ecocritical realism, the postpastoral, eco-memoir, and non-fiction nature writing/cinema. Literary readings include, among many others, films such as *The Day after Tomorrow* (Emmerich 2004), *An Inconvenient Truth* (Gore 2005), *Sunshine* (Boyle 2007), *The Age of Stupid* (Armstrong 2009), *Into the Wild* (Penn 2007), and *Interstellar* (Nolan 2014), and novels such as *The Flood* (Gee 2004), *The Road* (McCarthy 2006), *Flight Behaviour* (Kingsolver 2012), *H is for Hawk* (MacDonald 2014), and *The Water Knife* (Bacigalupi 2015).

These texts, often concerned with the 'anticipatory memory' that characterises fictional future histories of climate change, resonate with a recent shift in the field of memory studies (Craps

2017c:486). In other cases, literary representations of nature further often appear within recollections of childhood, or in the context of acts of remembering (Buell 2007). Using such narrative devices in the cli-fi genre is "particularly suggestive for thinking through the implications of the Anthropocene for memory and the field of memory studies" (Craps 2017c:479).

The most exhaustive layout of the use of different rhetorical and artistic devices in literary texts that I could find was Groes' essay entitled "Against Nostalgia: Climate Change Art and Memory" (2016). He notes that the "absence of a unified, shared response [to climate change from authors and artists] is a strength rather than a weakness as it mimics a diverse, evolving, diversifying ecology of the imagination that connects us to past forms of stability via literary and cultural traditions" (Groes 2016:175). Further engagement includes the articles in the special edition of *Textual Practice* (Bond, De Bruyn & Rapson 2017:860), which probe modes of mourning and working through loss, anticipation, and dread, where these are appropriate to the ongoing "trauma of climate change". Craps (2017c) and Crownshaw (2017a, 2017b) study trends in contemporary literary works, notably as viewed through the lens of 'anticipatory memory', which forces humans to imagine themselves in the future in order to look *back* on the present. Groes (2016:141) explains that these literary form a kind of 'preliminary' or 'proleptic' mourning (Colebrook 2017b), whereby humans "lament our fate and grieve for ourselves as if we were extinct already".

End-time thinking is thus one major part of current public discourse and popular imagination complexification when it comes to thinking about time and memory. This is partially because there is an increasing awareness that it is "not unlikely that climate change is threatening humans with extinction", which typically evokes feelings of guilt and embarrassment (Groes 2016:140, Craps 2017c:486).[12] In a sense, such future-history approaches to climate change "want to have their cake and eat it: they evoke the inhuman, the end of human existence, but they do so from the point of view of a human being (or human-like being) who can somehow look back on the present moment from beyond (or at least very close to) the end" (Craps 2017c:484).[13]

[12] The relation between "self-conscious" human emotions (Tracy & Robins 2004, 2007) (such as guilt or pride) and environmental consciousness is discussed in Chapter 6.
[13] The discussion of works of (climate) fiction – textual and in films – in this section could be analysed in much more detail from a visual culture studies perspectives. A useful point of departure would be Mirzoeff's (2011:1) suggestion that visuality – the unnaturally constructed 'way of life' as maintained by authorities with power – could be challenged with countervisuality, or "the right to look". (Yet, it must be recognised that "not all opposition to visuality is automatically countervisual: countering visuality is not simply a matter of "assembled visual images", but

Paradoxically, environmental degradation evokes questions about the future of the planet, yet it harks back to memories of the past and poses questions in strange new combinations (Groes 2014:3).[14] Wenzel (2017:5) notes that the temporal shifts demanded by the Anthropocene, destabilise the "straightforward, secular assumption that pasts and presents have futures, that things just keep on going, that time and history keep unfolding, […] according to the certitudes of a progress narrative". Moreover, theorists have introduced several terms, such as 'future anterior' or 'future perfect subjunctive' (Garrard 2016), 'past's futures' and 'future's pasts' (Wenzel 2017), 'anticipation of retrospection' (Currie 2010) and 'future-tense trauma' (Kaplan 2015) to think through the complex notion of time.

The emphasis on Anthropogenic futures and their causes as mere speculation also mitigates somewhat, according to Crownshaw (2017b:891), the teleological desire to "read ourselves from the future while maintaining the idea of a scientifically possible and probable if not prescribed scenario". As an example of how these terms are deployed, I refer to the notions of Wenzel (2017:6) of "past's futures" and "future's pasts".[15] 'Past's futures' are "entanglements of anticipation and retrospection" and connotes "how people in the past imagined the future would be" (Wenzel 2017:6). In the Anthropocene, humans increasingly realise that the changes yet-to-come "will have been effected by carbon emitted long ago and, in many cases, far away from the sites of its eventual effects" (Wenzel 2017:6). 'Future's past' connotes "what has to have happened before the future arrives" (Wenzel 2017:6).

Some Anthropocene narratives therefore demand of humans to imagine ourselves somewhere in the future and look back over time at our present selves. Simply put, humans are forced to think about time (the past, the present, and the future) *through* and with a critical awareness of other times. In this sense, extinction and mourning become memorial records themselves. Reporting stories of species extinction produces narratives of absence that form the fabric of memory and future memory (De Massol de Rebetz 2020:876). Ironically then, insofar as climate catastrophe

rather "the grounds on which such assemblages can register as meaningful renditions of a given moment" [Mirzoeff 2011:28]). In particular, the use of visual metaphors (such as 'looking back' and 'in retrospect') in cli-fi media could be regarded as representing a sort of countervisuality that opens a view onto an apocalyptic future rendered 'invisible' or 'improbable' by dominant power structures.

[14] For example, psychologist Glenn Albrecht's (2012:sp) term 'solastalgia' describes the homesickness that can occur when one's home disappears through radical environmental change (Emmett & Nye 2017:112).

[15] The concepts of 'past's futures' and 'future's pasts' are based on postcolonial feminist scholar Gayatari Spivak's concept of 'figured past'. Wenzel first developed these terms in her book, *Bulletproof: Afterlives of Anticolonial Prophecy in South Africa and Beyond* (2009) and, in her 2017 essay entitled "Past's futures, future's pasts" she applies them to memory in the Anthropocene.

will cause mass extinction, including of the human species, it "cannot actually be represented, remembered, or mourned after the fact for the simple reason that there will be no [humans] left to do the representing, remembering, or mourning" (Craps 2017c:484).

Similarly, Colebrook's (2017b:1020) 'proleptic' or 'preliminary mourning' also point to how the future's past is constructed. The preliminary mourning of the (anticipated) extinction of humanity under the conditions of the Anthropocene is the mourning of the past prior to a "fragile, drowned or lost world" and so of "what once made us human". In effect, preliminary mourning remembers past representations of the environment. She suggests thinking about contemporary preliminary mournings of the end of humanity "not as new ways of thinking about a humanity that has discovered its own destructive tendencies, but as part of a broader tradition of counter-memory" (Colebrook 2016:150).

Yet, Colebrook (2016:150) points out the impossibility of mourning a 'nature' lost. In the case of nature, humans cannot mourn something that no longer is, since *there is no 'nature' in the first place* as this would be the anticipatory retrospection of a past ecological equilibrium, or 'benevolent' nature, that was never objectively present. In his earlier ecocritical work, *Ecology without Nature: Rethinking Environmental Aesthetics,* Morton (2007:2-3) rejects Nature (with a capital N) as a Eurocentric construction inherited from Enlightenment philosophy and Romanticism: Nature is a mighty entity that is nurturing and cruel, fragile and powerful, tameable and controllable. If there can be something like climate change it is not because humans no longer live in harmony with 'nature', but precisely because there is no nature that can be restored (Alaimo 2016:11).

The false dichotomy between nature and culture, as perpetuated by modernist thinking and upheld by capitalist ideologies, is being undone in the Anthropocene. Although we "might like to think that we have lost what once made us human, and we might tend to mourn a past prior to a fragile, drowned or lost world", such a past has never existed (Morton 2007:4): climate has *always* been changing, which belies the nostalgic idea that some previous, static (and undamaged) version could be restored (at least to memory) (Crownshaw 2017b:890).

In many ways, environmentalist writers and thinkers have "skilfully mobilised literary and aesthetic concepts and genres" such as the sublime, the picturesque, pastoral, apocalyptic narrative, and what Buell (2001) has called 'toxic discourse' about polluted landscapes and deformed bodies, so as to convey "a sense of a previous, beautiful, and fragile natural world at

risk" (Heise 2016:7). Nostalgia thus further complicates the human relationship with futures, environmental issues, and memories. Garrard (2016:164), who focuses on 'environmental amnesia', warns that nostalgia may foster delusion that allows us to evade a discomforting past, present, or possible future realities. He notes, however, that we *need* nostalgia, since it is "an emotive type of biospheric perception that helps us counteract the amnesic drift" of the 'new normal' environmental conditions that intensify with the passing of each generation. Simultaneously, what is remembered is nonetheless no longer 'normal', since sentimental yearning and the act of remembering are, in themselves, tainted by subjective lived experience and oft-unpredictable human mnemonic systems. The ironic complexities entangled in our capacity to adapt to changed circumstances, the effects of nostalgic memories of the past and the increasing awareness of environmental degradation, therefore carry many risks *and* positive potentials.

In several ways, then, as Bond (2017:1009) argues, the Anthropocene might be considered to invoke a "crisis of mourning", not only because of the challenge it poses to established regimes of thought and action, but also because the object of mourning is fundamentally opaque. Indeed, the catastrophes of the Anthropocene are so widespread, engendering so many kinds of violence across such large scales of space and time, that "there is no clear focus of loss" (Bond 2017:1009,1010). Crownshaw (2014:175) points out that, although theories of mourning are helpful when examining memory in the Anthropocene, these current theories may still not be fully suited to discuss this matter. Such theories are usually based on the psychoanalytical logic that the lost object can be renewed by rejecting libidinal attachments to it and reattaching to its replacement. The main problem with such logic is that it wrongly conceives the "loss, depletion and degradation of environments, ecologies, resources, species and ways of life" as replaceable (Crownshaw 2014:175). Replacing such losses is impossible.

Because phrasing and rhetoric impact the way we think about a certain notion, it is further important to situate the words currently used to describe the Anthropocene, including those suggested to describe it. As Groes (2016:143) holds, environmental changes bring to the fore the complex relationships between actual experiences and mere knowledge, as well as human history and the Earth's history, engagement with which requires new tools and thought processes. Moving away from the concepts and discussions by theorists of literature studies, what I contemplate are three further connections between memory and the Anthropocene pointed out in the existing body of literature. These include the rhetorical device of 'the ecological holocaust',

the concept of 'weather weirding' and Nora's *lieu de mémoire*, which is increasingly re-evaluated for its potential of evoking *environmental* sites of memory.

As mentioned, a familiar and popular strategy for deploying memory as a basis for advocacy for environmental change is the overused metaphor of the 'holocaust' (Kennedy 2017a:9, Craps 2017c:488). Climate scientist Walter Dodds (2008) uses such a rhetoric of guilt, implying that the threat of extinction can be read as an 'ecological holocaust' (Kennedy 2017a:9).[16] The holocaust, assumed as an unparalleled symbol of 'universal evil' (Meister 2011), serves in theory as a moral imperative to foster action against atrocities in the present. Craps (2017c:488) further explains that this comparison between the holocaust and environmental degradation is usually drawn because it is the "closest thing we have to an analogue for human-caused loss of life on such a massive scale, and the moral call to action associated with its memory resonates with and adds weight to [an] appeal for climate change action".

However, it is important to point out how this approach is problematic in at least two ways. Firstly, it is necessary to acknowledge that a western understanding of trauma continues to privilege genocide of Europeans (particularly the holocaust in its various forms) over non-European genocide and the genocidal over other, slower, structural forms of violence and oppression experienced in colonial and postcolonial scenarios (Crownshaw 2017c:246). Therefore, one of memory studies' central tasks, which has been to "remember the victims of precisely these forms of violence and exclusion, also in order to prevent them from happening again", may be at odds not only with calls to decolonisation, but also with the humanist foundation of the field, which has, until now, "gone almost unquestioned" (Knittel & Driscoll 2017:381). Secondly, it is problematic that metaphorical use of the holocaust reduces tangible tragedies and traumas to rhetoric. Thus, extending the logic of the holocaust to the threat of species extinction demonstrates the (unsettling) ways in which memory paradigms shape moral discourses and advocacy in the present (Kennedy 2017a:9).

Locally, however, the work by the Truth and Reconciliation Commission (TRC) in search of healing in post-apartheid South Africa cannot be overlooked. Oral narratives were employed to impose closure on the colonial and apartheid past: in order to forget, victims and perpetrators alike were urged to remember and process painful memories. The TRC gave credence to

[16] In a similar vein, memories of genocides, or 'ecocides' (discussed by theorists like Meszaros Martin 2015; Lahoud & Tavares 2013; and Tavares 2014) are used to refer to the violent and 'terroristic' extermination of nonhuman life.

academic arguments for more research to be conducted on perpetrators, trauma, memory, memorialisation, reparations and a myriad of related questions. (Field 2012:176).

Returning to a planetary scale, although mass species extinction – only the sixth such event in the Earth's history, and a predicted effect and marker of the Anthropocene – is a very probable and palpable threat, Kennedy (2017a:7) holds that the field of memory studies has yet to engage significantly the loss of nonhuman species, especially without strategically using the holocaust as a rhetorical device. Three years after Kennedy's plea, an article by De Massol de Rebetz (2020:877), "Remembrance Day For Lost Species: Remembering And Mourning Extinction In The Anthropocene", treats exactly this topic while not mentioning the holocaust. By clearly linking anthropogenic species extinction to memory discourses, De Massol de Rebetz (2020:877) contends that each extinct species in the Anthropocene carries multiple memories: the "memory of the epoch as well as its own uniqueness and that of its particular geography and history". In this sense, not only the species itself is lost, but also the future genetic heritage of its evolution (De Massol de Rebetz 2020:877). Remembering such extinct species, for instance by means of museum collections or funeral rituals, can be seen as metonymical devices of "defining and devising planetary memory and future memory in the Anthropocene" (De Massol de Rebetz 2020:878).[17] Taking into account the proliferation of terms and cross-pollinated methods theorists are developing to describe unfolding issues in twenty-first century, it can be said with some justification that scholars of memory studies are grappling in earnest with current questions without restricting their approach to existing tools and frameworks.

Beyond the overly simplified rhetoric of the holocaust and novel engagements with speaking about species extinction, some theorists link memory and the Anthropocene by zooming in on humans' relationship with climate and weather through terms such as 'weather weirding' (Groes 2014, 2016; Hulme 2016) and 'weather-bodies' (Neimanis & Walker 2014).[18] Due to the 'strange' meteorological events where seasons are "knocked out of their 'proper', stable sequence", humans have an everchanging relationship with weather (Groes 2016:143). 'Weather weirding' can be described as a state into which humans enter when reflecting upon their recollection of

[17] An example of how extinction becomes a meditated archival record is through architectural spaces like the Mass Extinction Memorial Observatory (MEMO) on the Island of Portland, England, designed by British architect David Adjaye. Planned on the scale of a cathedral, MEMO is a public memorial space that both remembers the more than 860 extinct and draws attention to the ongoing wave of extinction (Emmett & Nye 2017:108).

[18] Phenomenologist Julien Knebusch ([sa]:5) explains that weather normally refers to a temporary state in the atmosphere, whereas climate is more likely to refer to large meteorological time (such as seasons). Whereas climate illuminates patterns over time, weather events are often surprising, capricious, and (seemingly) isolated – they may fulfil these overall patterns, or not (Neimanis & Walker 2014:562).

what the weather 'used to be like'. This usually consists of stable memories of when "it used to be colder" or when the "summers were sunnier" (Hulme 2016:160).

This 'personal climate', or each individual's *remembered* weather, guides one's expectations of how weather *should* behave. Memories of weather accumulate through an individual's life story and have an impact on how humans think about climate at any specific stage (Hulme 2016:160). In this vein, Garrard (2016:166) looks at how changing weather patterns are forging a changed relationship towards change itself. Furthermore, the malleable and changing weather patterns can only be made sense of through reference to the past. This includes an "instrumentalised past" reflected, for example, by meteorologists' statistics or, "more powerfully, in our own remembered and memorialised past" (Hulme 2016:161). In similar ways, human tissues are permeable, inhabited, and vulnerable to toxicity. Through bio-magnification, it can therefore be said that the category of the human is endangered at the macro and micro levels (Emmett & Nye 2017:109).

Moreover, writing within the field of archival studies, Neimanis and Walker (2014:572) hold that human bodies – "weather-bodies" – contract all past memories in the present moment in order to make sense of an experience. The body becomes alarmed by the remembered temporality of heat and cold or seasons passing and beginning. Acknowledging this bodily reaction, however, is immediately challenged by dominant structures that dictate "what we perceive", leaving the human body ill-equipped to "make sense of what is presented to it" (Mirzoeff 2014:213-214).[19] The first step to emancipating the human body from oppressing structures, Mirzoeff (2014:213-214) suggests, is to recognise how "deeply embedded in our very sensorium and modern ways of seeing the Anthropocene-aesthetic-capitalist complex of modern visuality has become".

Climate change and the "fleshy, damp immediacy of our own embodied existences" are nonetheless intimately imbricated, providing an understanding that the "weather and the climate are not phenomena 'in' which we live at all – where climate would be some natural backdrop to our separate human dramas – but are rather of us, in us" (Neimanis & Walker 2014:559). Drawing on Barad (2007), Neimanis and Walker (2014:560) aver that it is through the intra-active process of mutual becoming, or 'weathering', that humans and climate change come to matter. Neither humans (replete with tools, products, and prostheses) nor the meteorological

[19] For example, there are no effective, global climate change politics that work to inform and confirm such bodily reactions (Mirzoeff 2014:214).

milieu of weather patterns, phases, and events can be understood without the intermingling of the two. In short, humans are "thick with climatic intra-actions; we are makers of climate-time" (Neimanis & Walker 2014:558).

Hulme (2016:159) therefore rightly points out that memories of the past become our normative (and highly malleable) guide to present and future weather. He adds that humans are capable of imagining memories of past weather which reach them through "re-told stories" of previous generations' childhood experiences (Hume 2016:160-161). This weather, he explains, is communicated subjectively as indexed memories and evocations of fears and desires, in *lieu* of purified statistics, making climate "an ineffable multisensory account" of a past where imagination, situatedness and history meet the physicality of the seasons (Hulme 2016:160-161). Not only does this point out the close relationship humans develop with weather, but also the selectiveness and malleability of memory, because even if "the summers were sunnier" in general, it is also a tainted, often nostalgic, recollection (Groes 2014:4-5).

In the final narrative discussed here, I turn to the ways in which memory studies has begun to highlight the importance of place rather than planet (Lloyd & Rapson 2017:918). Cultural memory studies "draws attention to dimensions of the affective investment in place and of place-belonging whose implications have hitherto been largely ignored by ecocritics" (Goodbody 2011:57). Such work focuses on counteracting a "supposedly anonymous process of globalisation by salvaging the deeply felt environmental or memorial associations that had accrued to a particular *lieu de mémoire* or bioregion, construed narrowly or expansively" (Bond, De Bruyn & Rapson 2017:855). Yet, Bond, De Bruyn and Rapson (2017:855-856) note that, although these works are of indubitable value, they have "tended to overlook processes that have become increasingly hard to ignore", such as the harrowing concerns of population size, median age, mortality and fertility rate, global economic fragility, transnational migration flows and, last but not least, "newly unrecognisable environments that may stretch across regional, national, even continental borders". Again, Bond, De Bruyn, and Rapson (2017:859) call for a balance between large- and small-scale thinking.

In the process of recalibrating memory studies in the current geological epoch, some theorists point out the relation between 'natural' physical spaces and memory. Largely based on Nora's concept of the *lieu de mémoire*, Uekötter (2011:1) refers to this relation as 'environmental sites of memory', while Nixon (2011) refers to it as 'socioenvironmental memory'. Environmental sites

of memory can be defined as "historical events, limited in chronological and geographic respects, that played an important role in the interaction of man and the natural world" (Uekötter 2011:1). Similarly, Plate (2017:495), argues that there might be a sense in which climate change is creating a new environment of memory on other geographical and temporal scales "where the human and the geological commingle". Plate (2017:495) suggests further that to conceptualise memory as 'operating at multiple, interlocking scales, memory studies could step back to "retrieve an older and largely neglected term", namely Nora's *milieu de mémoire*, the 'environment of memory', a term he paired and contrasted with the *lieu de mémoire*, the 'site of memory'.

Milieux de mémoire can be understood as "real environments" of memory (Nora 1989:19). Rather than merely looking at social *milieux de mémoire*, memory studies could recycle the concept for a posthumanist understanding of memory and reconceive it to be about "the environment at large; a true memory environment of which humans are (but) a part, that is lived (not just by humans) in the anticipation of the materialisation of past mistakes, a future memory of catastrophes yet to come that already metamorphoses memory, how and what 'we' remember" (Plate 2017:495). The memory environment that looks beyond the humanist distinction between natural and human history might be a useful concept that serves the imaginative effort of telling new stories "necessary to understand the metamorphoses of the world and of memory in the Anthropocene" (Plate 2017:495).

In summary, the present section teased out the diverse ways in which theorists from various disciplines and fields, including most notably memory studies, archival studies, literature studies, and multispecies studies, are employing and/or dissecting tools and terms to engage (with) memory in the Anthropocene in order to gain a greater understanding of life in the twenty-first century.

3.4 CONCLUSION

Although it becomes clear that memory studies and Anthropocene discourses are progressively approached from an interdisciplinary perspective, literature of the two fields in relation to one another remains limited. This chapter was dedicated to providing a holistic and applicable overview of the literature on the intersection between memory and the Anthropocene by referring to 36 relevant academic writings.

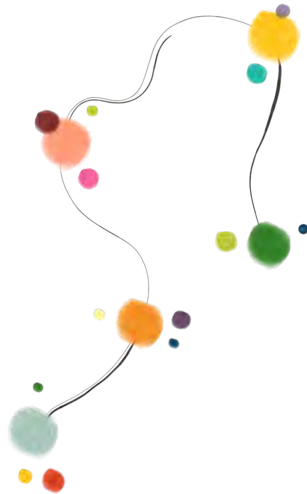
As I made progress with my search for writings that bring memory and the Anthropocene into the same frame, it became clear that, despite the existence of such an emerging body of literature, a lacuna exists around addressing the matter of the sentimental memory object, also in relation to environmental consciousness. As this is one of the main themes of this study, I briefly alluded to the potentials of Boscagli's *Stuff Theory*.[20] The chapter was consequently divided into the most prominent threads that are engendered by engaging with the literature.

In the first instance, as theorists have pointed out, memory studies needs to critically engage with a derangement of scale, including renewed understandings of Anthropocene time and space. I also referred to theorists' call that, while grappling with massive and in many cases incomprehensible spatiotemporal scales, scholars should not lose sight of individual experiences that continue to shape micropolitics of the self. This led to the second prominent thread: in order for a more just future to materialise, memory studies theorists agree that the field needs to start thinking 'ecologically' rather than merely socially. This involves a break with the persistent humanism that has thus far prevented the field from "adequately addressing the vast spatiotemporal magnitudes of the Anthropocene" (Craps 2017a:3). While arguing that anthropocentrism should be replaced with greater engagement with the nonhuman, theorists hold that this should not nullify engagements with unjust and detrimental realities that some human and nonhuman populations are facing in the twenty-first century.

The final section of the chapter discussed themes that are not less important than the issues of scalarity and inequality, as set out above, for thinking about the Anthropocene; these threads are simply less prevalent in the literature. This section included unpacking how humans' understanding of the world around them is changing through an awareness of possible human extinction and the traumas, mournings, and nostalgias evoked by it. Here, I referred to the contributions of literary scholars through the application of terms such as 'anticipatory memory' and 'proleptic mourning' in their analysis of literary texts. I discussed three final threads, including the rhetoric of guilt, by teasing out the common moral threat of an 'ecological holocaust', understanding the role of past memories in the human's embodied experience of weather as a 'weather-body', and the suggestion of looking at *environmental* sites of memory as a way to engage the relation between place, environmental awareness, and memory practices.

[20] This discussion on memory objects continues in further detail in Chapters 6 and 7.

Together, the discussion of theories found in this and the preceding chapter form the theoretical underpinning of this study in that these theories provide insights to the potential relations between memory and environmental matters. In Chapter 4 to follow, I turn to the implications of using the new materialisms as a methodological framework for conducting research in the humanities by alluding to the challenges and potentials of assemblage thinking.



CHAPTER 4

new materialist social enquiry

New materialism offers a means to move beyond the anthropocentrism that takes the human as the measure of all things, and allows us to take a fresh look at the ways in which the nonhuman has important and pervasive effects – on a daily basis – upon the social world and on all our lives.

- Nick Fox and Pam Alldred (2017:8)

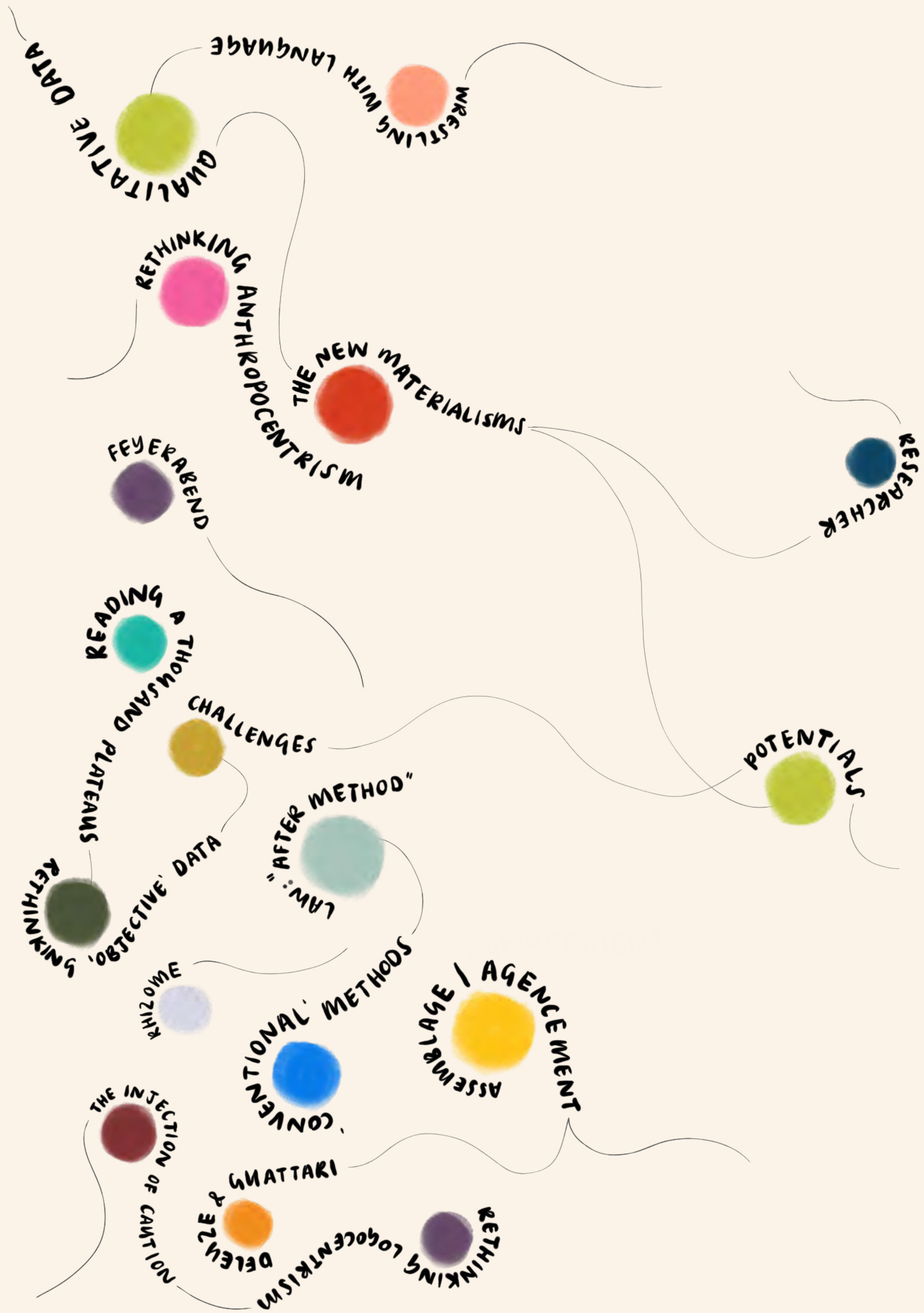
Slippery, indistinct, elusive, complex, diffuse, messy, textured, vague, unspecific, confused, disordered, emotional, painful, pleasurable, hopeful, horrific, lost, redeemed, visionary, angelic, demonic, mundane, intuitive, sliding and unpredictable [method]. Each is a way of trying to open space for the indefinite. Each is a way of apprehending or appreciating displacement.

- John Law (2004:6)

I am spacious, singing flesh, on which is grafted no one knows which I, more or less human, but alive because of transformation.

- Hélène Cixous (1976:889)

Figure 4.1 | key concept visualisation



CHAPTER 4: NEW MATERIALIST SOCIAL ENQUIRY

4.1 INTRODUCTION

As 'turns' do, the material turn in contemporary theory, too, inevitably challenges existing approaches to social enquiry (Kuntz 2019:42). The current chapter is dedicated to laying out this study's new materialist methodology by plotting the theoretical and practical implications of a new materialist approach for qualitative data enquiry (as introduced in Figure 4.1 on the previous page). The first section consists of an engagement with the challenges posed and potentials offered by new materialist methodologies. Drawing on theorists from various disciplinary backgrounds relevant to this study, I discuss the research directions made possible by the introduction of innovative methodological frameworks that require the rethinking of the role of human experience in twenty-first century research processes.

I refer predominantly to works that share a commitment to re-evaluating research practices in the twenty-first century. Such works include those of sociologist John Law, entitled *After Method: Mess in Social Science Research* (2004:4), which makes an argument for a way of thinking about method that is "broader, looser, more generous, and in certain respects quite different to that of many of the conventional understandings"; the introduction to and selected articles in *Critical Qualitative Inquiry: Foundations and Futures* (2015), edited by research design scholar Gaile Cannella and educational scholars Michelle Salazar Pérez and Penny Pasque, which maps the history and present practices of critical qualitative scholarship and provide possibilities for future work that would address both contemporary conditions and the unthought future; and cultural theorist Rebecca Coleman's and sociologist Jessica Ringrose's book, *Deleuze and Research Methodologies* (2013:1), which examines the ways in which Deleuzian thinking is "inspiring empirical research".

The second section examines my preferred new materialist point of departure, namely the notion of the assemblage. I firstly reflect on the difficulties of reading and understanding the assemblage as set out by Deleuze and Guattari, predominantly in *A Thousand Plateaus*, and the flurry of research perspectives this notion has evoked. I then explore the composition of assemblages as systems that work materially and conceptually through territorialisation and deterritorialisation. I also allude to the potentials of deterritorialisation without disregarding the effects of stability supposed by an assemblage's territory. The theoretical treatment of the assemblage introduces assemblage thinking and the concept of the 'research assemblage'. This theoretical discussion

engenders an elucidation of the practical implications of conducting new materialist research. I conclude with a brief summary of the chapter's content.

4.2 CONDUCTING NEW MATERIALIST RESEARCH

As indicated in Chapter 2, there is a widely shared sense among theorists in the humanities concerned with the post and nonhuman that research methods are lagging behind theoretical developments, which calls for a radical rethinking of some of the methodological premises underpinning the humanities and social sciences in the twenty-first century (Rigney 2017:475). In response to this, since the onset of the twenty-first century there has been an influx of experiments aiming at stretching existing methods so that they might witness, analyse, and evoke the affective and performative dimensions of imagery and writing (Lorimer 2013:63, Coleman & Ringrose 2013:3).[1] These methodologies are rooted in new materialist perspectives, and have supplied novel, often radical, methods for framing, collecting, analysing, and presenting data (Fox & Alldred 2017:151). I therefore work within this theoretical framework of the new materialisms.

Conventionally,[2] social enquiry is considered from the researcher's perspective who, "through efforts of reason, logic and scientific method, gradually imposes order upon 'data'" so as to 'make sense' of the world (Fox & Alldred 2017:155). 'Standard' research methods, such as empirical, interpretivist, or positivist approaches, *are* occasionally imperative. Using charts as an example, Law (2004:7) emphasises the validity of conventional research methods:

> Sometimes and in some locations we can indeed make a chart of what is happening round about us. Sometimes our charting helps to produce momentary stability. Certainly there are moments when a chart is useful, when it works, when it helps to make something worthwhile [such as] statistics on health inequalities (Law 2004:7).

Some things in the world can certainly be made clear and definite: income distributions, global carbon dioxide emissions in the atmosphere, nation state boundaries and terms of trade, among many. The ability to study such realities does not suppose that complexities and ambivalences do not exist in such contexts, because they surely do. To draw (useful) conclusions in the cases above, rather, researchers sometimes actively decide not to *favour* these complexities in order to

[1] Social researchers have increasingly drawn on new materialist methodological concepts, such as Deleuze and Guattari's 'schizoanalysis' (1983, 1987), 'assemblages' (1983, 1987), and 'cartography' (1987), or feminist theorist Karen Barad's 'diffractive methodology' (2007) and ideas of 'intra-action' (1996) between researcher and researched.
[2] I use 'conventional', 'standard', and 'traditional' research methods neither in a derogatory manner, nor to pose it against 'new', 'exciting' or 'forward-thinking' new materialist methods, as this would simply reinforce the old/new dualism that I aim to blur in this chapter. I employ these terms solely for the sake of clarity.

gain insights in one designated area of study (instead of another) in their research domain. Law (2004:4) provides examples of quantitative research that established plausible links between, for example, smoking and lung cancer, or poor health and a range of social inequalities such as poverty, or vulnerability to disaster and factors such as age and social isolation. Further, endless other "success stories for standard methods, quantitative and qualitative, could be cited" (Law 2004:4). These are examples of "provisionally stable realities that social and natural science deal with more or less effectively" (Law 2004:2, Buchanan 2020:1). The decision to leave certain complexities untouched in the research process is not an impractical approach: in fact, such studies have often been the basis for major social campaigns. The case cannot be that standard research methods are straightforwardly *wrong*: they are "significant, and they will properly remain so" (Law 2004:4).

But alongside such phenomena, the world is also textured in quite different ways. In a complex world, at least sometimes, we "have to give up on simplicities" (Law 2004:3). In *Against Method: Outline of an Anarchistic Theory of Knowledge* (1975), philosopher of science Paul Feyerabend argues that science is not an orderly procedure of erecting hypotheses and 'falsifying' them against independent, neutral facts. The 'facts' are only there as part of a different theory that has come to seem 'natural'. Mitchell (1984:525) agrees that 'a' scientific method so flexible and capacious that it can contain all these differences and adjudicate among them is a handy ideology for the scientist and a social system committed to the authority of science, but it seems mistaken in theory and practice.

Like Law (2004:7) and MacLure (2015:94), I am not arguing that there is no room for conventional research methods, because these often are extremely good at what they do. Yet they remain badly adapted to the study of the ephemeral, the indefinite, and the irregular (Law 2004:4). Law (2004:2) attempts to imagine what it might be like to remake social science in ways better equipped to deal with mess, confusion, and relative disorder because, in many instances, reality is "complex, diffuse and messy".

In this process of rethinking approaches to research, the new materialisms have "little to do with transcending or leaving 'the human' behind" or with "rejecting humanism as such and replacing it with something else" (Knittel & Driscoll 2017:382). Rather, it supposes critical engagement with the "limitations, blind spots, and unacknowledged exclusions" central to anthropocentrism

(Knittel & Driscoll 2017:382). In particular, new materialist approaches challenge humanities researchers to go *beyond* methodological textualism:

> Crucially, new materialism implies that scholars study the interactions between the symbolic, the material, and the human within the broader ecology in which they operate. To be sure, it has long been recognised that textual artefacts gain their meaning and affect by virtue of their relationship with other objects (Rigney 2017:475).

To do this, MacLure (2017:51) holds that "we are not talking about merely tinkering with the customary arrangements of qualitative enquiry", but that "we are obliged to rethink the whole ontological and epistemological edifice, and this means thinking outside of the remit of thought itself". If theorists want to think about the messes of reality, then "we're going to have to teach ourselves to think, to practise, to relate, and to know in new ways" (Law 2004:2). Methodological openness is necessary pertinently around the hybrid nature of global environmental issues, because it can be "the beginning of a highly productive dialogue in developing new tools and research directions for a historically informed, critical analysis" (Grevsmühl 2017:3).

Wider shifts in social science highlight the need for methodologies capable of attending to the world as 'messy' (Law 2004), 'sensory' and 'affective' (Stewart 2007; Orr 2006; Pink 2009), 'mobile' (Büscher, Urry & Witchger 2010), 'creative' (Massumi 2002), and 'changing' and 'open-ended' (Lury & Wakeford 2012). Such approaches may account for the performativity of method and may (at least in part) be involved in the creation of the world (Law & Urry 2004; Barad 2007; Coleman & Ringrose 2013). This shifts the basis of methodology from epistemology, where what is known depends upon perspective to ontology, where what is known is also being *made* differently (Law & Urry 2004:393-397).[3] Phenomena in the world emerge through relationality and can serve as, according to Barad (2007:333), the "basis of a new ontology", implying a possibility for the transformation of how things are and how these things are studied. Clearly, as the world studied by the social sciences changes, so too must the methods through which the world is studied.

If this is the case, why then have researchers not more readily adopted approaches equipped to describe these changes? For at least 200 years, western theorists have simultaneously struggled

[3] The new materialisms, precisely because they emerged from disparate strands, including actor-network theory, artificial intelligence, biophilosophy, evolutionary theory, feminism, neuroscience, posthumanism, queer theory, quantum physics, and Spinozist monism, are well-situated to developing such new tools for research (Grosz 1994; Massumi 1995; Barad 1997; Haraway 1997; Pearson 1999; Clough 2004; Thacker 2005; Coole & Frost 2010; Braidotti 2006, 2013). This transdisciplinarity facilitates thinking in new ways about methods and instruments.

with the inheritance of philosophical romanticism *and* its mirror image, the classical commitment to reason embedded in Enlightenment (Law 2004:8, Morton 2007:16). The research methods passed down to twenty-first century scholars tend to work on the assumption that the world is to be properly understood as a set of fairly specific, determinate, and more or less identifiable processes. It must therefore be acknowledged that, with good reason, it remains difficult for many researchers to move beyond such thinking practices (MacLure 2017:55, Kuntz 2019:44,47).

Further, researchers often have access to obdurate research instruments that hinder the production of other realities. Such tools – including those used to measure, quantify, keep time, survey, map, and experiment – enact many assumptions about the nature of 'the social' (as per Foucault). Arguably, many of the workings of 'the social' were brought into being by these very tools, as they developed strategies of social and state control (Law 2004:3-4). By now, because so many instruments and practices depend on official and other statistics, their reversibility is doubtful (Law 2004:4).[4] In particular, the collection and manipulation of certain kinds of quantitative *or* qualitative data is emblematic of humanities research methods. Thus, the quantitative/qualitative divide is a major building block for many research projects (Law 2004:3, Denzin 2015:37, Fox & Alldred 2017:7).

Again, this is not to say that these methods or approaches are *wrong*. Rather, these methods and the relations in which they are located enable and constrain work in the social sciences: they set limits to the conditions of social science possibility (Law 2004:39, Cannella 2015:16). Method, Law (2004:143) argues, can be *more* than a "more or less successful set of procedures for reporting on a given reality". Rather, its performativity can help to "produce realities" (Law 2004:143, Coleman & Ringrose 2013:6). Alongside its performative nature, method can also be creative, because it "re-works and re-bundles these and as it does so re-crafts realities and creates new versions of the world" (Law 2004:143). Enactments and the realities produced by them do not automatically stay in place, they are made and remade. At least in principle, this means that they can be remade in other ways too (Law 2004:143, Cannella 2015:16-17, Koro-Ljungberg & Ulmer 2013:215).

[4] This conversation is further complicated in that claims about the general importance of methodological rules tend to get naturalised: although *particular* sets of rules and procedures may be questioned and debated, the overall *need* for rules and procedures is not (Law 2004:5). It is possible to tinker with them – but undoing them would be extremely expensive both literally and metaphorically (Law 2004:39).

Take, for example, the interview as tool for conducting qualitative research. Scrutinising its usefulness poses questions regarding conventional givens about assuring data's validity: think of the importance of selecting the 'appropriate' data sample, of controlling bias, of sorting and subordinating practices of coding, and of having 'objective' information to analyse (Turner 2010:754-757).[5] While this approach is indeed useful in many cases (as laid out above), in other cases it does not fully account for the textures seeping through between words, the affectivity of sentences, silences and stuttering ("uhm", "ah", "well"), voice recorders (is it on?), spaces (this is beautiful), noises (will I hear that on the recording? When will the neighbour stop mowing his lawn?), distractions (oh, here is her cat! and "Hi, you must be his roommate"), as well as bodily sensations (it's getting hot on this balcony; this cookie is *so* good!). What might researchers gain if we engage more intimately with our entanglement with such heterogenous materialities?[6]

Broadly, theorists suggest that social enquiry rethink its methods in order to answer this question (see for example Bryant 2011, MacLure 2017, Kuntz 2013, Fox & Alldred 2015a, 2015b, 2017). For example, social enquiry might benefit by adapting interpretive research tools that conventionally attend to *human* actions, experiences, and reflections so as to focus on assemblages, affective flows, and the capacities they produce (Fox & Alldred 2017:94), or through "relational and material ways of knowing" (Kuntz 2013:115). In *The Democracy of Objects*, Bryant (2011:32) suggests thinking in terms of entanglements to prompt researchers to shift from thinking about entities grounded in other entities. This approach allows theorists to maintain the "irreducibility, heterogeneity and autonomy of various types of entities while investigating how they influence one another" (Bryant 2011:32-33).

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[5] Although I hope to make clear that these conventions are necessary and useful, it might be interesting to elaborate elsewhere on how such qualitative methodological strategies stem from a modernist desire to "control difference" (MacLure 2017:48).

[6] In this sense, new materialists' suggestions to pay attention to such factors in the research process is not new. Approaches that came very close to this position have been, for example, developed and considered by linguists that formed part of the structuralist Copenhagen school, such as Louis Hjelmslev (1899-1966) and Roman Jakobson (1896-1982). For instance, Jakobson (1960:353) explores what he deems the six factors of communication (namely addresser, addressee, message, code, contact, and context) and their effects, which are achieved by foregrounding one of the parts of communication. In particular, the phatic function – which refers to the *relationship* between addresser and addressee – avoids the reduction of language to mere 'transmission' of information (Jakobson 1960:353). Comparing this approach to language with Deleuze and Guattari's (1987:96-97) reading of music, in Deleuzoguattarian terms then, it can be said that communicating an idea may be seen as "an immense coefficient of variation […] affecting and carrying away all of the phatic, aphatic, linguistic, poetic, instrumental, or musical parts of a single sound assemblage". To put it otherwise, it is not simply the words that are spoken (or sounds that are produced by the instruments) that constitute communication (or music), but the interaction of various factors, such as the six suggested by Jakobson. In this thesis, then, it is not – as such – this holistic research approach that contributes to existing models in unprecedented ways, but rather the distinct *combination* and *application* of research tools, voices, affects, and embodiment in the research process (to name but a few).

Recognising that agency is distributed forces humans to realise that they "are not the only act in town" (Rigney 2017:476). This does not make the issue of human responsibility and accountability redundant, but arguably *more* urgent because humans are in the position to be able to account for and change their habits. Theorists call on social enquiry to remake its vocabulary to reflect this shift from emphasis on human agency to emphasis on affect (Fox & Alldred 2017:153). For example, notions such as 'conversing', 'suffering', and 'yearning' would need to take on an altered status beyond anthropocentrism, "perhaps to a point where such words came to hover or flicker on the edge of intelligibility" (MacLure 2017:54).[7]

These are not easy tasks. Events are not simply complex in the sense that they are technically difficult to grasp, though this is certainly often the case. Rather, they are also complex because they *necessarily exceed our capacity to know them* (Coleman & Ringrose 2013:6). Scholars need to think hard about their relations with whatever it is they know and "ask how far the process of knowing it also brings it into being" (Law 2004:3, Kuntz 2015:122). According to Law (2004:3), researchers should "certainly be asking ourselves whether 'knowing' is the metaphor that we need": perhaps academia "needs to think of other metaphors for its activities – or imagine other activities". When the potentials of the new materialisms are embraced it is necessary to tease out its hindrances. On the 'conventional' end of the spectrum, data are typically "assumed to be mute until awakened to meaning by the interpretive prowess of the researcher and her specialist analytic tools" (MacLure 2017:51). Data's role is "basically to nod in agreement with researchers' interpretations" and, after having been lifted up or subsumed under categories or concepts, disappear (MacLure 2017:51).

On the other end, extreme new materialists question the legitimacy of qualitative enquiry as the transformative work of interpretive human agents (MacLure 2017:50). One way in which new materialists attempt to "displace the centred, humanist self so that matter may speak" is through emerging stylistic tendencies such as the use of certain 'evocative' words in their writing (MacLure 2017:54). Popular examples include the much-discussed quotation from Barad (2012:59) that matter "feels, converses, suffers, desires, yearns and remembers", and a description made by Bennett (2010:112) of matter as "vibrant, vital, energetic, lively, quivering, vibratory, evanescent and effluescent". MacLure (2017:54) admits that such statements are "exhilarating", but warns against their "seducti[ve]" poetics. It remains difficult to read language

[7] Analysis should therefore become, as Haraway (1992) and Barad (2003) propose, 'diffractive'. Diffraction "does not map where differences appear, but rather maps where the *effects* of differences appear" (Haraway 1992:300), foregrounding interference above conventional replication, reflection, or reproduction.

such as this “outside of the conventions of a romanticised humanism that bestows upon matter the capacities that we so pride ourselves on having” (MacLure 2017:54).

In short, new materialist scholars “wrestle with language” in an attempt to express new human/nonhuman relations (MacLure 2017:54). MacLure (2017:53) notes that, although this demotion of the human aims to “dissolve and remake the boundaries between matter and culture, science and the social”, it remains to be seen whether language’s displacement “has actually gone far enough”. Most prominently, the materiality of language itself is often not addressed, and it is often unclear how “words, bodies, signs, minds and discourses intra-act and entangle” (MacLure 2017:53).[8] While such theorists might *believe* that they are “intra-acting, forming rhizomes, diffracting, mapping flat ontologies and so on”, we cannot really know if this is truly happening: although scholars have come a long way in formulating cartographies for new materialist research, we “continue to underestimate the sheer difficulty of shedding the anthropocentrism that is built into our world-views and our language habits” (MacLure 2017:50,56). These foundations are “so ingrained in daily practices of living that they subsist even in contradictory relation” (Kuntz 2019:44,47).

A clear-sighted new materialist research methodology encompasses at least three interwoven strands, as suggested by Lorimer (2013:62-63). Firstly, it is committed to sustained interrogation of the modern divisions that determine which forms have agency, by drawing attention to the diverse objects, organisms, forces, and materialities that “populate the world and cross between porous bodies” (Lorimer 2013:62).[9] Secondly, because such ontological manoeuvrings have epistemological consequences, it is vital to rethink which forms of intelligence, truth, and expertise count. This rethinking leads to questions of embodiment, performance, skill, and affect, broadly understood as “relational and distributed forces and competencies that cut across

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[8] In Refrain 4 of *A Thousand Plateaus*, “November 20, 1923: Postulates of Linguistics”, Deleuze and Guattari (1987:75) engage with the problematics of language by looking at figures that are able to unhinge conventional language from the bonds of representation (such as the child, the madman, and the poet). Such figures detach words from their syntactic bonds and conventional meaning in order to ‘play’ with them. Where “we may think that we are assembling the forces and intensities needed ‘to make thought travel, make it mobile, make it a force of the Cosmos’” – we end up “reproducing nothing but a scribble effacing all lines, a scramble effacing all sounds” (Deleuze & Guatrari 1987:344). MacLure (2017:54) notes that, “outside of the Deleuze-Guattarian enclave”, such a strenuous engagement with language is rare in new materialist theory. More recently, however, Chadwick’s article, “Theorizing Voice: Toward Working *Otherwise* with Voices” (2020) can be seen as an example of a thorough posthuman engagement with the complexities of language, and voice especially, from within the social sciences.
[9] For example, work has been done to unpack the category of ‘the animal’ to recognise the diverse modes of lively being it subsumes (Haraway 2008; Derrida 2008).

any lay-scientist and human/nonhuman divides" (Lorimer 2013:62).[10] Finally, this approach supposes distinct politics and ethics. Appreciating nonhuman agencies – as suggested in the preceding chapter of this thesis – underlines humans' material connections to the world and the ways these can be made to matter: the focus is on affirmative ethics that are open to life's unpredictable nature.

I draw on Law (2004:9) when I say that one of my aims here is to broaden extant methods so as to acknowledge the affective flows brought about by matter without shying away from my humanness (Figure 4.2 provides my visual interpretation of this process). In order to illuminate the unpredictably rhizomatic nature of assemblages, I want to move from the moralistic idea that maintains if you "do your methods properly you will lead a healthy research life – the idea that you will discover specific truths about which all reasonable people can at least temporarily agree" (Law 2004:9). Law (2004:151) asks:

> What would it be to practice quiet method? Method with fewer guarantees? Method less caught up in a logic of means and ends? Method that was more generous? The answer, of course, is that there *is* no single answer. There *could* be no single answer. And, indeed, it is also that the ability to pose the questions is at least as important as any particular answers we might come up with.

MacLure (2013:175) reflects on "a languorous […] pleasure in giving oneself over to the data":

> […] I enjoy that part of the research process that involves poring over the data, annotating, describing, linking, bringing theory to bear, recalling what others have written, and seeing things from different angles. I like to do it 'manually' too, with paper and pen, scribbling a dense texture of notes in margins and spilling onto separate pages. There's something about embodiment in all this.

Similarly, Law (2004:2) suggests knowing realities through the "hungers, tastes, discomforts, or pains of our bodies". I acknowledge that these kinds of affective and embodied methods could tend to be slow and uncertain as they will "take time and effort to make realities and hold them steady for a moment against a background of flux and indeterminacy" (Law 2004:10). Law's (2004:11) call hinges on the following:

> My hope is that we can learn to live in a way that is less dependent on the automatic. To live more in and through slow method, or vulnerable method, or quiet method. Multiple method. Modest method. Uncertain method. Diverse method. Such are the senses of method that I hope to see grow in and beyond social science.

[10] Law (2004:144) argues that method is not just "what is learned in textbooks and the lecture hall, or practised in ethnography, survey research, geological field trips, or at laboratory benches", since even in these "formal settings it also ramifies out into and resonates with materially and discursively heterogeneous relations which are, for the most part, invisible to the methodologist". Method is also found outside such settings, making it more fluid than its formal accounts suggest.

Figure 4.2 | **researcher's perspective: what new materialist research might feel like**

Collage from magazine clippings with digital overlay. Produced by the author.

Law (2004:10) believes that slow methods allow researchers to "work [and reflect] as happily, creatively and generously as possible". I choose to engage with method in this way, because I am curious about what this might *feel* like. A prominent example of this curiosity is my choice to draw data visualisations as an attempt to tease out how coloured dots and my handwriting might influence my analysis of the dataset. In this process of 'drawing data' I am cultivating and playing with my capacities, while acknowledging myself as a human bound up with nonhumans, to think impossible things. My thinking tool of choice is the assemblage.

4.3 DELEUZOGUATTARIAN ASSEMBLAGE

4.3.1 Reading *A Thousand Plateaus*

Compared to *Anti-Oedipus* (1972), in *A Thousand Plateaus* Deleuze and Guattari's analytical targets are much broader: beyond combatting the binarising, structuralist, molar tendencies within the discipline of psychoanalysis as in the first volume, they aim here to dismantle these tendencies in "almost every other arena of thought" (Thornton 2018:181). The diversity of perspectives on the 'general logic of the assemblage' is also of such considerable bulk as the literature written on *A Thousand Plateaus*. The most prominent publications in which assemblage theory is discussed, of which some are particularly dedicated to how it is set out in *A Thousand Plateaus*, include *The Deleuze Dictionary Revised Edition* (2005) edited by cultural critic Adrian Parr; DeLanda's *A New Philosophy of Society: Assemblage Theory and Social Complexity* (2006) as well as his more recent work, *Assemblage Theory* (2016); cultural theorist Eugene Holland's *Deleuze and Guattari's A Thousand Plateaus: A Reader's Guide* (2013); *The Deleuze and Guattari Dictionary* (2013) edited by interdisciplinary scholar Eugene B. Young with cultural theorists Gary Genosko and Janell Watson; Adkins' *Deleuze and Guattari's A Thousand Plateaus: A Critical Introduction and Guide* (2015); and, most recently, cultural theorist Ian Buchanan's *Assemblage Theory and Method: An Introduction and Guide* (2020).

A major reason for the diversity of interpretations of the assemblage might be that, despite its longstanding influence on political theory, understandings of assemblages remain obscured by the fact that Deleuze and Guattari used the term largely *ad hoc* throughout their work, and never formalised it in a way that "amounts to a fully-fledged theory" (DeLanda 2006:3). This situation allows theorists, notably DeLanda (2006:4), to relegate "Deleuzian hermeneutics" to the footnotes and focus on developing his own "neo-assemblage" theory, "not strictly speaking Deleuze's own".

A considerable number of theorists have expressed gratitude to DeLanda for his major interpretations of the Deleuzoguattarian assemblage (Harman 2008, Briassoulis 2017, Adkins 2015). Adkins (2015:253) and geographer Helen Briassoulis (2017) confirm that DeLanda has the "great virtue of writing very clearly from the perspective of complexity theory and providing a seemingly endless array of examples to illustrate his arguments". DeLanda (2006) theorises the implied meanings of assemblages as a whole, making his writings instrumental in providing a digestible description of assemblage thinking. The assemblage's 'whole' differs from a seamless whole as per the Hegelian tradition: in fact, the concept of the 'assemblage' can be seen as an alternative to the idea of totality, with which Hegel aims to resolve some of the dichotomies latent in Kant's philosophical system. Hegel's totalities are holistic perspectives that aim to reconcile opposites and unify fragmented or alienated forms and practices.[11] The whole's parts cannot be reduced to the sum of the parts, because the parts *fuse* together to form a seamless totality. In his conception, wholes have an inextricable unity where the parts are kept together by properties that are internal to them.

By providing comparative examples such as the one above that poses Deleuze and Guattari's assemblage against Hegel's totalities, DeLanda remains one of the most prominent authors who have helped me understand Deleuze and Guattari's writings better. In a sense, his kind of 'creative appropriation' of the assemblage correlates with Deleuze and Guattari's invitation to experiment with affective capacities.[12] Indeed, some theorists have taken up experimentation by developing diverse and fruitful interpretations of the assemblage (see for example Law 2004; Ringrose 2011; Dewsbury 2011; Coleman & Ringrose 2013; Adkins 2015; Baker & McGuirk 2017; Nail 2017; Fox & Alldred 2017; Briassoulis 2017; Feely 2019; Sun 2020). These interpretations are different from the 'original' assemblage 'actually' defined in Deleuze and Guattari's work.

I agree, however, with Nail (2017:21) and Adkins (2015:253) that, for those who want to know what Deleuze and Guattari's assemblage theory is, DeLanda's and Latour's answers are not always satisfying. I agree with theorists such as Buchanan (2020:5) who warn that secondary

[11] A totality in the Hegelian sense can thus be defined as the processes by which disparate and unrelated phenomena are understood in connection with a larger complex, or a totality.

[12] Buchanan (2020:5) disagrees: he considers both DeLanda's and Latour's versions of the assemblage "considerably narrower in scope" than the version one finds in *A Thousand Plateaus*. He also draws on Deleuze's statement that his own appropriations of other philosophers, which he freely admitted were "monstrous", were always "unmistakably their offspring", in other words he adapted the concepts he borrowed from other philosophers, but not unrecognisably so (Buchanan 2020:5).

interpretations of the assemblage (including in DeLanda's work) in some cases cause certain "casualties".[13] In this sense, it might be useful to "*return to the work of Deleuze and Guattari*" (Buchanan 2020:4, emphasis in original).

This return soon raises the unavoidable question: how do we read *A Thousand Plateaus* and Deleuze and Guattari's work overall? Their work is "as playful and poetic as it is vast in scope and ambition" (Buchanan 2020:9). Deleuze and Guattari, after all, wanted *A Thousand Plateaus* to be a rhizomatic assemblage composed of different ideas by allowing the other complete liberty to write in experimental ways. Not only does this make it difficult to understand the diverse definitions of the same concepts spread out across the book – the concept of the assemblage, for example, is used in different chapters within a specific context without regard for how it is used in other chapters – but this understanding is also hindered in that the book was written over seven years.[14]

I briefly refer to two possible ways of reading *A Thousand Plateaus.* Firstly, Deleuze suggested that one should read it "as you would listen to a record" (Massumi 1987:ix, xiii-ix):

> When you buy a record there are always cuts that leave you cold. You skip them. You don't approach a record as a closed book that you have to take or leave. Other cuts you may listen to over and over again. They follow you. You find yourself humming them under your breath as you go about your daily business.

The apparent oddity of trying to read this complex and technical book – rife with concepts drawn from a wide range of disciplines in the sciences, mathematics, and the humanities – as if it were a record may become reasonable if one recognises that the different plateaus in the text do not relate to or logically follow one another, unlike the chapters of a 'normal' book. Secondly, in a close-reading of *A Thousand Plateaus,* Thornton (2018:256) provides a plausible method of reading that draws on Guattari's and Deleuze's separate works composed before their collaboration. Thornton (2018:256) suggests thinking along the lines of the two concepts of the

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[13] One such example is the lack of references to the concept of desire (Buchanan 2020:5). According to Buchanan (2020:5), this exclusion is because desire is conceived as "either unnecessary or simply too messy", despite it being one of the central terms in Deleuzoguattarian philosophical lexicon. My prediction is that not many theorists include the concept of desire when discussing assemblages, because the connection between the two is less prevalent in *A Thousand Plateaus* than in *Anti-Oedipus*. This occlusion is not necessarily wrong per se, it simply brings about other – possibly equally valid – conclusions about the workings of the assemblage.

[14] This problem of how to interpret assemblage theory, which Massumi (1987:x) broaches, becomes even greater when one asks where it begins. *Anti-Oedipus*? *A Thousand Plateaus*? Or does one need to go further back, and if so, how far back? Does it end with *What is Philosophy* (*Qu'est-ce que la philosophie* 1991)? Does it include what Deleuze and Guattari wrote separately after *A Thousand Plateaus*? Again, because the project was left unfinished and because they deliberately wrote in a complex and rhizomatic (rather than arborescent) way, one can never precisely know what Deleuze and Guattari intended.

'line of flight' and the 'refrain', in conjunction with the framework of institutional analysis[15] – a French psychiatric reform approach and therapeutic method to group psychotherapy influenced by Marxism and Lacanian psychoanalysis starting in the 1950s – which Guattari also applied to political contexts *outside* of the psychiatric ward where he worked. He argues that it is possible to read *A Thousand Plateaus* as an attempt to "produce a subject group" as applied in the use of Institutional Analysis (Thornton 2018:256).

In whichever way one might read the book, I find it wise to treat assemblage theory as an *incomplete project* that invites researchers to develop it further on the basis of a set of 'first principles' (DeLanda 2006, 2016; Buchanan 2020). To do so, I focus predominantly on *A Thousand Plateaus* and refer to other writings as needed. I take my cue for gaining a more thorough understanding assemblage theory from an answer provided by Deleuze during an interview published in *Libération* after *A Thousand Plateaus'* publication, where he explains that the book's aim is to interrogate "the circumstances in which things happen: in what situations, where and when does a particular thing happen, how does it happen, and so on" (Deleuze 1995:25). The assemblage, arguably the book's most central concept, is intended to answer questions such as '*how* do materialities assemble?', '*wh*y do they assemble?', '*when* do they assemble?', rather than '*what* assembles?'.

According to Massumi (1987:xiv), the best way of all to approach *A Thousand Plateaus* is to read it "as a challenge: to pry open the vacant spaces that would enable you to build your life and those of the people around you into a plateau of intensity that would leave afterimages of its dynamism that could be injected into still other lives". The question should not be, "is it true?" but, rather, "does it work?" "What new thoughts does it make possible to think? What new emotions does it

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[15] Thornton (2018:256) turns to the production of subject groups which was a central activity in the work of Institutional Psychotherapy developed by Guattari at the psychiatric institution he was affiliated with, La Borde. Guattari applied the same process of subject-group formation in political context, *outside* of the psychiatric hospital, through the discipline of Institutional Analysis. The defining factor of a subject-group, which distinguishes it from a subjugated-group, is that its "consistency was produced internally, via the relation between its members, rather than being determined by a shared relation with an external factor" (Thornton 2018:256). At the point of writing *Psychoanalysis and Transversality* (2015 [1972]), Guattari is clear that subject groups are able to 'speak'. In his preparatory work for *A Thousand Plateaus,* however, Guattari writes that it is the *refrain* that produces "the collective and asignifying subject of the enunciation." This means that it is the "resonance produced by the repetition of a rhythmic difference among a group of elements that creates a group and allows it a voice" (Thornton 2018:256). Guattari further aims to *produce* the conditions for such a group by increasing the coefficiency among its members. By drawing a diagonal line across the different discourses that would in other instances stratify a group into a social hierarchy, Guattari aims to produce a shared language for a group so that they could work towards a shared goal. It is highly probable that the technique of the subject group, Thornton (2018:256) argues, is also used in writing *A Thousand Plateaus*: by producing the conditions for a subject group consisting of many different writers, philosophers, mathematicians, scientists, geologists, and so on, Deleuze and Guattari connect ideas in ways that has not been previously done.

make possible to feel? What new sensations and perceptions does it open in the body?" (Massumi 1987:xiv).[16] In order to answer these questions, I sit alongside Buchanan (2020:2) and reflect: what does the concept of the assemblage enable us to see that we could not see before?[17]

4.3.2 *Agencer*

To begin with, theorists highlight the problematic translation of the original French word *agencement* to 'assemblage' in English (Law 2004; Shaviro 2009; DeLanda 2016; Nail 2017; Fox & Alldred 2017; Buchanan 2020). Firstly, the English word 'assemblage' does not mean the same thing as the French word *agencement*.[18] *Agencement*, an abstract noun, is the result of the verb *agencer*. A simple French dictionary such as Le Robert Collins, for example, defines *agencer* as "to arrange, to dispose, to fit up, to combine, to order, to piece together, to lay out". As a noun, *agencement* thus means "a construction, an arrangement or a layout". An extensive French dictionary offers dozens of synonyms for *agencement* with a wide range of meanings which, combined, reveal that the term has no single English equivalent (Law 2004:41). In short, the French *agencer* (a layout or arrangement of heterogenous elements) is not the same thing as the French *assemblage* (a unified gathering of things into unities or a simple coming together) (Nail 2017:22).

Adding to this confusion are statements in English dictionaries, such as the Oxford English Dictionary, that the English word 'assemblage' is based on the already-existing French word *assemblage* instead of the French word *agencer*. Although the meanings of the English and the French word 'assemblage' do coincide in that both are described as "the joining or union of two things" or "a bringing or coming together", much of the original flavour of the verb *agencer* has been lost in the translation. 'Assemblage' is therefore not an absolute mistranslation of *agencement*, but rather a watered-down reading of *agencer* (Law 2004:42, Buchanan 2020:20). In English, the notion of 'assemblage' has come to sound more definite, clear, fixed, planned, and rationally

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[16] Massumi (1987:xiv) adds: "The answer for some reader, perhaps, will be 'none'. If that happens, it's not your tune. No problem. But you would have been better off buying a record." Admittedly, the density of their work can be overwhelming and a few times during this study I have considered listening to a tune *not* written by Deleuze and Guattari.

[17] Buchanan (2020:2) notes that, for commentators on the assemblage, the answer is surprisingly uniform across the spectrum of responses. Driven by his call to return to the original text, he holds that this uniformity is in large part because "so-called" assemblage theory "seems content to rely on a handful of commentaries on Deleuze and Guattari for their definition of the concept" (Buchanan 2020:2).

[18] *Agencement* is Deleuze and Guattari's own translation of the German word '*Komplex*' (as in the 'Oedipal complex' or the 'castration complex') (Buchanan 2020:20). 'Assemblage' is translators Paul Patton and Paul Foss's term of choice for *agencement* which Massumi picked up and uses in his translation of *A Thousand Plateaus* (Buchanan 2020:19). It has since become more or less the default translation.

centred than the original French *agencement*: It sounds "more like a state of affairs or an arrangement rather than an uncertain and unfolding process" (Law 2004:41).[19] Similar to Law (2004:42) I use 'assemblage' as a verb and noun that encompasses the tentative, the hesitant, and that which continues to unfold.

4.3.3 What is an assemblage?

As mentioned, Deleuze and Guattari often adapted the definition of a concept according to its usage within a specific context, without making its 'final' definition smooth or consistent across chapters. Theorists are following in their footsteps and defining, interpreting, and adapting the concept of the assemblage in diverse ways. The definitions I tease out here are a synthesis of my own reading of Deleuze and Guattari's original text and the (often conflicting) interpretations of particularly DeLanda, Nail, Buchanan, and Law, along with cultural theorist John-David Dewsbury and archaeologist Yannis Hamilakis. Synthesising theorists' differing opinions is important in that it provides a holistic view of the myriad of ways in which the concept of the 'assemblage' has been adapted and employed, and how it is used further in the current study.

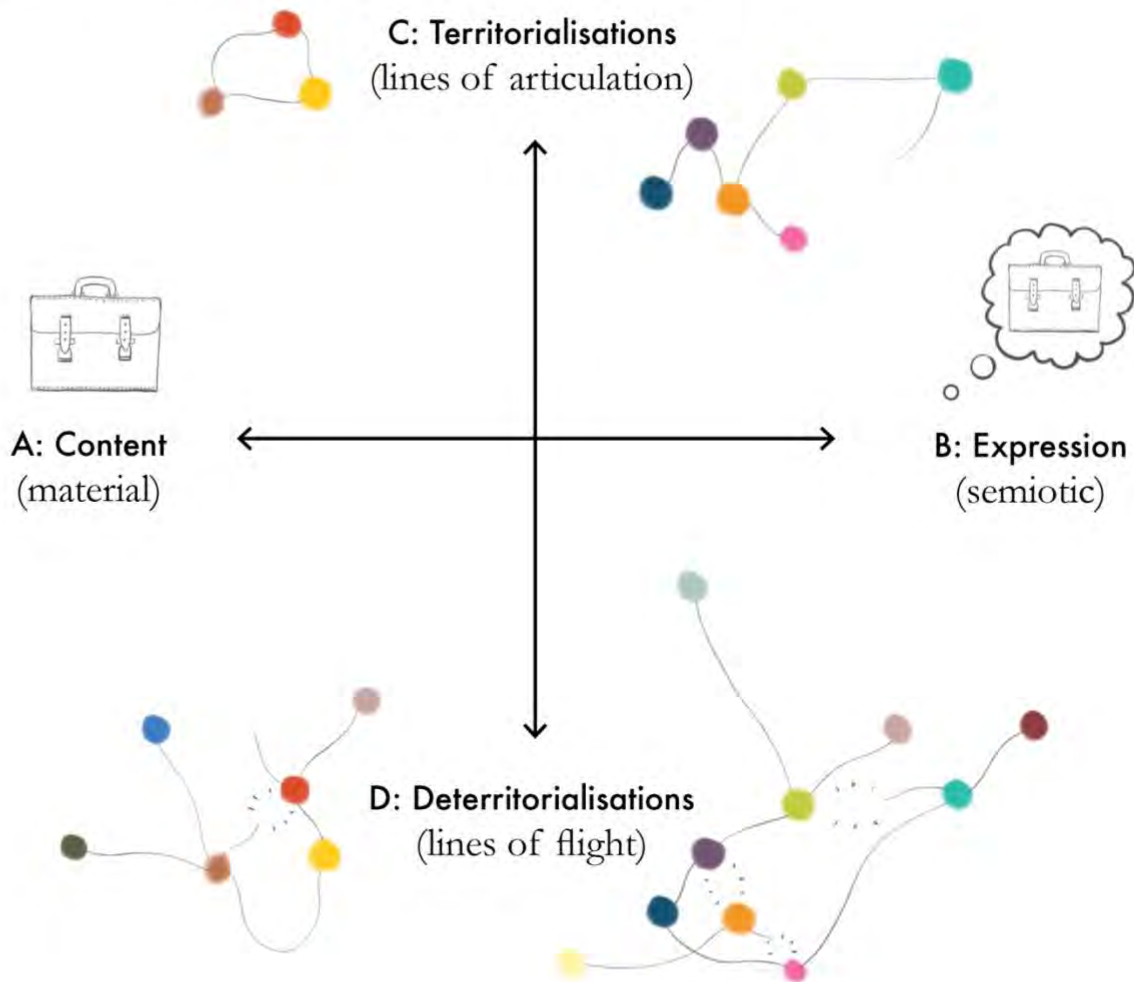
Law (2004:42) argues that an assemblage can be seen as a process as well as an arrangement in which heterogenous elements entangle, are not fixed in shape, and do not belong to a larger pre-given group of things. Similarly, for Hamilakis (2017:176) assemblages can be thought of as "temporary co-presences" and articulations of things, beings, enunciations, and memories, "brought together and enacted as such by embodiment, sensoriality and affect". As a result, assemblages can be used to negotiate presences and absences of heterogeneous materials, including humans and nonhumans, as well as the power relations between them (Hamilakis 2017:177). Affects, as "states of being" transferrable between territories (Hemmings 2005:551), may either limit materialities within existing capacities (resulting in territorialisation) or open up new possibilities in them (resulting in deterritorialisation).

Beyond these broad overviews and, as demonstrated in Chapter 1, I take the assemblage to be a tetravalent system that functions along two axes: the components of content and expression on the horizontal axis, and territorialisation and deterritorialisation on the vertical axis (Figure 4.3).[20]

[19] Nail (2017:22) concludes that it is important for English readers to "dissociate their understanding of the English word 'assemblage' from the concept of *agencement* since it will only confuse things".
[20] Tetravalent ('tetra' means four and 'valency' refers to amount, or measure) is a term used in the field of chemistry to describe, for example, an atom that has the capacity to form chemical bonds with four available electrons around it.

That this description occurs twice in *A Thousand Plateaus*, both in the main text and in the summarised glossary at the end is telling, because no other definition presented in the book is repeated (Deleuze & Guattari 1987:89,505).

Figure 4.3 | **an assemblage as tetravalent system**



By using the spatial metaphor of axes, Deleuze and Guattari evoke an abstract space defined by its coordinates, or territory. This leads to the first concrete rule for assemblages, which also introduces what happens on the first axis: to identify the territoriality an assemblage envelops, as this is the first thing that constitutes an assemblage (Deleuze & Guattari 1987:88,504). Through the process of creating a centre, determining an inside and an outside, and using this orientation to explore the world, territories – which are the assemblages that we *inhabit* – are formed (Smith 2012:346).[21] Territorialisation stabilises an assemblage – a person, an idea, a community, an

[21] Deleuze and Guattari (1987:311) use the example of a child who is lost in the dark and how such a child can orient himself in an otherwise undifferentiated chaos by singing and effectively using the song's refrain to form a

organisation, and so on – by asserting spatial boundaries and defining an identity and function within that assemblage. Territorialisation that stabilises an assemblage along with its counterpart deterritorialisation, form the vertical axis of the assemblage.

Thus, on the one hand, one must understand what the territoriality of a specific assemblage is and, on the other, what its deterritorialisations are and what abstract machines they effectuate. Lines of deterritorialisation are very diverse: some cut across the territorial assemblage and carry it away, opening it onto other assemblages ("a land that is eccentric, immemorial, or yet to come") (Deleuze & Guattari 1987:505). The human heart, for example, is spatially located in the chest and has the function of pumping blood to other parts of the body. When deterritorialisation occurs, it softens or breaks down such spatial boundaries and detaches the element of its function in the assemblage. If a heart is removed from a cadaver to train medical students, its territory changes and it no longer fulfils its function within that body assemblage: rather, it becomes a tool in the study of anatomy. Through this becoming and shifting in function and in spatial dimension, that is, when effectively the movement of affects as they unite and disunite with elements under 'natural' or 'artificial' conditions, a machine is released (Deleuze & Guattari 1987:333).

A machine is like a set of cutting edges that insert themselves into the assemblage undergoing deterritorialisation, and that consequently draws variations and mutations of it. These machines are ambivalent: they can push the assemblage towards a closed-up transcendent formation or open it out onto an unlimited field of immanence. The latter is implicitly coded by Deleuze and Guattari as more desirable, whereas the former is coded as problematic and decidedly undesirable.[22] For Deleuze and Guattari (1987:281), the relation between immanence and transcendence is a relation of consequence rather than a dichotomous pre-condition. Deleuze maintained the argument originally articulated by Husserl that transcendence emerges from immanence; the differentiation between inside and outside, between self and world, between the experienced lived world of sense and the world lived, emerges from dynamic life, and should not be accepted as some original difference which might explain life (Colebrook 2006:116). The

territory for himself. The concept of the refrain is central to *A Thousand Plateaus*, because it is what accounts for the possibility of 'consistency' without relying on any form of externally imposed order or 'organisation'.

[22] The second form often passes unnoticed precisely because of its openness. Buchanan (2020:46) suggests thinking of the difference between saying to oneself 'I can't do this' and 'I can do this' to know that "the second form is just as potent as the first, even if our experience of it tends to be unremarked" (except in those moments "when we've been able to transform the former into the latter"). If one wanted to give a name to the complicated set of interlocking 'reasons' why one 'can't' do something, then in Deleuze and Guattari's terms it would be the abstract machine (Buchanan 2020:46).

transcendental, for Deleuze, refers to that which is a *condition* for some other practice, form of cognition, or activity (Bryant 2011:42).[23]

Further, then, the relation between the concepts and the plane of immanence is that of a mutual condition: no concepts can be created without being grounded by the plane of immanence, yet the plane of immanence itself cannot be thought without the concepts that inhabit it. Deleuze succeeds in locating every postulate of transcendence on the level of immanence, that is, on the level of our concrete involvement in the world. Immanence, for Deleuze and Guattari (1987:262), can further be investigated as an impersonal form of infinitive 'a' life rather than 'the' life or 'life' itself. In this way, one needs to acknowledge embodiment (lived, sensed, or experienced living) and thinking as equally important. Further attention should be paid to how these relations of experience emerge (Colebrook 2006:116).

In summary, the vertical axis ranges between (re)territorialisation (that is, territory made and remade) and deterritorialisation (that is, territory unmade) (Deleuze & Guattari 1987:88). An assemblage always possesses tendencies towards *both* territorialised stasis and deterritorialised change as the poles of a single continuum (Adkins 2015:11). In many ways, the assumption in some secondary writings that deterritorialisations occur more regularly or are more important than territorialisations is problematic and "only half the story" (Dewsbury 2011:150). To avoid referring to assemblages in misplaced derogatory terms as "always on the move, disruptive, incessantly active", territorialisations and deterritorialisations should be *equally* considered (Dewsbury 2011:150).[24]

On the second, horizontal axis of every assemblage, Deleuze and Guattari (1987:504) distinguish content (a pragmatic system of actions and passions, or a machinic assemblage which presents corporeal modifications of material bodies, actions, and passions) from expression (which becomes a semiotic system, or a regime of signs, or an enunciative assemblage of enunciations

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[23] For example, the transcendental condition of speech might be seen as language. *If* this is the case, Bryant (2011:42) argues, then it would be "because the condition under which it is possible for two people to communicate requires the existence of a shared *code* in the form of *language*". Here the conditions under which it is possible for one person to *speak* to another would lie in the two persons sharing a language, whether language be "something minimal like gestures or something very complex like chains of signifiers capable of self-reflexively commenting on themselves" (Bryant 2011:42).

[24] The view of the assemblage as oscillating between stasis and change was instrumental in my own structuring of this study's research assemblage, and more specifically, Chapters 6 and 7 that focus on territorialisation and deterritorialisation respectively.

which expresses incorporeal transformations of acts and statements).[25] The concept of the assemblage can only be grasped in terms of the dynamic relations among the elements of the content, such as the structure of organisations, physical materials, and resources on the one hand and, on the other, the expressive aspect, such as regulations, governing principles, and symbolic expressions.

Deleuze and Guattari's (1987:106) discussion of the relation between content and expression intends to account for "basic differences among things as diverse as rocks, animals, and language" without "resorting to a metaphysics of discontinuity, or to any kind of hylomorphism" (Adkins 2015:51). They aim to show how the real differences between physical, organic, and linguistic materials are created "without relying on any essential difference between these registers, without blocking off the possibility of their communication, and without relying on the arborescent philosophical image of an inert substance that is given form by an intelligent and willing subject" (Thornton 2018:198). Deleuze and Guattari (1987:66) make it very clear that "content is not a signified nor expression a signifier; rather, both are *variables* of the assemblage".[26] The material content of all assemblages does not preclude the possibility of it becoming signifying, and vice versa: material-semiotic content is expressed as physical matter, organic matter, and linguistic matter (Deleuze & Guattari 1987:66-67).[27]

In short, the machinic and the enunciative or expressive are imbricated in each other in multiple ways and in various combinations. These two sides on the horizontal axis are mutually presuppositional, but also autonomous from one another (Buchanan 2020:150-151).[28] Assemblages therefore consist of a machinic side which concerns bodies (broadly defined as any materiality capable of entering into a causal or semi-causal relation with something) and an expressive side which concerns the incorporeal transformation of those bodies (which can

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[25] Deleuze and Guattari's (1987:502) assemblage takes it structure from the linguistic work of Hjelmslev, briefly mentioned earlier. Specifically, content and expression each possesses its own form and substance. Hjelmslev (1969) conceived of the form of expression and the form of content as two entirely relative variables on one and the same plane. According to Deleuze and Guattari (1987:43, emphasis in original), Hjelmslev was able to "weave a net out of the notions *of matter, content* and *expression, form* and *substance"*.

[26] This was also one of the reasons why I opted for New Materialist Analysis instead of material semiotics as tool for analysis. This point is discussed in the next chapter.

[27] Deleuze and Guattari (1987:41) use the example of the formation of sedimentary rock to introduce their theory of double articulation. The varying stages of the process (particles moved by the flow of water, the formation of levels of silt containing these particles, the calcification of these silt levels, and a solid mass with relatively static relations) all contain forms of expression and forms of content in varying degrees.

[28] Buchanan (2020:71) claims that, from the outset, the assemblage "was never intended to refer to ensembles of material things": rather, it "was always about the organisation of desire". In my reading of Deleuze and Guattari (also through secondary interpretations by some other theorists), they *do* refer to material things and acknowledge desire through its ability to affect material and immaterial things.

broadly be understood as the application of labels to those bodies). Components of an assemblage play a material and expressive role. Therefore, the way expression relates to content is not by uncovering or representing it, but rather by constantly communicating with it (Deleuze & Guattari 1987:64).

Taken together, the assemblage's tetravalence highlights the *ratio* of its tendencies between the material and the expressive and towards stability and change, such as the body is for Spinoza a ratio of motion and rest on a continuum (Deleuze 1988:123).[29] The tendencies towards stable territories in assemblages can be regarded as a "safety net" against "total and violent deterritorialisation", and is needed, since there is "no guarantee that a becoming will increase the capacities of an assemblage" (Adkins 2015:158). For DeLanda (2006:14), what allows an assemblage to flip back and forth between the material and the expressive, or territorialising and deterritorialising, are its capacities rather than its properties.[30] Although this view is cause for debate, theorists seem to agree that the assemblage has a material dimension (form of content, machinic assemblage), an expressive dimension (form of expression, collective assemblages of enunciation), a principle of unity (territorialisation, abstract machine), and that it rests upon a condition of possibility (Body without Organs, plane of immanence, plane of consistency), all of which are criss-crossed by lines of flight (lines of absolute deterritorialisation). I agree that only by taking all these dimensions into account can one be said to be working with assemblages (DeLanda 2006:12; Dewsbury 2011:150; Buchanan 2020:121).

According to philosopher Steven Shaviro (2009:148-149), a defining characteristic of the assemblage is that its "aim is not a totalisation, a definitive tracing of limits, or a final theory of everything". It must be seen as "an expansion of possibilities, an invention of new methods and new perspectives, an active 'entertainment' of things, feelings, ideas, and propositions that were previously unavailable to us". What is required is "thought that acknowledges things' tendency towards consistency, but looks for the potential lines of flight, for becomings and for change, to

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[29] The more a particular practice tends towards universal axioms, the more it becomes resistant to change. On the other hand, the more uninterested that a particular practice is in what constitutes its expression (and instead adapts its method in response to the problems at hand), the more such a practice tends towards change. Any practice will, however, display *both* of these tendencies in a certain *ratio* (Adkins 2015:13-14).

[30] To use one of DeLanda's (2006:14) own examples: a city has both a certain infrastructure (that can be viewed as material) and certain skylines (an expressive surface exceeding the city's current material reality). Following Deleuze, DeLanda maintains that these skylines can also become functional (think of mountainous terrains – that form a certain skyline – but also have material effects on bodies that climb or descend them). Harman (2008:379) objects that DeLanda never fully develops what the properties of an assemblage are, defining them instead in terms of their capacities to affect and be affected by other things.

discover the knots of becoming tangled in the fabric of being, to discover the rhizome in the tree" (Adkins 2015:141).

To summarise my understanding of the workings of an assemblage, I use the following two quotes from the introductory chapter of *A Thousand Plateaus*, in which Deleuze and Guattari (1987:2-5) pose a book (also their own) as an assemblage. (For 'book', read 'assemblage'):

> A book has neither object nor subject; it is made of variously formed matters, and very different dates and speeds. To attribute the book to a subject is to overlook this working of matters, and the exteriority of their relations. It is to fabricate a beneficent God to explain geological movements. In a book, as in all things, there are lines of articulation or segmentarity, strata and territories; but also lines of flight, movements of deterritorialisation and destratification. Comparative rates of flow on these lines produce phenomena of relative slowness and viscosity, or, on the contrary, of acceleration and rupture. All this, lines and measurable speeds, constitutes an *assemblage* (Deleuze & Guattari 1987:4).

And they continue on how to think about what an assemblage *does*, rather than what it is:

> As an assemblage, a book has only itself, in connection with other assemblages and in relation to other Bodies without Organs. We will never ask what a book means, as signified or signifier; we will not look for anything to understand in it. We will ask what it functions with, in connection with what other things it does or does not transmit intensities, in which other multiplicities its own are inserted and metamorphosed, and with what Bodies without Organs it makes its own converge (Deleuze & Guattari 1987:4).

Deleuze and Guattari (1987:22) explain that an assemblage, "in its multiplicity, necessarily acts on semiotic flows, material flows, and social flows simultaneously (independently of any recapitulation that may be made of it in a scientific or theoretical corpus)". The tripartite division between a field of reality (the world), a field of representation (the book), and a field of subjectivity (the author) no longer exists. Rather, an assemblage "establishes connections between certain multiplicities drawn from each of these orders, so that a book has no sequel nor the world as its object nor one or several authors as its subject" (Deleuze & Guattari 1987:23).

Deleuze (1980:16) notes that he and Guattari are interested in "the circumstances". The concept of the assemblage *is* a set of circumstances (Massumi 1987:xi). Buchanan (2020:132), in turn, argues that we "have to stop thinking of the concept of the assemblage as a way of describing a thing or situation and instead see it for what it was always intended to be, a way of analysing a thing or situation". We should ask questions such as: what holds it together? What are its internal and external limits? What function does it fulfil? (Buchanan 2020:132). Rather than analysing the

world into discrete components, reducing their manyness to the One of identity, and ordering them by rank, "it sums up a set of disparate circumstances in a shattering blow: it synthesises a "multiplicity of elements without effacing their heterogeneity or hindering their potential for future rearranging (to the contrary)" (Massumi 1987:xi).

To tie the concept of the assemblage with this study's theoretical and methodological framework, I turn briefly to the concept of assemblage-thinking as generally used to describe the kind of thought associated with assemblage theory. Some theorists, such as Baker and McGuirk (2017:425), argue that, despite the ongoing debates around the implications of assemblage thinking for "questions of structure, agency, and contingency", there is growing widespread agreement around its "value as a methodological framework". Deleuze's work has "typically been viewed as 'high' theory, and as a set of ideas that work in an abstract way but which have little relevance to 'doing research'" (Coleman & Ringrose 2013:1).

Consequently, the focus has tended to be on textual modes of analysis, with the 'practical' dimensions of Deleuze's philosophy and approach to the empirical largely neglected. However, Deleuzian inspired empirical research is steadily growing (Coleman & Ringrose 2013:1).[31] Assemblage-thinking, therefore, allows for an experimental exploration of the entanglements of the material and the immaterial by focusing on the in-between affects, the processes and the "possibilities that emerge in the midst of things, senses, memories" (Hamilakis 2017:176).

It is necessary to mention that an "immanent [rule] to experimentation", as Deleuze and Guattari (1987:150) warn, involves "injections of caution".[32] One cannot reach a Body without Organs "by wildly destratifying" the body because "enough of the organism [must be kept] for it to reform each dawn" (Deleuze & Guattari 1987:160). Learning to experiment, according to Thornton's (2018:218) reading of Deleuze and Guattari, is a skill that is developed through contextual practice, rather than in theory. Because experimentation is also never complete, the Body without Organs is not simply attained, but is rather a limit that one approaches (Deleuze & Guattari 1987:149-150).

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[31] Examples include Hickey-Moody and Malins (2007); Masny and Cole (2011); Olsson (2009); Potts (2004); McCormack (2007); Latham and McCormack (2009); Tamboukou (2008) and Jensen and Rödje (2009); and select chapters in Coleman and Ringrose (2013).

[32] Calls to caution pepper *A Thousand Plateaus* and is probably most prevalent in the plateau entitled 'How do you make yourself a Body without Organs?'.

This means that if all of the body's organisations are dismantled simultaneously, then there will not be any ground on which to base the reorganisation of its organs. Towards the end of the plateau on the Body without Organs Deleuze and Guattari (1987:161) give the following answer to the question of how to make oneself a Body without Organs:

> Lodge yourself on a stratum, experiment with the opportunities it offers, find an advantageous place on it, find potential movements of deterritorialisation, possible lines of flight, experience them, produce flow conjunctions here and there, try out continuums of intensities segment by segment, have a small plot of new land at all times. It is through a meticulous relation with the strata that one succeeds in freeing lines of flight, causing conjugated flows to pass and escape and bringing forth continuous intensities for a [Body without Organs].

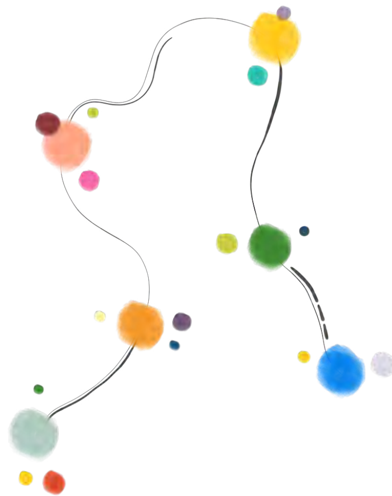
This passage, "one of the most telling" of the book according to Thornton (2018:219), brings together many of the practical points of assemblage theory. Processes proceed by experimentation: "one does not yet know what your lines of flight are, or what your possibilities of deterritorialisation are, so it will take some trial and error to find out" (Thornton 2018:219). Throughout this process it remains crucial to keep some of the body organised, because without a small area to come back to after each experimentation, the likelihood of the experiment failing is higher. Deleuze and Guattari (1987:161) make it explicit that remaining "stratified – organised, signified, subjected – is not the worst that can happen". There is risk in too closely identifying with territorialisation or deterritorialisation, but these are risks that must sometimes be explored "in order to create something *new"* (Adkins 2015:159, emphasis in original). Therefore, experiment, but do so carefully and in small steps.

4.4 CONCLUSION

With the challenges posed by the material turn to social enquiry in contemporary theory as a backdrop, this chapter was dedicated to a new materialist methodology for exploring these issues, but also their possibilities. Throughout the chapter, I drew predominantly on assemblage theory as laid out by Deleuze and Guattari (1987), and as found further in the writings of authors such as DeLanda (2006), Law (2004), Coleman and Ringrose (2013), Buchanan (2020), and Fox and Alldred (2017). It becomes clear that theorists argue for sustained interdisciplinary enquiry into the new materialisms and assemblage thinking, both of which pay close attention to the nature of new types of knowledge, mobilised potentials, politics, asymmetries, and marginalisation processes that are inevitably involved when talking about the research process.

The first section of this chapter consisted of an exploration of the various aspects of new materialist methodologies. Some innovative research directions, such as the introduction of 'new' methodological frameworks and rethinking anthropocentrism in twenty-first century research processes, were foregrounded. Thereafter I delved deeper into assemblage theory and assemblage thinking. Assemblages, as tetravalent systems, operate on a continuum of material and expressive segments through territorialisations, de-/reterritorialisations and include diverse materials that affect and are affected (Deleuze & Guattari 1987:88).

In the subsequent chapter, that can be read as the second part of the current chapter, I situate my study as a new materialist research assemblage comprising human and nonhuman materialities such as myself as researcher; the data; the methods and tools used; and the different contexts in which the research took place. I also pay attention to the collection, analysis, and presentation tools that form part of my research assemblage, namely interviews, Fox and Alldred's (2017) 'New Material Analysis', and data visualisations. Together, Chapters 4 and 5 lay the groundwork of a new materialist approach to qualitative research, before it is applied through the use of interview narratives in Chapter 6 and 7.



5 CHAPTER

arranging the research assemblage

Yet one was already present in the other; the cosmic force was already present in the material, the great refrain in the little refrains, the great manoeuvre in the little manoeuvre. Except we can never be sure we will be strong enough, for we have no system, only lines and movements.

- Gilles Deleuze and Félix Guattari (1987:408)

Figure 5.1 | key concept visualisation

CHAPTER 5: ARRANGING THE RESEARCH ASSEMBLAGE

5.1 INTRODUCTION

In this chapter, I elaborate on the new materialist groundwork laid in Chapter 4, by focusing on the idea of this study as a research assemblage. Following Fox and Alldred's thinking in their book *Sociology and the New Materialism: Theory, Research, Action* (2017:3), in which they are primarily concerned with the new materialisms as a tool to help us do research that is both "appropriate and useful; to gain fresh insights [and] to make sense of the social world in ways that can offer solutions to social problems", I consider my study as a rhizomatic research assemblage comprising humans and nonhumans including, among others, myself as researcher, interview participants, the studied events and objects, words, actions, and habits, data collected, tools and methods utilised, and spatial and temporal contexts.

I tease out selected tools of collection, analysis, and presentation that form part of this research assemblage. I discuss interviews first, then Fox and Alldred's (2017) 'New Material Analysis' and, finally, data visualisations. I discuss how this combination of materialities, alongside and in close relation to many others in this study's research assemblage, have the potential simultaneously to prohibit and enable new materialist enquiry. I conclude with a brief summary of the chapter's main arguments. Figure 5.1 above highlights the key concepts discussed in this chapter.

With this as a backdrop, I now lay out the ways in which I am approaching this study's research process *itself* as a new materialist assemblage comprising data, myself as researcher, the methods I used, the contexts in which the research took place, etcetera (see Coleman & Ringrose 2013:126; Fox & Alldred 2017:152). In a way, the research assemblage can be seen as an adapted version of Law's (2004:41) 'method assemblage'. A method assemblage crafts "a bundle of ramifying relations that generates presence, manifests absence and Otherness". The crafting of boundaries between what is present, what is manifestly absent, and what is Othered distinguishes it as a method (or research) assemblage (Law 2004:42).

In arranging my own research assemblage, I take the cue from a materialist methodology first presented by Fox and Alldred (2017:175), namely "materialist analysis of research-assemblage micropolitics". (As mentioned in Chapter 1, I refer to this tool as New Materialist Analysis

throughout this study.)[1] They stipulate that they developed this methodology by drawing on Deleuze and Guattari's notions of assemblage, affect, (de)territorialisation, sociologist Patricia Clough's (2004) notion of 'affect economy', and the idea of 'intra-action' as presented by Barad (1996) (Fox & Alldred 2017:152). By developing this tool, the collaborators do not claim to offer the last word in materialist methodology, but rather aim to provide students and researchers with the means "to translate ontological innovation into practical tools for social inquiry" (Fox & Alldred 2017:152).

I acknowledge that other perspectives or relevant and related methods might exist, but I have not been able to find any other new materialist scholar who lays out the components and processes of the research assemblage, and who considers the inclusion and analysis of diverse sources of data, as clearly as Fox and Alldred. It is common for theorists to state that they are applying a 'new materialist methodology' to the events they are studying, but they rarely explain what the steps of this process of conducting research are (see for example Coleman & Ringrose 2013; Baker & McGuirk 2017; Feely 2019; Sun 2020). Although laying out this information is not always necessary, I find Fox and Alldred's rigorous analysis useful in the development of this thesis because of their explicit focus on how the various stages of the research assemblage unfolds.

In addition to Fox and Alldred's guidelines and similar to the work of Dewsbury (2011) and visual communication theorist Zhen Sun (2020), I take the tetravalence of the assemblage as one of its core characteristics: the research assemblage is composed of material and expressive parts on the horizontal axis and fluctuates between territorialisation and deterritorialisation on the vertical axis, as has been indicated. In this study, some material and expressive parts include, not exclusively, my co-presence as researcher, participants, physical objects (sentimental and otherwise), homes, mutual knowledge of the interview protocol, alongside the act of interviewing and remembering, academic research, gestures, words and facial expressions, photographs, beliefs regarding environmental consciousness and narratives of habits, spaces, tools such as a recording device, computers, and visualisations. Analysing the current study's research assemblage along these two axes is useful when it comes to understanding the potentials of de- and reterritorialisation.

[1] As stipulated, Fox and Alldred (2017:28) refer to their method simply as 'materialist' (without the prefix 'new'). I prefer to call it New Materialist Analysis (retaining the prefix, capitalised, and emphasising that it is a tool used to *analyse*), since I found it facilitates its distinction from 'materialist' (for example historical Marxist) methods.

If one approaches diverse relations as a research assemblage with its own affect economy, research becomes a territorialisation that shapes the knowledge it produces through affect flowing between its components (Fox & Alldred 2017:155). In this process "something quite precise that could not be said if such compositions were not taking place" is created (Dewsbury 2011:150). From this perspective, research (at least theoretically) is not at root an enterprise undertaken by human actors, but an assemblage of things, people, ideas, social collectives, and institutions (Fox & Alldred 2017:155).

5.2 WHAT CONSTITUTES A RESEARCH ASSEMBLAGE?

When one arranges a research assemblage, one is faced with the question: what components constitute such a research assemblage? Some relations include those between the elements named above, such as researched events, research tools, and so forth. Further, contextual elements are important, such as the physical spaces where research takes place; the frameworks, philosophies, cultures, and traditions that surround social enquiry; ethical principles and ethics committees; and the aspects of academic research outputs: libraries, journals, editors and reviewers, and publishers (Fox & Alldred 2017:155, Feely 2019:6). The interactions between the studied events, the instruments and the researchers depend upon the "intentional affective interactions defined by the machines used, in other words, the techniques and methodological strategies adopted" (Coleman & Ringrose 2013:126, Fox & Alldred 2017:155).

Fox and Alldred (2017:151) pose the research assemblage as the interaction between an event assemblage and how it is observed by a study assemblage (as seen in Figure 5.2 to follow shortly). This idea that an assemblage is firstly composed of smaller assemblages *and* secondly, as one component of larger assemblages, follows DeLanda's (2006:17) reading. A specific event occurs in the world (let us call it E). From an assemblage perspective, E is an event assemblage with its relations (1, 2, 3 for example) and its own affect economy that makes it do whatever it does (Fox & Alldred 2017:157).

E then becomes the focus of a research study. This research study, seen as separate from E, is also an assemblage, a study assemblage (let us call it S) consisting of heterogeneous materials, relations (4, 5, 6 for example) and affects. Once E becomes the focus of S, the aim of S is to apply methods that can identify relations 1, 2, and 3 found in E, explore the affects between these relations that make it work and assess from some contextual perspective the capacities that these affects produce.

Relations 4, 5, and 6 in S (such as the researcher, methodologies, research instruments, theories, technologies, and so on) are composed in order to engineer specific affective flows, with the objective of taking the event assemblage E (or any other event assemblage) and "producing a textual or similar output that can be claimed as 'knowledge' of E" (Fox & Alldred 2017:157). Therefore, if the aim of S is to document, analyse, and eventually textually report E, it must necessarily have the capacity to *be affected* by the relations 1, 2, and 3, in the sense that a "research instrument or conceptual tool must be sufficiently sensitive to be useful as a means of inquiry" (Fox & Alldred 2015a:404).[2]

Through this interaction between event assemblage E and study assemblage S, a third assemblage, known as the *research assemblage* E/S with its own affective flow between 1, 2, 3, 4, 5, and 6, is formed (Fox & Alldred 2015a:404) (Figure 5.3 below after Figure 5.2). This correlates with Deleuze and Guattari's (1987:367,333) description – and Delanda's (2006:10) reading – of parts of assemblages with *machinic* effects: the affects in an assemblage are dependent on what components are "plugged into" it.

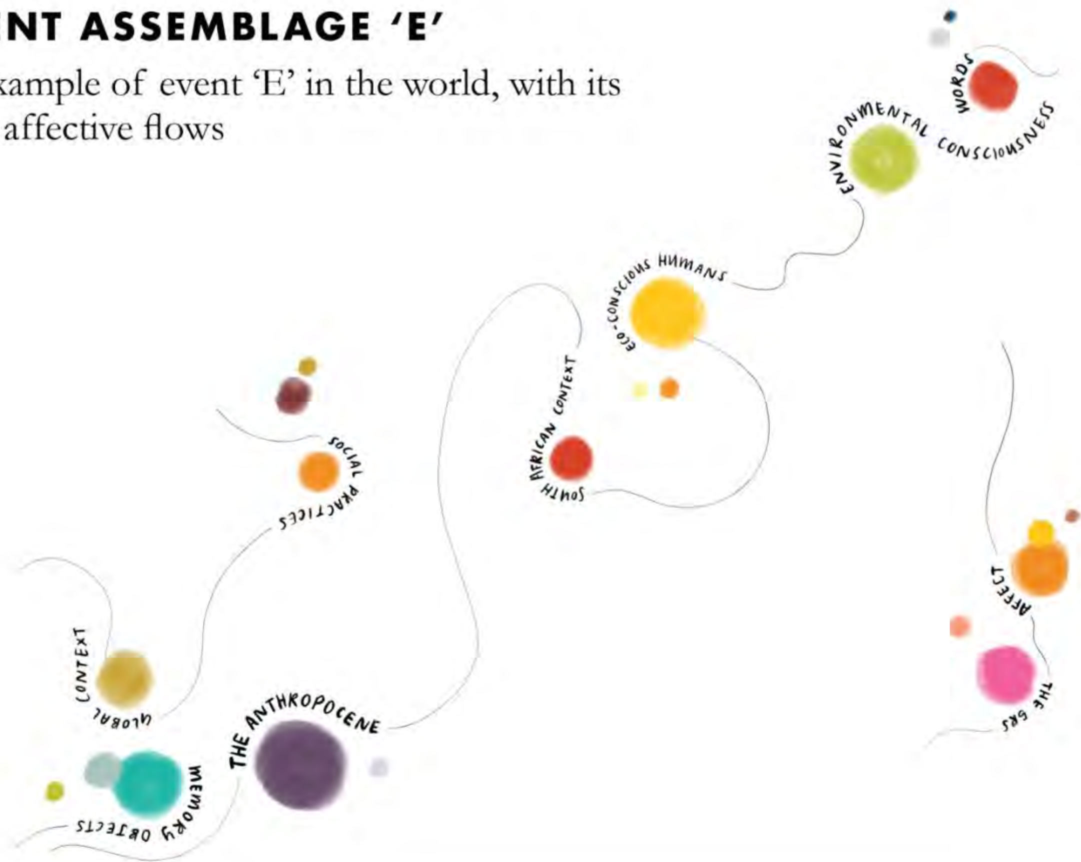
Any component of an assemblage may be detached from it and plugged into a different assemblage in which its interactions will be different. This flow is therefore distinct from those in either E or S: it is this hybridised affect economy that will produce the outputs of research such as the 'knowledge' of E, and potentially altered sensibilities concerning E in the researcher, among research audiences, and perhaps also those caught up in the event itself (Fox & Alldred 2015a:404).

[2] It is interesting to note that this capacity to be affected is often described (but left unnamed) in conventional social research texts. This is described, for instance, as the sensitivity that a measuring instrument such as thermometer or a questionnaire needs in order for it to be useful, or as the hermeneutic understanding ('*Verstehen*') in a qualitative study that enables a researcher to make sense of an event studied (Fox & Alldred 2019:5).

Figure 5.2 | **event assemblage and study assemblage**

EVENT ASSEMBLAGE 'E'

an example of event 'E' in the world, with its own affective flows



STUDY ASSEMBLAGE 'S'

an example of a way to study event 'E', with its own affective flows

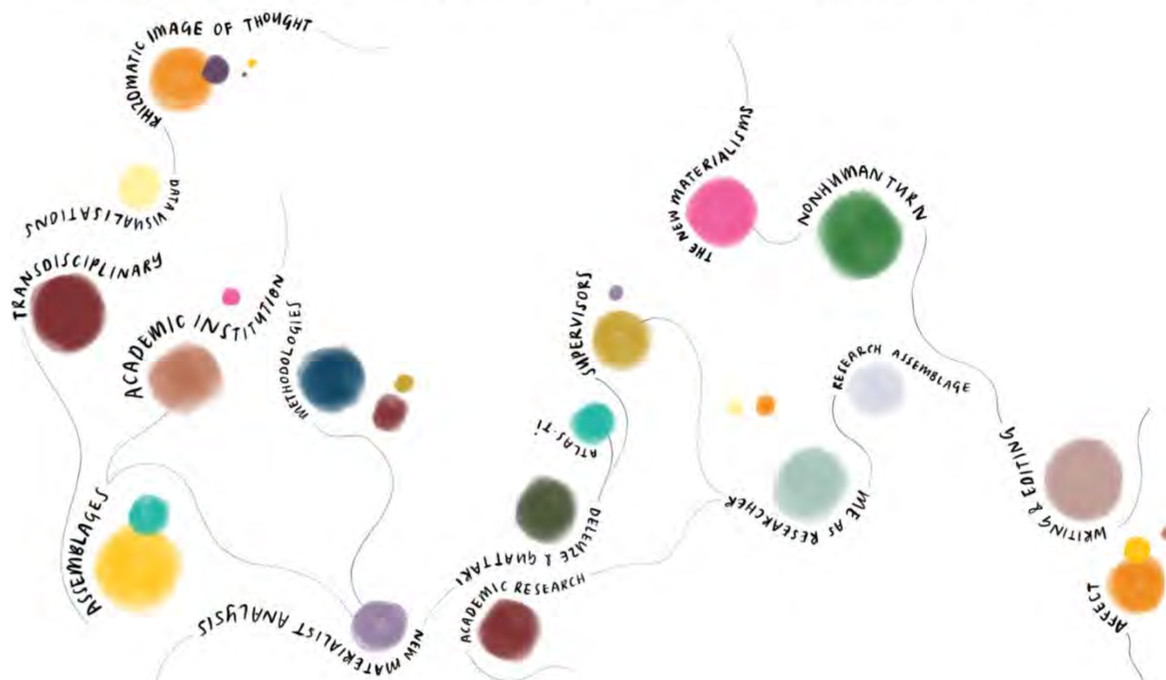
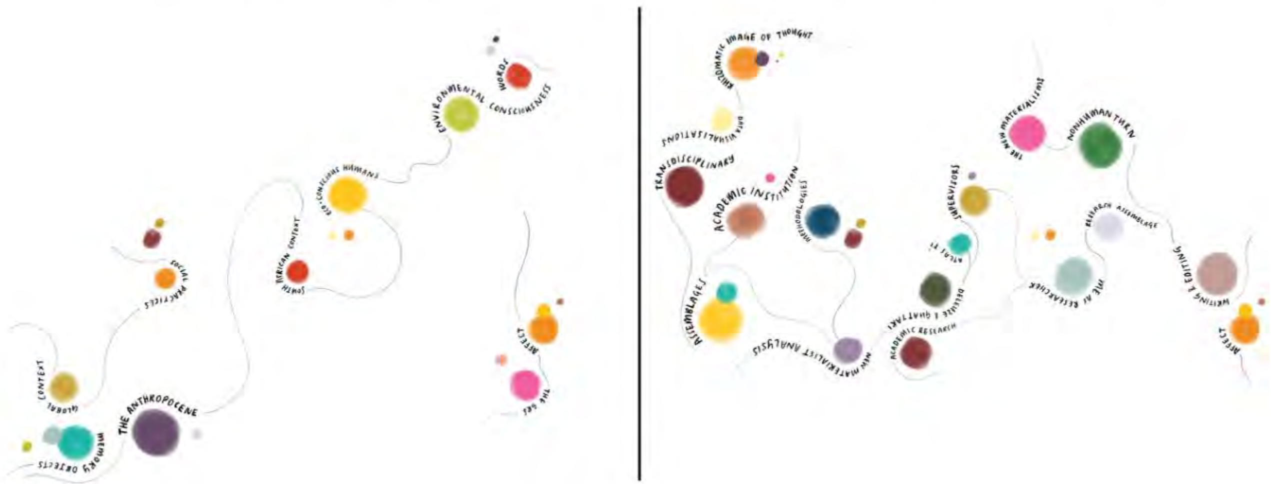


Figure 5.3 | **research assemblage**

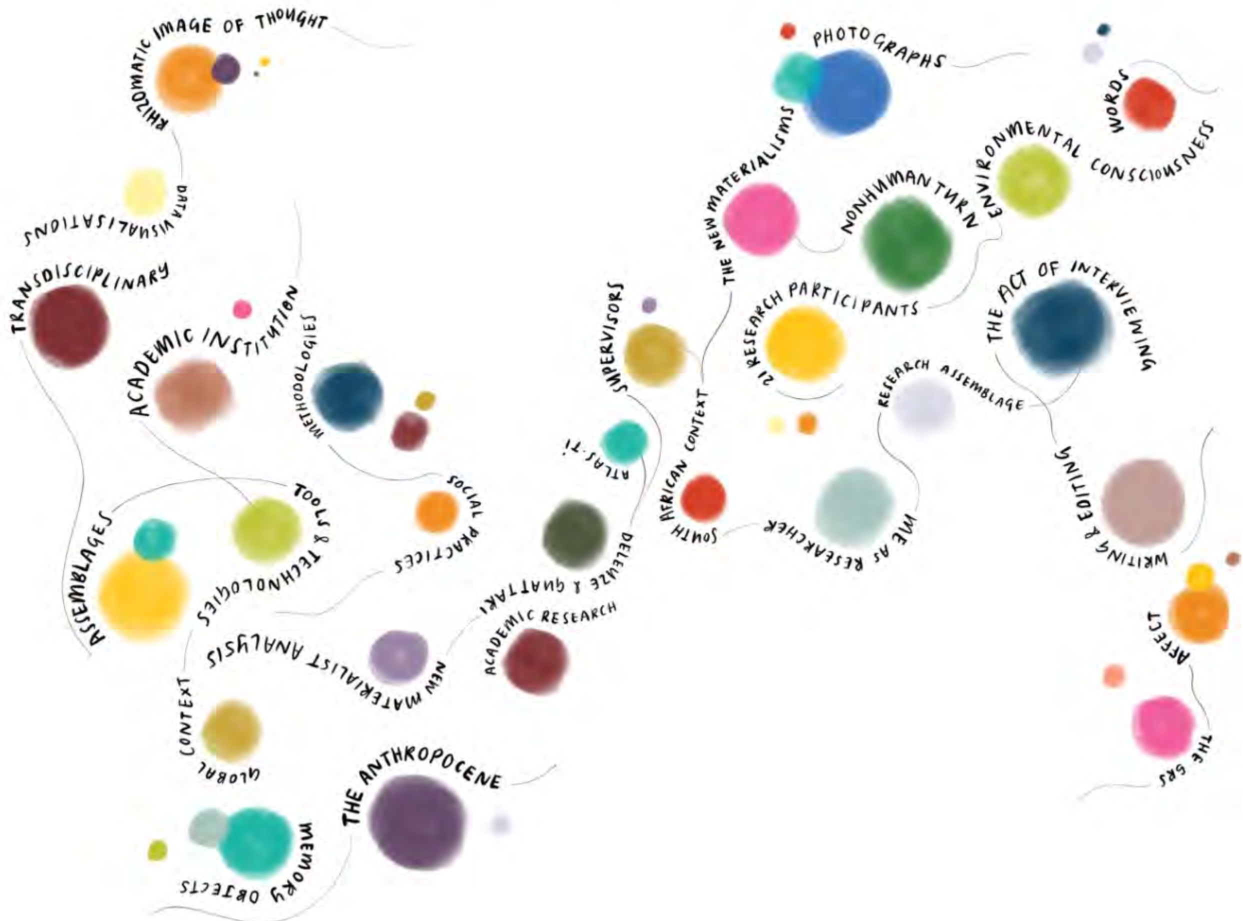
EVENT ASSEMBLAGE 'E' AND STUDY ASSEMBLAGE 'S'



interact to form

RESEARCH ASSEMBLAGE 'E/S'

with its own affective flows



5.3 PHASES OF THE RESEARCH PROCESS

In order to assemble a research assemblage E/S as set out above, Fox and Alldred (2017:169) divide the new materialist research process into four categories or phases, namely 1) research design (how the study is methodologically envisioned), 2) data collection (how and what kind of data are collected), 3) data analysis (how and in what ways data are organised), and 4) data reporting (how the research is presented, textually or otherwise). Because this division is somewhat artificial, and the phases imbricate in many ways, I use it as a guideline rather than employing its potentially strict categories. Although no other theorist lays out these steps in such detail, some recommendations presented below (to favour affect, for example) resonate with what others have applied in their work (see for example Baker & McGuirk 2017; Sun 2020; Feely 2019).

Firstly, new materialist research design favours assemblages above individual bodies. Researchers attend not to individual subjects, experiences, or sensations, but to the affective flows within assemblages of human and nonhuman, animate and inanimate, material and abstract. They further explore how "affects draw the material and the cultural, and the 'micro', 'meso' and 'macro' into assembly together" (Fox & Alldred 2017:169-170). They explore the affect economies and micropolitics the movements of territorialisation and de-territorialisation reveal (Fox & Alldred 2017:170). Above all, one's orientation must be towards what things do, rather than what they 'are'; towards processes and flows rather than structures and stable forms. I take these new materialist principles as the groundwork for the design and layout of my entire study.

Secondly, new materialist data-collecting "machines" must be able to identify assemblages of humans and nonhumans, material and abstract and animate and inanimate, by cutting across traditional 'micro' and 'macro' levels. It should in this way explore how elements in assemblage affect and are affected, and what things do and what affective flows they produce. This is done by identifying territorialisations and deterritorialisations and aggregating and singular flows within assemblages (Fox & Alldred 2017:171). Collecting data from a variety of sources and using various methods could potentially erode boundaries between matter/meaning and micro/macro. Fox and Alldred (2017:171) note that a mixed-methods approach can be engineered to "meet the objectives of identifying assemblages, affects (aggregating and singular) and capacities, while also encouraging reflexivity about how research is assembled".

My own data consists of an eclectic combination of materialities, including research papers, the interviews' structure, narratives, objects, and photographs. Here, I aim to acknowledge data's "unruly potentials" that can be sensed when "something seems to reach out from the inert corpus of the data to grasp us" (MacLure 2017:51). These engagements could be "a comment in an interview, a fragment from a fieldnote, an anecdote, an object, a strange facial expression or a feeling of déjà vu" (MacLure 2017:51). By focusing on assemblages, I shift the attention from individual subjects to affective flows between humans, memory objects, memories, practices, habits, and beliefs around environmental consciousness.

Regarding the third category, new materialist data analysis, the study takes the assemblage as the primary focus for analysis, incorporating human and nonhuman elements and their relations (Fox and Alldred 2017:171). It explores affect and the territorialising and deterritorialising capacities produced in bodies, collectivities, and other relations in assemblages and examine how these link matter and meaning, and 'micro' and 'macro' levels. Above all, it acknowledges the affective relations within the research assemblage itself. Human accounts can "no longer be accorded validity on the basis of their 'authenticity', and methods such as interviews must be treated not as means to obtain subjective representations of the world" but rather as "evidence of how respondents are situated within assemblages" (Fox & Alldred 2015a:409).

I analyse interview data through the use of New Materialist Analysis which allows me to focus on affects between the materialities that assemblages are composed of (Multimedia Drawer 5.1 provides an example of its application). I further draw visualisations that enliven data, as gathered through academic writings and the interviews, to communicate selected findings in a radically different way than is common in the humanities and social science research. These data visualisations are one of the ways in which I interpret and present the data that I have collected. The final phase of the research process is discussed after the Multimedia Drawer.

Multimedia Drawer 5.1: An example of a New Materialist Analysis

Using a 'painting assemblage', the latter as discussed by Fox and Alldred (2017:84), as a point of departure, this drawer contains an example of what a New Materialist Analysis might look like. In the painting-assemblage various entities such as artworks, art materials, and human bodies (artist, model, and so on) are involved in artistic production and consumption. In New Materialist Analysis, the assemblage becomes the "unit of analysis" (Fox & Alldred 2017:84-85). Applying this to artistic creativity, we might conjecture a minimal 'painting-assemblage', comprising, at least (but never limited to):

subject – matter – medium – canvas – paintbrush

In this assemblage, none of the entities possesses essential attributes, except in their relations with other (similarly contingent and ephemeral) bodies, things, ideas, or social institutions. In other words, they gain these identities only in assemblage that develops in unpredictable ways around actions and events.

Further, no single element (for instance, an 'artist') possesses primary agency. Instead, affect (the capacity to physically, psychologically, emotionally or socially affect or be affected) reflects the ways in which assembled relations interact. All materialities are affective. For example, the "marks on a canvas will affect which next mark a painter makes; an artwork will affect its viewers in many differing ways, including how much a buyer might pay for it at auction" (Fox & Alldred 2017:85). In this assemblage, different affects may be at work, including how artist and paint mark a canvas, how a model's image inspires an artist, how artists develop a style or focus, and how audiences respond to artistic products.

Further, affective flows between the components can be explored in terms of their micropolitical effects on the different relations between artists, subjects, art objects, audiences, and so on in the painting assemblage.

Here, the distinction between 'singular' and 'aggregative' affects is important. Singular affects or affect economies change relations in ways that "represent nothing, signify nothing" beyond the immediate – an example would be a single mark on a canvas, or a unique musical phrase (Deleuze & Guattari 1984:286). By contrast, aggregating affects or affect economies produce "stable forms, unifying … organising the crowds" (Deleuze & Guattari 1984:287-288). An example of the latter might be an artist's colour palette preferences that match her current or established style: this will affect not only the current work, but also contribute to a 'body of work' and perhaps a reputation. Both singular and aggregative affects may be present in assemblages. The latter imposes order upon what bodies can and cannot do, the former has no consequences beyond the immediate, and may indeed dis-aggregate components in the assemblage, opening up new possibilities. For example, a bold treatment of a subject (such as the abstract expressionist technique of Jackson Pollock) can displace an art object from conventions or traditions, with a consequent effect on its audience (Fox & Alldred 2017:85).

In a nutshell, New Materialist Analysis focuses on assemblages of human/nonhuman relations rather than creators and outputs; on affective flows within assemblages rather than notions of (creative) agency; on the micropolitics of assemblages and their effect (rather than social structures and deterministic fields); and upon the affective capacities of creative products themselves. This materialist sociology de-privileges the individual creator and her/his 'creativity' (Deleuze and Guattari 1994:164), and indeed creativity must no longer be considered as an agentic attribute of a body, but rather as an affective flow between assembled bodies, things, and ideas (Fox & Alldred 2017:86).

Finally, when it comes to the fourth phase of presenting new materialist work to an audience/ reader/ viewer, researchers need to recognise that a research report is the product of a "hybrid assemblage with an affect economy deriving from both the event and the machines of social research" (Fox & Alldred 2017:173). The affective entwinement between the event assemblage and the study assemblage – that make up the research assemblage – should be foregrounded. Further, researchers need to acknowledge and challenge academic research's highly ritualised (territorialised) conventions (Fox & Alldred 2017:173). Generally, what is permissible are articles, research reports, grant applications, reviews, books, and seminars, in some cases sparingly punctuated with certain kinds of maps, graphs, and photographs (Law 2004:147). Academic texts are rarely "read for themselves", but are viewed rather as more or less technically adequate descriptions of external realities (Law 2004:148).

These restrictions have their place, because "they make it possible to produce particular realities": they negotiate presences that "(are taken to) describe, mirror, correspond or work in relation to specific and singular realities" (Law 2004:147). But this often means that multidimensional event assemblages are transformed into the unidimensional medium of written text. I am curious about what might happen if certain conventions are displaced in some ways to present research differently.

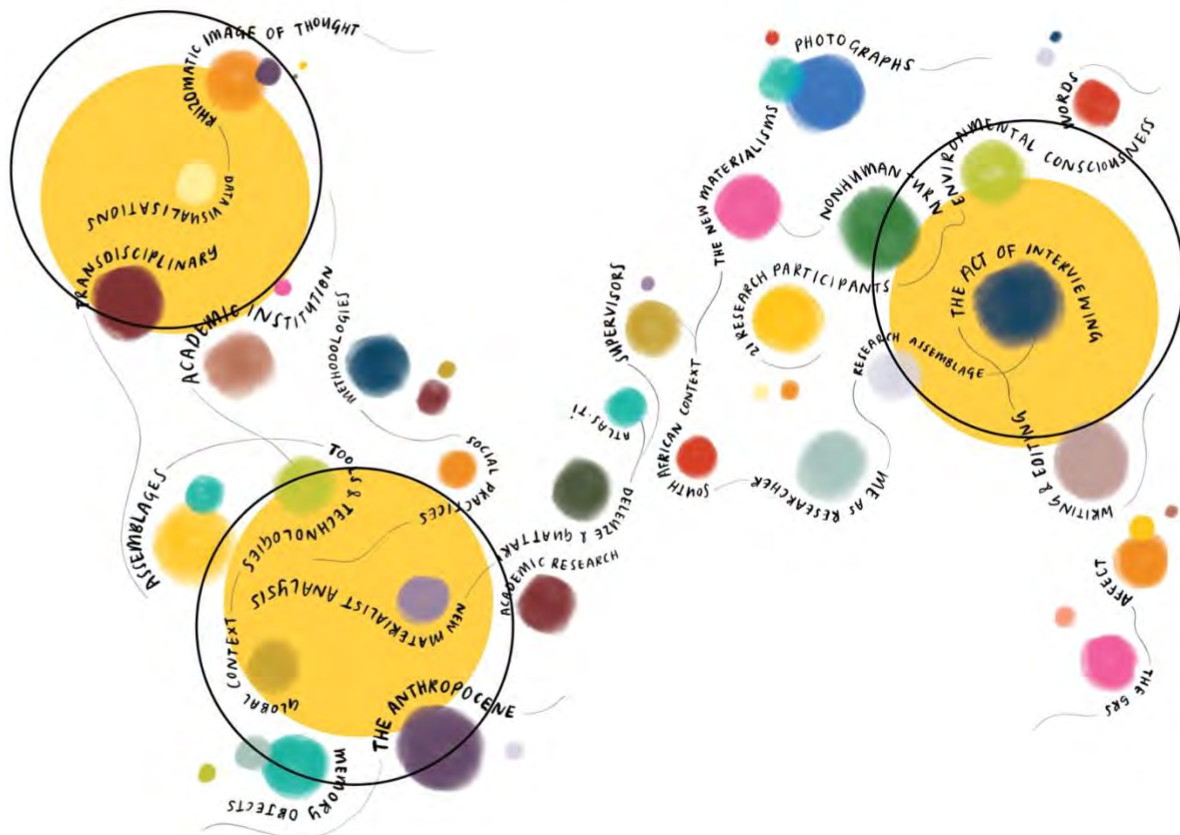
New materialists are well situated to produce necessary lines of flight through a multimedia approach: drawings, photographs, sound, colour usage, installation art, and so forth may connect readers and events in ways that could not be affectively produced through text alone (Fox & Alldred 2017:173). I include a variety of media beyond text in my thesis, including visualisations, photographs, and hand-drawn graphs, using a variety of colours and textures. Such initiatives have the potential to alter the flow of affects in the research assemblage between event, researcher, and reader, and re-engage research audiences by drawing them into the research assemblage (Fox & Alldred 2017:174). Here again, plugging components into other assemblages may produce new affects.

5.4 THREE METHODS

In order to navigate the aspects of my research assemblage further, I now turn to three diverse methods that I use in the process of data collection, analysis, and report, namely interviews, New Materialist Analysis, and data visualisations. As can be seen in Figure 5.4, drawing attention to these three components does not exclude other components that are equally present in the

research assemblage. In many cases, the sections below also focus on the implications for and of these components (such as the role of the researcher, language, technological tools and material objects) which, in effect, highlight the assemblage's affective dimension. I turn firstly to the act of interviewing.

Figure 5.4 | **three methods in the research assemblage**



5.4.1 Interviews

Whereas interviews enjoyed prominence in the humanities and social sciences in the twentieth century predominantly owing to their 'objective' focus on language, this method is increasingly scrutinised by new materialist movements (Kuntz 2019:48). Although the use of interviews is challenged by emerging research processes, I take it to remain a useful method for understanding the social world (Kuntz 2019:42). This section teases out how this ambivalent tool prohibits, but also has the potential to *enable*, new materialist social enquiry. This potential can be realised by, as Dolphijn and Van der Tuin (2011:14) hold, shifting attention away from the interviewer, the

interviewee, or the expertise of the interviewee as such, towards the *action* or performance of interviewing itself.[3]

Following new materialist methodology, interviews become useful in a new materialist manner when emphasis is placed on the act of interviewing and not on the interview content alone (Feely 2019:7, Fox & Alldred 2019:26). This includes, for example, refusing to theorise 'voice' as a stable 'thing', and shifting towards a conceptualisation of *voicing* as an embodied, sociomaterial, sensual, and relational process (Chadwick 2020:16). Concerning the study of memory, Fox and Alldred (2019:32) propose interviews and observations as useful tools to explore personal memories as "a potent source of affectivity that link events and assemblages across time and space". I accept interviews as a useful tool in the current study *should* it emphasise the affective flows in assemblages. Moving forward from this perspective, interviews, as one materiality in this study's research assemblage, provide in-depth information pertaining to participants' memories, experiences, and viewpoints of a particular topic (Turner 2010:754).

In early 2019, late 2020, and again in early 2021, I conducted 21 face to face interviews with participants based in and around Johannesburg, Pretoria, and Cape Town. Interviews took place in the participants' homes.[4] In the interviews' preparatory phase and structure, I followed conventional methods. As discussed in Chapter 1, I adhered to the needed ethical procedures to ensure participants' anonymity and willingness to participate.

This choice was mainly made because (albeit constructed) social norms and expectations remain *useful* in the twenty-first century (a new materialist approach must, after all, be accompanied by "injections of caution" so as not to dangerously dismantle all of the body's organisations simultaneously [Deleuze & Guattari 1987:160]). I could not, for example, expect a participant to partake without having had the opportunity to read the consent letter, or arrive at her home unannounced, or without properly introducing myself, or without a recording device, or without communicating how long the interview would take. In this case, these territorialised practises structure social life in necessary and practical ways.

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[3] Dolphijn and Van der Tuin (2012:14) hold that the interviews in Part One of their book are *intra*-actions (a term introduced by Barad, one of their interviewees) rather than *inter*actions. The term "intra-action" is coined to conceptualise the action *between* (and not *in*-between) materialities that matter.

[4] I also gave participants the option of meeting me in a public space instead of in their home. Three participants chose this option (two interviews were conducted at a coffee shop and one at the University of Cape Town), predominantly as an extra COVID-19 precaution.

Participants were selected with the use of purposive sampling. This strategy is often employed to overcome the limitations of available time, needed costs and a relatively small sample size, by selecting "information-rich" cases (Vasileiou *et al* 2018:2; Fox & Alldred 2019:7, Tongco 2007:154). I used this non-random, inherently biased technique and deliberately chose to approach participants owing to a certain quality they possess – that is, self-identifying as environmentally conscious. Before continuing, I now briefly turn to the models for measuring environmental consciousness. Dunlap and van Liere's (1979, 1980) research on environmental concern is deemed as seminal in this regard as their New Environmental Paradigm (NEP) Scale is still a widely used measure of pro-environmental orientation by environmental theorists.

Environmental consciousness can be seen as an assemblage of knowledge, emotions, and evaluations concerning humans, society, and 'nature', which ideally creates the "appropriate emotional background" for someone to take pro-environmental action (Shedlovska 2013:79). It is therefore a multidimensional, behaviour-oriented concept (Sánchez & Lafuente 2010:746). This means that it entails specific psychological factors related to individuals' propensity to engage in pro-environmental behaviours (Zelezny & Schultz 2000:367).

Sánchez and Lafuente (2010:732) explain that an environmentally conscious individual engages in a range of pro-environmental behaviours and holds certain beliefs, values, attitudes, and knowledge habitually associated with such actions. Apart from a set of values or beliefs, theorists such as psychologists Lynnette Zelezny and Wesley Schultz (2000:367) and sociologist Mariya Shedlovska (2013:82) have stressed the importance of an active component of environmental consciousness, which entails engaging in pro-environmental behaviours, such as recycling and composting. Common 'guidelines' to eco-conscious practices include the "three Rs" (reduce, reuse, and recycle) (Wilson 2016:394) or, expansively, the "five Rs" (refuse, reduce, reuse, recycle, and rot) (Johnson 2013:15) (Multimedia Drawer 5.2).

Multimedia Drawer 5.2: The five Rs as eco-consciousness guidelines

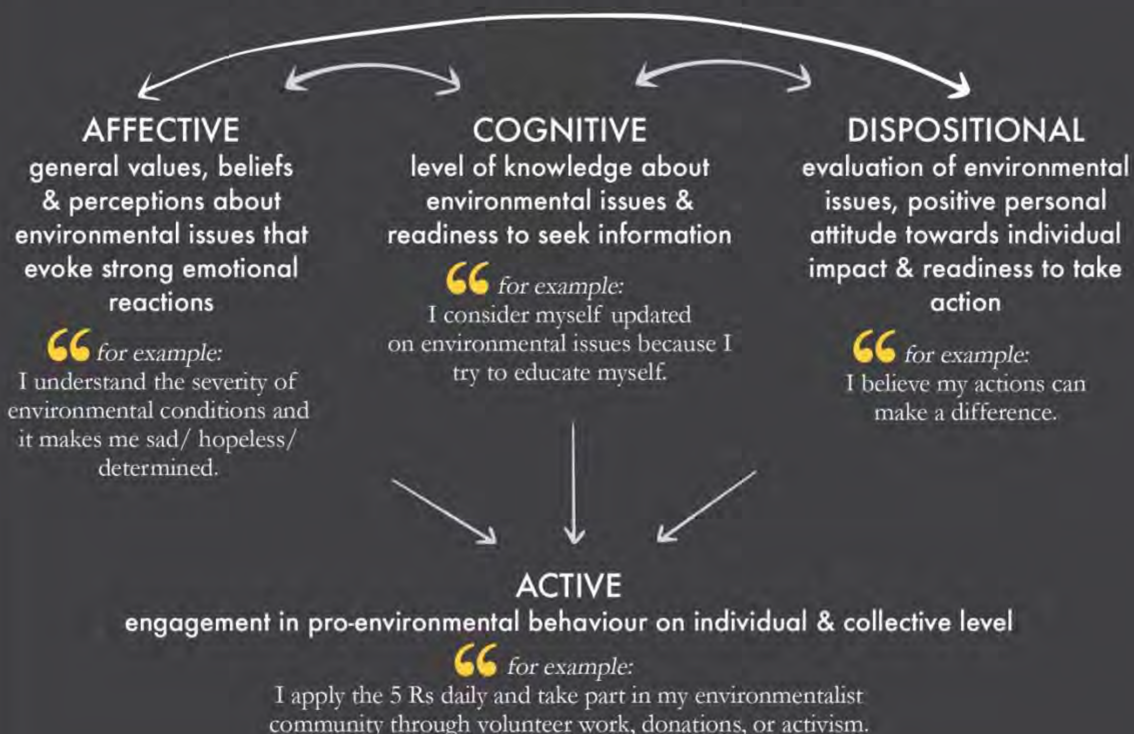
The "five Rs" (refuse, reduce, reuse, recycle, and rot) are a guideline for environmental consciousness. Applying these actions in order and on a daily basis could keep any waste from going to landfills since it "naturally result[s] in very little waste" (Johnson 2013:10).

Firstly, refusing entails actively declining 'passive' forms of consumption such as the use of plastic straws and 'freebies'. Thereafter, reducing includes, firstly, "donating or selling previous purchases", which "fosters collective generosity through sharing resources already consumed" and actively consuming less (Johnson 2013:19). Reusing follows and means "utilising the product in its original manufactured form several times to maximise its usage and increase its useful life" (Johnson 2013:22). Upcycling, the "practice of refashioning something useless into something useful" can also be seen as a form of reusing (Wilson 2016:395). Fourthly, recycling is "reprocessing a product to give it a new form" (Johnson 2013:22). Johnson (2013:14) notes that there is a common misconception surrounding zero waste and recycling. Many people believe that "all [zero waste] involves is extensive recycling, when on the contrary, [it] does not promote recycling": rather, it considers the costs associated with the recycling processes. Recycling, although included in the zero waste model, is therefore regarded only as an alternative to handling waste materials and is "deemed a last resort before landfill" (Johnson 2013:14). Finally, rotting entails composting and "represents the kind of big closed-loop waste cycle upon which our manufacturing model should have been based from the beginning" (Johnson 2013:32).

Shedlovska (2013:79) notes that the majority or contemporary researchers make use of a three-component structure to determine environmental consciousness. These components are cognitive (knowledge), affective (treatment), active (action). In this study, I prefer the approach suggested by Sánchez and Lafuente (2010:738, 740), because they expand on this model, adding another component: their proposal for measuring environmental consciousness includes a combination of 1) pro-environmental values and the perception about environmental conditions (affective dimension), 2) the level of information (cognitive dimension), 3) attitudes towards action (dispositional dimension), and 4) engagement in pro-environmental behaviours (active dimension) (Multimedia Drawer 5.3). The bidirectional relationship between these dimensions means that "specific pro-environmental behaviour can be reinforced or mitigated by certain attitudes such as the sense of individual responsibility which, in turn, can encourage or discourage the extension of pro-environmental involvement to other behaviours" (Sánchez & Lafuente 2010:738).

Multimedia Drawer 5.3: Measuring environmental consciousness

To determine the participants' level of environmental consciousness, I used Sánchez & Lafuente's (2010:738) diagram consisting of four dimensions. From an analytical perspective, an ecologically conscious individual (or "pro-environmentalist") engages in a wide range of pro-environmental behaviours and holds certain values and attitudes that different theories have associated with this type of conduct (Sánchez & Lafuente 2010:732). Sánchez and Lafuente (2010:738) propose that environmental consciousness combines the endorsement of pro-environmental values and perceptions of environmental conditions (affective dimension) on the one hand and, on the other, the levels of information (cognitive dimension), attitudes towards action (dispositional dimension), and engagement in pro-environmental behaviours (active dimension). As illustrated in the diagram below, the relationships among these different dimensions is bidirectional. For example, engagement in specific pro-environmental behaviour can be reinforced or mitigated by certain attitudes, such as the sense of individual responsibility which, in turn, can encourage or discourage the extension of pro-environmental involvement to other behaviours. As regards the cognitive dimension, it is equally reasonable to think that specific information or knowledge is mutually dependent on both attitudes and general beliefs about how the world operates, since certain values or attitudes can make one more receptive to environmental information, while the acquisition of new information or knowledge can modify these attitudes and beliefs (Sánchez & Lafuente 2010:738). The relationship between these dimensions is mediated by a series of intermediate attitudinal, cognitive, knowledge-based, and action constructs (Sánchez & Lafuente 2010:736).



Using the four components of Sánchez and Lafuente's model as outlined, all 21 participants could accordingly be defined as environmentally conscious. Using purposive sampling, then, the "researcher decides what needs to be known" and approaches people willing to provide information by virtue of knowledge or experience (Tongco 2007:147,151). In order to find "knowledgeable and reliable informants most efficiently", the researcher must know something about the chosen participant beforehand (Tongco 2007:151).

As mentioned in Chapter 1, the Facebook group, *Zero Waste Journey in Southern Africa*, that was initially earmarked to reach participants did not yield the necessary results. While I managed to recruit four participants from this group, I reached the remaining 17 participants through my own network of acquaintances with the use of purposive sampling.[5] This included snowball sampling, a common purposive sampling technique (Tongco 2007:152), in which I asked a participant to suggest another participant they understood to self-identify as environmentally conscious. The participants included a combination of female and male, white, black, coloured, and Indian middle-class[6] South Africans between the ages of 23 and 42, that is, predominantly millennials, all based in large metropolitan cities.

A total of 12 interviews were conducted in English and nine in Afrikaans. Where I translated a participant's Afrikaans words, the original quote is inserted in a footnote.[7] I am aware that the number and ratio of participants' particular age, gender, race, socio-economic means, and location evidently influenced the data and these factors were considered.[8] That this sample can indeed be interpreted as problematic in certain regards, deserves attention. Determining an 'appropriate' sample size remains widely debated, especially because the intricacies of determining and assessing a qualitative sample size arise from diverse methodological, theoretical, epistemological, and ideological pluralisms associated with qualitative enquiry (Vasileiou *et al* 2018:2). Qualitative research experts argue that there is no straightforward answer

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[5] Regarding time and needed costs, purposive sampling is often deemed a more realistic option than randomisation (Tongco 2007:154).

[6] Using the South African Audience Research Foundation's (SAARF) Living Standard Measures (LSM) – a measurement tool that segments the consumer market into ten groups (one a scale of one to ten) primarily by looking at what household assets people have access to – all participants can be deemed as having an LSM score of six or higher. Whereas this study included only middle-class participants, I acknowledge that an in-depth exploration of the relation between environmental consciousness and different societal classes would offer a fruitful avenue for further research.

[7] Figure 6.2 in Chapter 6 shows where each interview took place and which language each interview was conducted in (which was not necessarily the participant's home language).

[8] Further research is necessary to establish how factors such as age, gender, race, and socio-economic means affect South Africans' environmental awareness. Some participants also touched on this point and these aspects are therefore discussed in Chapters 6 and 7.

to sampling, and that sample size is highly contingent (Baker & Edwards 2012:1, Vasileiou *et al* 2018:2). Broadly, sample size is predominantly dependent upon one's methodological and epistemological perspective (Baker & Edwards 2012:5).

I found little research on the sample size of qualitative interviews *conducted within a new materialist methodological framework*. Fox and Alldred (2017:164) simply note that the use of interviewing as a new materialist methodology must be "designed to provide 'rich descriptions' of a social event or events by interrogating accounts elicited from social actors". In a study including empirical data on how memory and remembering affect people's everyday food choices, Fox and Alldred (2019:26) used random sampling of 45 participants "stratified according to body weight and family income, based on BMI and Index of Multiple Deprivation scores, to provide 15 'low deprivation obese', 15 'high deprivation obese' and 15 'high deprivation normal body weight' respondents".

Sociologist Michael Feely (2019:2), who also used interviews in his New Materialist Analysis of sexuality within a community-based service for adults with intellectual disabilities, does not specify the number of interviewees and simply states that his primary method of data collection was "in-depth narrative interviews with a strategic sample of service providers – including frontline service providers, a clinical professional, and a service manager – and of service users that attended a variety of the service's day centres". Following sociologist Jennifer Mason (2002), the sampling strategy employed by Feely (2019:2) sought to include a "relevant range of perspectives without claiming to be directly representative or generalisable".

Polkinghorne (2005:139) suggests taking one step back and looking at the term 'sampling': "the selection of participants and documents". Although this term is liberally used in qualitative research, it must be done with care, because it carries the connotation that those chosen are a sample of a population and that the findings are therefore applicable to that population (Polkinghorne 2005:139).[9] This is not the case: instead of fulfilling representative requirements of statistical inference, participants are chosen because they contribute to the understanding of *specific* experiences (Polkinghorne 2005:139).

[9] Like 'data', the term 'sampling' was adopted from quantitative practices and is used with an altered meaning in qualitative practices (Polkinghorne 2005:139).

Purposive sampling is thus not concerned with how much data are available from how many sources so as to gain a clear understanding of a whole group, but rather whether the data are sufficiently rich to bring refinement and clarity to a specific topic (Polkinghorne 2005:140). I therefore acknowledge that conclusions drawn from data acquired through purposive sampling must remain limited to the population under study and must in no way engender general conclusions about a broader population (see Bernard 2002; Tongco 2007:154). I make no interpretations beyond the sampled group and do not claim the participants to be representative of South African society as a whole or the local or global population who self-identify as environmentally conscious in any way.

After contacting each potential participant via phone or email, I shared with each a consent letter to sign, made sure he/she was comfortable with a visit to their home (COVID-19 health and safety regulations added another layer to navigate), and agreed upon a date and time for our interview. Upon arrival, I followed social scientists' (such as McNamara 1999 and Turner 2010) recommendation and explained the interview's purpose, format and timeframe; addressed the terms of confidentiality; assured the participant that he/she may be in touch after our discussion and asked if he/she had any questions before commencing. To ensure participants' anonymity, I asked them to choose a pseudonym by which they were referred to in this study. All participants agreed to their interview being recorded. Although education scholar Aaron Kuntz (2019:48) would hold that this act reinforces interviews' "persisting logocentrism", I deem it a useful tool in recollecting the interview-scene afterwards. Every aspect of the interview process (including the largely accepted and familiar normative aspects as set out above) forms part of the new materialist research assemblage and allowed me to set the stage for the interview-act.

I conducted standardised, open-ended interviews with structured wording.[10] Participants were asked identical questions which elicited open-ended responses that allowed them to "contribute as much detailed information as they desire[d]" (Gall, Gall & Borg, quoted in Turner 2010:756). It furthermore allowed me, as researcher, to ask participants to elaborate further when this was deemed to be useful. During the interview, I also focused on the moments when a participant moved around the space to show me a specific object or shifted in their chair, when they paused to ponder or laugh, how and when they looked at the objects they spoke about, and so on.

[10] According to Turner (2010:756), standardised open-ended interviews are "likely the most popular form of interviewing utilised in research studies because of the nature of the open-ended questions, allowing the participants to fully express their viewpoints and experiences".

I therefore focused on language not as a superior medium but simply as *one* element of many in the interview assemblage that is always both material and semiotic (Barad 2007, Dolphijn & Van der Tuin 2012, Fox & Alldred 2017). This choice was inspired by the new materialisms' focus on assemblages, which undeniably displaces the privileged position of language in the twentieth century's dominant paradigms (Barad 2003:801, MacLure 2017:52, Kuntz 2019:47). Here it is also necessary to tease out the additional challenges that oral narratives pose. Conventionally, research often aims to avoid 'distracting' nonlinguistic occurrences since

> it is [assumed] that such traditional interviews are to be held in a familiar, comfortable setting, out of the way of any disruptions: noises, smells, sights are limited so that the individual voice might be heard and rendered as appropriate – and isolated – language (Kuntz 2019:48).[11]

By accepting and in some cases deliberately foregrounding "disruptions", I aimed to move from language as an isolated and objective account of an experience to a view that sees it simply as one aspect of the assemblage. This included refusing to theorise 'voice' as a stable 'thing', and shifting towards a conceptualisation of *voicing* as an embodied, sociomaterial, sensual and relational process (see Chadwick 2020:16). Although speech is constantly "forgetful of its own materiality" and easily moves away from matter towards ideas, concepts, and categories, it is formed from "noises, breath, grimaces and silences and shot through with pre-linguistic pulses of affect, while still being animated by something immaterial that somehow transforms it into a passage for meaning and ideas" (MacLure 2017:11,53). In a similar vein, sociologist Rachelle Chadwick (2020:2) argues that 'voice' is not a transparent, individual, or singular phenomenon: rather, it is a "slippery and paradoxical border concept". Voice is somehow both a matter of language and bodies, speech and silence, presence and absence. Precisely this ambiguity is the key to the "radical potentiality of voice" (Chadwick 2020:2). Again, the research assemblage embraces *all* such material and expressive manifestations (Kuntz 2019:48).

The semi-structured interview was designed to focus on, firstly, the participant's environmental consciousness; then, on the participant's relationship with sentimental objects; and, finally, on how the participant saw these two topics in relation to each other (or, how one component of an assemblage was plugged into another assemblage to see what affect this produces). Although set out in three parts, the interview's open-endedness gave participants the opportunity to introduce and discuss topics of their own choice, as well as allowing me the freedom to probe further.

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[11] Yet again, I acknowledge that this approach is useful and highly necessary in some cases, but maintain that, in other cases, foregrounding these variables can have interesting and unpredictable outcomes that can bring about novel understandings.

Each interview lasted between one and two hours, and all participants willingly shared their perspectives and spaces and let me photograph their memorabilia.
Along new materialist lines, I argue that the emphasis in current research is not on the individuals as such, but rather on the affective flows *between* humans, objects, spaces, words, ideas, and so on. Examining assemblages that these particular participants entangle with, granted me a distinct perspective. Precisely this focus on multi-material assemblages, rather than on 'autonomous' humans, underlines this study's new materialist methodology. In a sense, the new materialist interview assemblage becomes congruous with historian a description provided by Lyn Abrams (2010:54-55, my emphasis) of an interview in which there "can be no pretence at neutrality or objectivity", because "memory stories are manufactured in an interview environment *pulsating with influences*".

Finally, when it came to processing the interview data, I was conscious of the ways in which spoken words were presented in writing and visually (becoming, again, more components in the assemblage). In this, the transcription of interviews as "socialcultural practice" played a pertinent role (Skukauskaite 2012:7). Chadwick (2020:5) further notes that, "while we can never fill the gaps of what is (inevitably) lost as we turn sounds, speech and embodied research encounters into textual and transcribed forms, we can be attentive to these issues and acknowledge the critical role of transcription in our research interpretations". Reflection on this process makes visible the consequential relationships between transcribing choices, research purposes, and data representation, because transcribers (as further components of the assemblage) make theoretical, contextual, value-related, and practice-based decisions (Skukauskaite 2012:7,10). This process of (preparing) data (for) analysis can further be enriched by rethinking the role of audio recordings. In her research exploring women's birth stories, Chadwick (2020:5) found that treating original audio recordings alongside written transcripts as her 'data' (by engaging in repeated listenings to audio files) "transformed [her] relationship to voices and stories". As many theorists recommend, I transcribed the interviews myself, since the process of listening and relistening – and not just the final transcriptions – yielded valuable insights (Lapadat & Lindsay 1999:82).[12]

I then added the interview transcriptions to Atlas.ti, a computer-assisted qualitative data analysis software program, which proved useful around analysing the set of data further.[13] Through the

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[12] See for example Baker (1997), Roberts (1997), Bucholtz (2000), Lapadat and Lindsay (1999), Tilley (2003a, 2003b), Bird (2005), Vigouroux (2007), Ross (2010), Hammersley (2010), and Markle *et al* (2011).
[13] The instruments provided by other CAQDAS programs, for example Transana and NVIVO, could have been equally useful. I acquired a licensed version of Atlas.ti through the University of the Pretoria.

use of codes such as 'environmental consciousness', 'memory objects', 'nature', and 'transience', the tools provided by Atlas.ti allowed me to break down imbricating concepts and tropes present in various interviews into chunks of information (without losing sight of definite nuances), thus facilitating understanding, interpretation, and analysis. These analytical and technological processes influenced the research assemblage in that it sharpened my view on the connections between participants' responses and vitalised my capacity to communicate the research findings in a nuanced manner.

This discussion situated not only participants, but also the entire interview process in the research assemblage, thus calling attention to flows between humans and nonhumans and mediations and materialities within a particular social and physical environment. This makes this study, what Rigney (2017:475) calls, "truly ecological" and acknowledges that, as Grusin (2015:ix-x) points out, the human coevolved, coexists, and collaborates with the nonhuman. The subsequent section elaborates on another tool used in the data analysis process, namely New Materialist Analysis.

5.4.2 New Materialist Analysis

Fox and Alldred (2017), working predominantly in the field of sociology, developed a model for materialist social enquiry, namely New Materialist Analysis. To my knowledge, this method has been developed, reassessed, and applied since 2015 by the collaborative duo, see for example their articles, "New Materialist Social Inquiry: Designs, Methods and The Research-Assemblage" (2015a), "Inside the Research-Assemblage: New Materialism and the Micropolitics of Social Inquiry" (2015b), "The Materiality of Memory: Affects, Remembering and Food Decisions" (2019) and "Doing new materialist data analysis: a Spinozo-Deleuzian ethological toolkit" (2021). It can be said that developing a rigorous framework for the research assemblage is one of their core pursuits. To establish their methodology's framework in its initial phases, they reviewed 30 empirical (new materialist) studies focusing on how micropolitics were involved in a research process (Fox & Alldred 2015a:399).

As Dolphijn and Van der Tuin (2010:40,149) note, applying new materialist approaches to research radically extends Marxist materialist analysis beyond traditional concerns with structural and 'macro' level social phenomena, allowing it to address issues of how desires, feelings, and meanings contribute to social production, as pointed out by theorists such as DeLanda (2006:5).

This application of New Materialist Analysis to 'see' how it works is highly valuable for my own study, in which I also apply it.

To produce results as rich as those yielded by New Materialist Analysis, however, it is important to note that alternative tools could have been used instead of Fox and Alldred's New Materialist Analysis. Material semiotics is one such tool that I considered. Material semiotics is often associated with science and technology studies, actor-network theory, and the theoretical work of authors such as Law, Latour, and sociologist Michel Callon. Material semiotics also falls under broader new materialist approaches that aim to suspend such dichotomies as immaterial/material, subject/object, and active/passive (Beetz 2016:6). Similar to New Materialist Analysis, it allows researchers to "enact and depict the shape shifting implied in the interactions and interferences between different realities", because it "highlights that all materialities are effects of material conditions, relations, processes and practices and are therefore multiple, complex and irreducible to simply *tangible* matter" (Beetz 2016:4, Law 2019:1).

The most prominent sources on material semiotics are a chapter in book written by materialist scholar Johannes Beetz entitled *Materiality and Subject in Marxism, (Post-)Structuralism, and Material Semiotics* (2016) and Law's unpublished article, "Material Semiotics" (2019), which can only be found on his website. While Law (2019) provides a few practical pointers on the application of material semiotics (also with computer-inspired textboxes, or "Sandboxes", to test and experiment with ideas), Beetz (2016) is dedicated solely to mapping the theoretical underpinnings of material semiotics.

I was drawn to the idea of material semiotics, because the name seemed to make explicit Deleuze and Guattari's definition of the assemblage as consisting of *both* content (material) and expression (semiotics). Yet, as this study progressed, it became apparent that material semiotics as a tool does not necessarily account for the fact that Deleuze and Guattari (1987:66) maintain the application of content and expression in assemblages to be *variables* of a continuum (rather than as signified and signifier, as material semiotics reads it).[14] Although this method served as useful point of departure, I abandoned it in favour of New Materialist Analysis' more thorough investigation of the practicalities surrounding composing a research assemblage.

[14] In short, an assemblage's material-semiotic content is expressed as physical matter, organic matter, and linguistic matter that interact on a continuum (Deleuze & Guattari 1987:66-67).

Similarly, new materialist methods such as Marxist and (post)structuralist approaches, also discussed by Beetz (2016) in his book, and those referred to or used by some authors in *Deleuze and Research Methodologies* (Coleman & Ringrose 2013), could possibly have been equally useful for this study. But, again, none of these felt sufficiently comprehensive to address the specific methodological and practical challenges I was confronted with.

Returning to New Materialist Analysis, Fox and Alldred develop this tool based on six propositions, following theorists such as Deleuze and Guattari (1980, 1987), Coole and Frost (2010), and Braidotti (2013) and Clough (2004). The propositions are 1) focusing upon matter; 2) exploring what matter does through affect (not what it is); 3) not privileging human agency; 4) seeing thoughts, memories, desires, and emotions as having material effects; 5) seeing that material forces act locally; and, lastly, because they are sociologists, 6) expanding sociology's methods as part of this shift towards matter (Fox & Alldred 2017:23-27). To illustrate how they intend to use New Materialist Analysis, Fox and Alldred (2017:28) apply the principles as set out to a specific topic, namely the challenges deriving from the ageing profile of western industrialised countries.[15] In doing so, they explain that their aim is not to do a "full-blown analysis of ageing": they rather refer to some 'data' (descriptive statistics and an extract from an interview), and use these to establish their approach, while using the concepts of 'relation', 'assemblage', 'affect', and 'micropolitics' (Fox & Alldred 2017:28). Throughout their book, they develop this method by adding core aspects, including the elision of nature/culture and the materialist rethinking of social stratification.

A New Materialist Analysis begins by trawling the used data sources to make sense of how a wide range of materialities have been, as Deleuze and Guattari would say, assembled. This places the analytical focus firmly upon materiality and its relationality – what it does rather than what it is. Fox and Alldred (2017:28) then compose an assemblage "cloud" of "intra-acting" (Barad 1996:179) material relations which can be visually represented (in no particular order):

> materiality – materiality – materiality – materiality – materiality – materiality – materiality – materiality – materiality – …

[15] Throughout their book, Fox and Alldred (2017) make use of assemblage "clouds" (spanning a great variety of topics) to test and solidify their New Materialist Analysis. These cloud examples can be found on pages 30 (ageing assemblage), 41 (public health assemblage), 45 (child health assemblage), 62 (consumer assemblage), 70 (education assemblage), 85 (basic painting assemblage), 86-87 (comparison of two creativity assemblages), 91 (bank assemblage), 100 (kiss assemblage), 134-135 (ill/health assemblage), 139 (body with organs assemblage/ biomedicine assemblage), 140 (erectile dysfunction assemblage), 143 (blood pressure assemblage), 181-182 (anorexia assemblage), and 192 (sexualisation assemblage).

They acknowledge that "many other relevant relations that cannot be picked up from the few data presented here" exist, and "in practice we would use multiple interviews or observational data" to generate a more complete understanding of this specific assemblage cloud (see, for instance, Alldred & Fox 2019:30), but that this brief explanation suffices to illustrate the approach. The idea of the assemblage cloud instantly reminded me of Massumi's (1987:xi) description of Deleuze and Guattari's "nomad thought" that replaces the "closed equation of representation, x = x = not y (I = I = not you)" with an "open equation: … + y + z + a + … (+ arm + brick + window + …)". Through this 'open equation', a composed assemblage consisting of many materialities comes to the fore.

Fox and Alldred (2017:29) determine "how assembled relations affect or are affected by each other". This shifts attention away from the anthropocentric privileging of human agency to ascribing 'affective' capacity to all kinds of matter, including thoughts, memories, emotions, and desires. In determining how the assembled relations affect, and are affected, one can learn what an assemblage *does* and pay attention to the consequences of this: for example, how humans in different relations of power affect others physically and psychologically; the effects of the built environment on moods and behaviour; how governmental policy is implemented and in turn how this produces emotions; how memories affect daily preferences and decisions; how time and spaces are divided; how plans affect what projects are executed, and so on (Fox & Alldred 2017:29). Affect makes an assemblage do what it does and produces the capacities of all the assembled relations (Fox & Alldred 2017:30-31).

Finally, Fox and Alldred (2017:31) turn to the "absence of a 'structural' level in this materialist ontology" and the "local nature of power and resistance". They hold that for New Materialist Analysis to work, *only* these affects or forces must be seen as producing everything, from a human's social identity or a body's capacities through to the continuities and social regularities discerned in social life. Further, these affects must be seen as generating the kinds of social 'entities' conventionally called "structures, mechanisms, systems or discourses" (Fox & Alldred 2017:31). For example, a 'local' event (such as described by participants in interviews) assembles the 'micro' of subjective experience with the 'macro' of laws, policies, economies, and so forth. The 'macro' becomes *mediated* by local affects. If reproduced in other locations, such an affect may eventually manifest to outside observers as a broader social formation or 'structure'. Most importantly, New Materialist Analysis' focus of interest and concern "rests entirely upon the micropolitics of what goes on within assemblages" (Fox & Alldred 2017:31).

In summary, New Materialist Analysis invites researchers to explore any event (an observed activity, interaction or occurrence) though some general questions (Fox & Alldred 2017:35):

- What relations are assembled?
- What are the affects (and the affect economy) between these relations that assemble them and thereby produce the event?
- What are the capacities produced in the different relations by this affect economy – what can the human and nonhuman relations do?
- What are the micropolitics of the event assemblage – what does the event reveal about which relations in an assemblage are powerful?

What I appreciate most about this tool is that the authors thoroughly consider the *practicalities* of undertaking materialist research (Fox & Alldred 2017:28). It establishes a dynamic understanding of an event that draws micro and macro, natural and cultural, human and nonhuman into assemblages. This provides students and scholars alike the means to apply a materialist sensibility to just about any topic, firmly based upon a material understanding of the world. In Chapters 6 and 7 I will use this tool in the analysis of the interviews, and in Chapter 8 I will report on its prospects and obstacles for future researchers. I now turn to the third and final method under discussion here, namely data visualisation.

5.4.3 Data visualisations

Because of its increasing capacity to reach and lead "beyond itself", data are increasingly "taking strange forms and entering into unexpected assemblages with humans, who no longer merely read it or analyse it, but wear it, eat it, sculpt it, stitch it, walk it, breathe it, dance it" (MacLure 2017:52). Another 'strange' form data are taking is through being drawn, sketched, and painted using diverse mediums. Alongside analysing data in writing, I also visualise aspects of this study by drawing visualisations. As introduced early in the thesis, and as can be seen through the colourful visuals dotting its written content, visualisation can be a useful tool in the research assemblage assemblage toolkit. In delving deeper into its usefulness, I first clarify some diverse definitions and uses of visualisation.[16] I then discuss what visualisation can contribute to new materialist social enquiry. This includes exploring visualisation as an assemblage itself and as a

[16] In the context of this study, I take the terms visualisation, data visualisation, information visualisation, and data art to be very similar (although I acknowledge that distinction can indeed be drawn). My personal preference is to refer to the visuals that I produce as 'data visualisations'.

materiality within other assemblages that affect to a lesser or greater extent its other components, including humans.

Where 'visualisation' commonly refers to the construction of a mental picture, the common understanding of the term has become "a graphical representation of data or concepts" (Ware 2000:1). Digital culture theorist Lev Manovich (2010:2) defines it as the "mapping between discrete data and a visual representation". Visualisation is a process that reduces complexity and ambiguity into something graspable (Dávila 2016:69). For visualisation theorists Julie Steele and Noah Iliinsky (2010:xi), it is the "practice of presenting information for consumption as art". Thus, it could broadly refer to any type of information that is represented in a graphic instead of textual way (Vande Moere 2005:32).

The field of visualisation is difficult to delineate, because visualisation is an ambiguous term that may refer to a "research discipline, to a technology, to a specific technique, or to the visual result" (Van Wijk 2005:79). Practitioners from various fields spanning the natural sciences, mathematics, and statistics, engineering, architecture, marketing, design and many more have presented data visually for different purposes and in diverse ways.[17] Some theorists argue that data visualisation emerged as a field in the late twentieth century, its practice rooted in the use of computers with computer scientists and software engineers as its common practitioners (Van Wijk 2005).

With the development of new tools and technologies, however, data visualisation practice is increasingly accessible to those not originally trained in the computer science fields (Botha 2011:18). Currently, it is predominantly the rise of social statistics that is fuelling the development, popularisation, accessibility, and usability of data visualisation practice. Consequently, emerging visualisation sub-fields termed 'casual', 'artistic', or 'information aesthetic' aim to create more pleasurable representations that encourage "insight discovery in an engaging and educational experience" for the layperson (Vande Moere 2008:470).

This move away from the specialised scientific community towards a mass audience is where information design and visualisation start to overlap, and where it becomes applicable to my own

[17] In her doctoral thesis, design scholar Anneli Botha (2011:19) navigates the often-confusing distinctions between terms such as 'data visualisation', 'scientific visualisation', 'information architecture', 'information visualisation', 'information graphics', and 'information design', which are used interchangeably.

study (Botha 2011:18).[18] In this context, data visualisation can be taken as forming part of (but not limited to) information design which, in turn, is broadly affiliated to the field of visual culture studies. My use of visualisations in this thesis responds to theorists such as visual sociologist Luc Pauwels (2012) and qualitative research specialists Mirka Koro-Ljungberg and Jasmine Ulmer (2015:217), who call for an extension of social-science (and humanities) methodologies. Without providing definite methodological procedures, techniques, steps, or 'how-tos' of visual method, these theorists challenge scholars interested in visual materials to create theoretical opportunities and new analytical openings, or deterritorialisations, with visuals. They advocate for "stimulated and enhanced aesthetic sensitivity (of the researchers and users of research) to create richer forms of scholarly communication and (critical) forms of knowledge" (Koro-Ljungberg & Ulmer 2015:217).

Using data as the most basic building block in producing a visualisation, the visualiser "shapes" its meaning through organisation and converts it into information (Shedroff 2001:28). Data visualisers have the opportunity to dissect and present information in an accessible, expressive and captivating manner, while having an effective emotional impact (Brittz 2018:184). Some visualisations seem to "have a profound effect on society, changing the course of government policy, scientific research, funding and public opinion" (Hall 2008:123). According to visual culture studies theorist Karli Brittz (2018:188), the goal of visualisation is not to generate new knowledge but to inform a greater sense of the self and to promote the understanding of an issue and eliciting responses to the solving of this issue in society. Yet, theorists such as media theorist Helen Kennedy and sociologist Rosemary Lucy Hill (2014:774) argue that visualisations offer the opportunity to "make visible and operable that which was previously invisible" or, as cybernetics design theorist Orit Halpern (2014:21) notes, produce "new objects and spaces for action and speculation". It is evident that, similar to that which visual culture studies aims to do, data visualisers can make the previously invisible visible to society (Lauwrens 2005:70, Mirzoeff 2002:191, Brittz 2018:200).[19]

Having established this context, it is necessary to explore the implications and uses of visualisation as a tool (used by humans) for new materialist social enquiry. An emerging body of

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[18] Given the relatively recent incorporation of the design field into academia, visualisation has not received sustained critical enquiry (Dávila 2016:3). Exceptions come mainly from science and technology studies (Daston & Galison 1992; Dumit & Burri 2008; Haraway 1997; Jones 1998; Latour 1986; Lynch & Woolgar 1990), geography (Crampton 2001; Pickles 2004), and graphic design (Manovich 2002; Sack 2007; Drucker 2014; Hall 2011; Dávila 2016).

[19] This has been the case since at least the golden age of cartography (Dávila 2016:69). A seminal example of data visualisation is the *Carte Figurative* of engineer Charles Joseph Minard (1781-1870) (Botha 2011:16).

scholarship attempts to link visual design environments with a central theme of the new materialisms, namely the affective dimensions of visual design (see Hayles 2014; Dávila 2016; Kidd & Smitheram 2014). Thinking about the affective powers of visuals, Mitchell's (1996) influential essay entitled "What Do Pictures *Really* Want?" comes to mind. To save time, he says, he begins with the assumption that humans "are capable of suspending our disbelief in the very premises of th[is] question", because he is aware that this is a "bizarre, perhaps even objectionable question" (Mitchell 1996:71). In a sense, it involves a "subjectivising of images, a dubious personification of inanimate objects" that "flirts with a regressive, superstitious attitude toward images" (Mitchell 1996:71).

Almost 30 years since Mitchell posed this "bizarre" question, many new materialists would claim that this is, in fact, an *essential* question when it comes to the human/nonhuman discourse. Indeed, some new materialist theorists have taken Mitchell's intriguing question as a point of departure to explore the affective power of the visual (see for example Thomson & Davies 2019). Seen in this light, I take Mitchell's (1996:72) question as a kind of "thought experiment" to explore what the new materialisms might gain from visualisations.[20]

Firstly, new materialist methodologies can "make new relationships appear" through concentrating on visualisations (Kennedy & Hill 2017:774). Design practices and visualisations may help theorists explore complex social, political, environmental, and technological assemblages in order to make better decisions regarding critical issues. Designer and design scholar Patricio Dávila (2016:3) explains that a major impetus for his work on visualisation is the "need to develop a framework that helps designers redirect their practice to better address the major crises facing contemporary society, namely environmental degradation and growing social and economic disparity". According to him, (visual) designers can provide "ways of rendering complex phenomena visible, readable, and possibly intelligible" (Dávila 2016:3).[21]

This call resonates with the work of architectural design scholars Akari Kidd and Jan Smitheram. In their article, "Designing for affect through affective matter" (2014:82), they explore "how we can design affective environments rather than use affect as a tool for interpretation, analysis or

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[20] Mitchell (1996:74) concludes that "it may be time to […] scale down the rhetoric of the 'power of images'". He shifts the question from what pictures do to what they want (from power to desire), inviting them to speak. Critics "may want pictures to be stronger than they actually are in order to give ourselves a sense of power in opposing, exposing, or praising them" (Mitchell 1996:74).

[21] This view was inspired by a call by Latour (2008) in his address to the Design History Society (Dávila 2016:3). In it, Latour (2008:13) frames design as a practice of repair rather than revolution.

description of a design project". Kidd and Smitheram (2014:82, emphasis in original) are less interested in using affect to analyse design or the environment and more interested in "*design[ing]* for affect by looking for that which *moves us* in materialised and localisable conditions". Their argument is based on the idea that affect is a force implicit in materials. This ties in with new materialists' attempts to rethink materiality as "an excess, force, vitality, relationality, or difference" that demands it be understood as "active, self-creative, productive, unpredictable" (Coole & Frost 2010:9). Visualisations can simultaneously be used to observe people, things, and events in space, and to plan and coordinate them.

To my knowledge, the only theorist who has dealt with visualisation *as an assemblage* is Dávila, who is briefly mentioned above. In his doctoral thesis entitled "Visualisation as Assemblage: How Modesty, Ethics, and Attachment Inform a Critical Design Practice", Dávila (2016:85) poses visualisation as an assemblage in itself (the data and tools used, page layouts, omission and inclusion of certain aspects, and so on), and one component of another assemblage that affects other components (such as viewers or users) in subtle, yet powerful ways. When investigating visualisations as and within assemblages, design can be seen as a discipline and practice "particularly suited to working between content and expression as well as between material and symbolic interactions, and therefore finding passages of influence between these relationships" (Dávila 2016:4). This view is clearly inspired by the Deleuzoguattarian assemblage. For a 'data visualiser', firstly, working materially is a basic empirical process of discovering the interactions within and between media and secondly, working conceptually is a basic thinking process of relating concepts. Akin to Kennedy and Hill's (2014:774) perspective then, Dávila (2016:4) argues that this design process can be seen as a creative assemblage "in which something is devised".[22]

Visualisation is therefore an assemblage that works through artefacts, processes, and affect, and is involved in "creating the style of our attachment, the kind of equipment we use, and the conditions of our artificiality" (Dávila 2016:96). I return to Kidd and Smitheram (2014:83): as architecture lecturers, they sought to utilise the concept of affect in students' design studios by emphasising the design processes and the intuitions that drive it, rather than final outcomes. As such, students' works usefully provided insight into how affect can be *designed for* (Kidd &

[22] Concerning the micro and the macro aspects, both present in assemblages, and visualisation can further be seen as a media practice that spans both these levels, since it organises and affects both "everyday knowledges" (like cell phone applications tracking the user's number of steps) and "specialised fields of knowledge" (like the graphs and figures drawn to present national COVID-19 infections) (Dávila 2016:60).

Smitheram 2014:83). For example, students engaged with a process the authors termed "extracting materialities" that entails "seeking out instances of immateriality capable of being experienced and explored corporeally" (Kidd & Smitheram 2014:83,85).

In other words, students identified and explored a particular affective materiality they associate with one of four prescribed sites in Wellington, New Zealand (Kidd & Smitheram 2014:83). In the process, they used different mediums shifting from, for example, drawing or painting on paper with graphite or ink, to digital rendering with computer software, to modelling with materials such as fabric and steel with a view to recording their selected affective materiality (Kidd & Smitheram 2014:83). The first student project they refer to in their article explores decay as affective material (which, as Hawkins [2006:2] notes, offers a significant affective valence because of the strong reactions people have towards it). The second student, as can be seen in Figure 5.5, focuses on wind's atmospheric turbulence which offers an active, although intangible, material to use in design. Common to both projects is a quest to design for and with affects capable of moving humans (Kidd & Smitheram 2014:85).

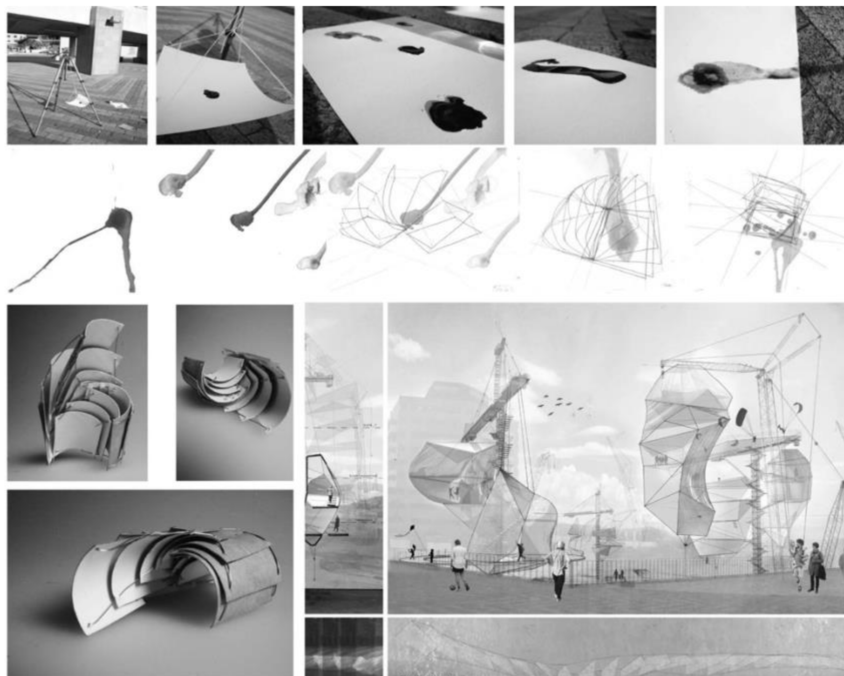
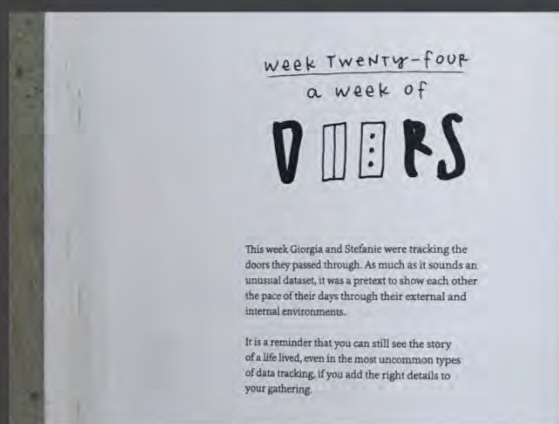


Figure 5.5 |
wind as affective materiality
Kelly Lambert, Various stages of wind as affective materiality in the design of an architecture project, 2014.

First row: The images show how wind movement is caught by an instrument constructed by the student out of a tripod, strings, ink, and paper (*far left*). The wind movement is documented on the paper by dropping ink on it and allowing the ink to disperse according to the wind force.
Second row: The dispersion of the ink through the wind on the site is overlaid with the student's drawings, which generate potential architectural forms.
Third row: Built model of wind movement (*left*) and illustration of speculative 'wind market' that shows how the structure's shape changes when the wind blows (*right*).
(Kidd & Smitheran 2014:86,89).

This process of extracting affect in a space, similar to that which visualising data entails, draws humans and nonhumans together into assemblages that highlight their entanglement. Visualisation becomes another "way of representing our attachments and a form of attachment itself" (Dávila 2016:60). Within the context of this study, which aims to foreground human/nonhuman assemblages, in Multimedia Drawer 5.4 I briefly examine the affective powers of the *Dear Data* (2016) postcard project, a so-called 'personal documentary' by graphic designers Giorgia Lupi and Stefani Posavec. This is an ideal example of where micropolitical data, humans, objects, drawing tools, and other components are drawn together through visualisation.

Multimedia Drawer 5.4: Affectivity of the *Dear Data* postcard project



Giorgia Lupi & Stefanie Posavec,
"Dear Data Week 24: A Week Of Doors",
2016
Data postcards with mixed media
Photographs of the book by the author.

For a year, visual collaborators Lupi and Posavec collected personal data about their lives, made hand-drawn postcards to communicate this data, and sent it to each other on a weekly basis. Lupi and Posavec (2016:1) describe their project "as though we were keeping a shared diary within a weekly rhythm, where we used this tool – this material [data] – to compose a portrait of the other person through these weekly fragments of her nature". The collection became a means for transmitting personal data through a combination of observations, planning, symbols, and keys and, finally, delicately crafted hand-drawn data visualisation (Brittz 2019:194).

Drawer 5.4 cont. ⟶

By suspending a strictly instrumental, technical, or 'efficient' approach to visualising data, while adding "more meaningful and thoughtful approaches", the humane, often unacknowledged aspects of the data, were represented (Brittz 2018:196). In other words, the traveling postcards on which personal data was visually translated promoted a sense of being human, and "it is this aspect that captivates its audience" (Brittz 2018:195). Lupi and Posavec's intimate approach to data, rendered by focusing on its imperfections, has turned the notion of data and conversing about personal data into a more accessible and relatable thought (Brittz 2019:196).

Paging through their beautifully crafted book, which gives a glimpse into the back-end of their visualisation processes, I am also struck by the intimate relations the designers developed with not only their data, but also time (they highlight that drawing postcards by hand takes time – often more than they expected), other humans, objects, and emotions (mapping their relation with aspects of the world forces them to slow down, see it or engage with it differently) and the physicality of the postcards. (Incidentally, Posavec is frustrated when a delicately crafted ink visualisation smudges and Lupi finds it humorous that all her postcards arrive wrinkled or wet in Posavec's postbox).

In the week photographed here, for example, the designers mapped every door they walked through (previous page, left). Lupi's meticulously crafted final (right) contains details such as whether the door was heavy, if someone had opened it for her, if it was automatic, if she locked it, and so on (bottom). The above photograph, also included in the book, is a quirky reimagined visualisation of how much time it took Lupi to create this postcard - six hours on a Saturday during which she started over twice, cancelled a lunch date, swore multiple times, and experienced jealousy of "regular people who enjoy their weekend" (Lupi & Posavec 2016:127). From a new materialist perspective, these emotional and physical responses underline the affective relations that the designers step into in the act of collecting, organising, and presenting personal data in this way.

A word has to be said on humans as the "orchestrators of data's adventures" (MacLure 2017:11). By entering into rhizomatic assemblages with data, data visualisers concentrate on representing – from their perspective – beauty and the (aesthetic) experience which in turn has affective potentials (Crawford in Off Book 2011). Here it is crucial to consider Mitchell's (1996:82) warning not to confuse "the desire of the picture with the desires of the artist, the beholder, or even the figures in the picture":

> What pictures want is not the same as the message they communicate or the effect they produce; it's not even the same as what they say they want. Like people, pictures don't know what they want; they have to be helped to recollect it through a dialogue with others.

Humans use data as a "continuous mediation through which we live, navigate, and operate in our environment" (Dávila 2016:60). Precisely because data are the result of the *human* measurement, they "carry bias and error and they carry stories and tragedy and beauty and all these things, they are a record of us in some ways" (Thorp in Off Book 2011). Being entangled in assemblages with visualisations affect humans and cause them to navigate, use, discern, think, and participate in the world in specific ways (Dávila 2016:85). Acknowledging the human's role in the assemblage makes it easier to notice the ways in which visualisation functions as a "process of entanglement" that may increase or decrease "our ability to understand and act" (Dávila 2016:89).

Drawing on the affective power of projects such as *Dear Data* or those of the architecture students briefly referred to earlier, new materialist approaches to data, also in the form of visualisation, could similarly reveal the imperfections and inherently human qualities in the collecting, processing, analysing, and displaying of data by using data bias and error as an invitation instead of an obstacle (Brittz 2018:201). In a similar vein, through my own visualisation, I not only think through and represent academic research technologically, but also aim to create affective responses in viewers who engage with this thesis. This, finally, loops back into the call made by Law (2004:10) for slow methods that allow researchers to entangle as "happily, creatively and generously as possible" with the events they are studying.

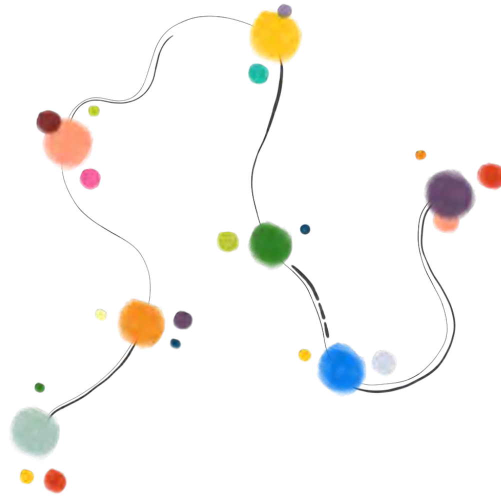
5.5 CONCLUSION

In this chapter, I situated my study as a research assemblage comprising human and nonhuman materialities including (but never limited to) myself, research participants, the studied events, data, the use of language, the presence of memory and other objects, habits, methods, tools, and

the process of conducting research (Fox & Alldred 2017:173). This included a breakdown of the research assemblage as a hybrid consisting of processes or events in the world that are studied (the event assemblage) and the tools and methods used to study them (the study assemblage).

I further teased out three of my research assemblage's components used at various stages in the research process, namely interviews, Fox and Alldred's (2017) New Material Analysis, and data visualisations. As tools for exploring assemblages, this combination of vast materialities have potential (despite certain hindrances and blind spots) that enable new materialist enquiry. In summary, I became aware that in approaching this research project as a research assemblage I faced certain challenges, constraints, advantages, pleasures, and responsibilities posed to me as researcher in the twenty-first century.

In Chapter 5 I built on the discussion of the theoretical challenges and potentials that a new materialist approach to qualitative data enquiry holds introduced in Chapter 4. Read together, these two chapters lay the groundwork for the treatment of assemblages. I now make my way to the practical implications of new materialist research processes by introducing this study's research participants. I treat the participant interviews, its components, and affective flows predominantly through New Material Analysis and the production of visualisations as discussed in the current chapter. Through analysing, highlighting, and discarding certain aspects of the interviews, I continue to reflect on core issues and potentials associated with new materialist approaches and the future of research in the humanities and social sciences.



chapter 6

territorialised assemblages

The ordinary is a circuit that's always tuned in to some little something somewhere.
- Kathleen Stewart (2007:12)

The details matter. The details link actual beings to actual response-abilities.
- Donna Haraway (2016:29)

Figure 6.1 | key concept visualisation

CHAPTER 6: TERRITORIALISED ASSEMBLAGES

6.1 INTRODUCTION

On a rainy Pretoria day early in 2019 I arrived at Susanna's[1] apartment and was invited inside with strong coffee served in a patterned cup. What followed that afternoon was a fruitful discussion that marked the first of 21 interviews I conducted for the current study. In this chapter, I introduce the data collected through these in-depth qualitative interviews with South Africans who self-identified as environmentally conscious, as summarised in Figure 6.1 on the previous page.

By analysing the interviews as seen through a new materialist lens, I build on the theoretical underpinnings of a new materialist approach to qualitative data, as discussed in the previous two chapters. Following Fox and Alldred's (2017) proposal, I situated my study as a rhizomatic research assemblage, comprising of humans and nonhumans, including myself as researcher, the participants, the studied events, the data, the methods used, and contexts. Without renouncing my role and responsibility as a human and a researcher, I discuss the new materialisms' theoretical critique of anthropocentrism, 'objective' data, and logocentrism.

Here, I turn to the practical implications of new materialist data enquiry by introducing this study's research participants (Figure 6.2),[2] predominantly through the use of visualisations and New Materialist Analysis. Conducting the New Materialist Analyses of selected event assemblages, I draw on three recent articles that use the new materialisms as main methodological frame, namely Hamilakis' "Sensorial Assemblages: Affect, Memory and Temporality in Assemblage Thinking" (2017), Fox and Alldred's "The Materiality of Memory: Affects, Remembering and Food Decisions" (2019) and Feely's "Assemblage Analysis: An Experimental New-Materialist Method for Analysing Narrative Data" (2019). All contribute to a lesser or greater extent to this study of affect, memory, habits, personal human narratives, and environmental consciousness.

[1] To ensure their anonymity, I refer to all participants by a self-selected pseudonym.
[2] Wording in Figures are the participants' own, except where stated.

Figure 6.2 | **meet the research participants**

* Wording reconstructed by the author as gleaned from narratives shared in the interviews.

SUSANNA

23, female
PTA
27 Mar '19
15:00 - 16:20
Afrikaans

Hi, I'm Susanna. I live in a small, cosy apartment filled with sentimental items. Some are more functional than others, but that does not make me love them more or less. I love objects with a story, especially those that remind me of my parents and my grandparents. I don't think you can every have too many sentimental possessions. I strive to live a zero-waste life, try to avoid excessive packaging where possible, make some of my own products and enjoy the feeling of togetherness in this community. I also love that my mom makes many of my clothes, now I know it's good quality and it has more sentimental value.

NICHOLAS

32, male
PTA
29 Mar '19
10:00 - 11:20
Afrikaans

Hi, I'm Nicholas. I live in a neighbourhood where I see many people actively taking part in community projects, such as cleaning up our local park. It's on my to-do list to join them. Although I find recycling a bit tedious, I make these sacrifices and they become habit. I try to live more sustainably, not necessarily for future generations, but for living a healthy life here and now. I believe I'm a sentimental person, although it now comes in a different form than before: when I was young I had massive amounts of 'goedjies' [little things] that evoked nostalgia in me. Now a beautiful song has the ability to move me in the same way. I enjoy being able to move more freely without the burden of things.

MARY

32, female
PTA
3 Apr '19
15:00 - 16:00
Afrikaans

Hi, I'm Mary. My husband and I, with our 18-month-old boy, are on a journey of living more environmentally conscious by systematically eliminating toxins and excess waste from our home. Having experimented with cloth nappies since my son's birth, I now run a tiny business where I make and sell these. I also make many of my household products myself. I enjoy living this lifestyle because it fits in with my values as a human being. I don't think I'm overly sentimental, but I have a few beautiful sentimental items that I display and use in my home and everyday life.

JACK

25, male,
JHB
18 Apr '19
17:00 - 18:00
Afrikaans

Hi, I'm Jack. I live in an apartment where I am lucky to enjoy the benefits of not only formal recycling organised by the government, but also a compost heap (which I enjoy very much) orchestrated by my landlords. I love how small the contents of my dustbin have become since becoming more aware of waste. I have a few sentimental items that double as functional items. I value and use these, like jackets that once belonged to my father or a hectically cool speaker to play my favourite tunes, almost daily. I love that these items are both sentimental and functional, because it means that I don't have to, or want to, buy new ones.

LOLO

37, female,
JHB
19 Apr '19
9:00 - 10:30
English

Hi, I'm Lolo. My husband and I had the opportunity to install solar power for electricity and water heating (convenient, also when Eskom decides to drop us!) in the house where we currently live. Through my work in a product stewardship programme I have become very aware of taking into account a product's entire life cycle: where did it come from, how was it sourced, who did it, and how did it get here? I try to send as little waste to landfill as possible. I have a few sentimental items in my life, mostly objects that previously belonged to my grandmother and sister, both people who were very close to my heart before they passed away. I am in the middle of a clean-up session and am surprised that I have been able to let go of some items I thought I was sentimental about. Especially also because I know that someone else can benefit from them.

Figure 6.2 cont. ⟶

SAMMY

33, female
Hout Bay
26 Apr '19
15:00 - 16:00
English

Hi, I'm Sammy. I live in a tiny cottage apartment with my partner who I met while living in Korea a few years ago. Living in this tiny space, with my feet on the ground, is all I want in life. We follow a plant-based whole food diet and give our food scraps to a lovely woman who lives close by, who turns it into compost. I also run a small business where I sell healthy, tasty vegan snacks to local coffee shops in my area. In 2017, I lost 17 kg and haven't looked back since. With shedding weight, I have also shed the need to surround myself with stuff. I still think that I'm a very sentimental person, but I now find sentiment in experiences, rather than things. I only have a few sentimental items left, like two special rings that I always wear.

ALTA

33, female,
CT
27 Apr '19
9:00 - 10:00
Afrikaans

Hi, I'm Alta. I live in an apartment with a beautiful view over Cape Town and its harbour. I work in the field of African feminism and decoloniality, but sometimes catch myself falling back on dichotomous ideas surrounding humans and nature. I currently enjoy reading up on wellness, but wonder how this ties in with the whole economic system of self-betterment? Anycase, I don't consider myself a sentimental person. What does that even mean? I do have a few things, though, that I feel that I can't chuck away, like a handbag that's not particularly beautiful, or my mother's wedding ring. I might be sentimental about a quirky quilt my favourite grandmother made, which makes me happy.

RIVER

34, female
CT
27 Apr '19
12:00 - 13:35
Afrikaans

Hi, I'm River. I live in a tiny flat where recycling is difficult. I do split my materials for waste pickers, although I'm not sure I, as an individual, am actually making a difference. I currently study at the Sustainability Institute outside Stellenbosch and am learning so much about people and the planet, what experiences I've had! I want to go into policy making, because imposing laws on people is the only way in which you will be able to fight environmental degradation and social injustice. I have an extremely neutral relationship with my memorabilia, like a little box that belonged to my grandmother, or some letters friends wrote to me in primary school. I find that I am probably more inclined to be sentimental about goods that are produced locally.

FRANCES

38, female
CT
28 Apr '19
10:00 - 11:30
English

Hi, I'm Frances and I live in an apartment with my husband and our cat. I have been aware of environmentally conscious living for around 4 years now, and actively try to reduce my waste. That's why I also take my own containers to shops like Nude Foods in Cape Town where I can refill them to avoid unnecessary packaging. I enjoy taking the bus to work, where I have inspired others to also start a similar journey. I find myself to be hugely sentimental, and think it's because my parents were also that way. I have more than 500 pairs of earrings from many different places, most of them gifts from friends or family. I enjoy my sentimental objects, because they remind me of the things I treasure most in life.

HELLEN

39, female
Centurion
1 May '19
10:00 - 11:00
Afrikaans

Hi, I'm Hellen. I'm a mother of two and together with my husband we live in Centurion. I love spending time in my garden, where I grow a bit of everything: flowers, plants, herbs and vegetables. I make many of my own cosmetics, like perfume or face cream and delicious foods, like pickled olives from our olive tree. I enjoy these processes a lot and have become a lot more in touch with nature over the last three years. I don't think I'm overly sentimental or emotionally attached to too many objects, but there are some that I value, like artworks by my aunt or cousin, or a few items from when my kids were younger. I also try to find a balance between valuing something and being ready to let it go.

Figure 6.2 cont. ⟶

HARRY

Hi, I'm Harry. I live in a beautiful old house in an old suburb in Pretoria with my wife and four-year old son. I am a constellations instructor and love helping people in this way. Through my job, I have become a lot more aware of the interconnection between things on our planet. My wife runs a community garden, and I would enjoy seeing my son grow up with a love for the outdoors and gardening. Honestly, I have a bit of a negative connotation to the term 'sentimentality', and I think this is largely driven by a disease I have called muscular dystrophy. Everything in life leads to entropy and I think we are much happier if we embrace decay and change, which is inevitable.

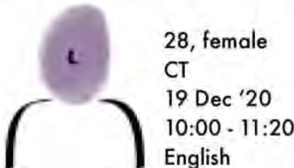
HIBISCUS

Hi, I'm Hibiscus. I have many homes around Pretoria, including my sister's house, my mother's house and my job space. Along with two other founders, I run a community centre for artists who work in various media: from paint, to cloth, to words. I love hearing or reading about people's stories. I think this is actually the thing that I'm most sentimental about: narratives, not actual objects. I have been environmentally conscious for most of my life as I was raised by family members, especially my grandmother, who were always very aware of their surroundings, upcycling and not wasting anything. In my daily life, I think I'm around 80% environmentally conscious. The remaining 20% has to do with things that I can't change right now but would like to work on, like recycling our grey water consumption and installing solar power.

CYNTHIA

Hi, I'm Cynthia. I recently moved to Joburg, but spend most of my weekends with my mother and sister in Centurion. The commute there, by car or sometimes by Gautrain, is probably my biggest environmental impact. I've been a pescetarian now for eight years and enjoy my diet. I'm a very sentimental person. I mean, how can you not be sentimental when it's so central to being human? I work at an art foundation and also practice as an artist. I often upcycle used materials, like blankets and plastic bags, in my work. The current artistic phase I'm in deals predominantly with my memories of my matriarchal family lineage. I love communicating my feelings and thoughts in this way.

GABO



Hi, I'm Gabo. I recently completed my PhD in oceonography. Although it wasn't my plan initially, I love being a physical oceanographer now because I learnt so much over the last couple of years: the ocean's health truly is crucial for all life on our planet. Just because we're on the southern tip of Africa doesn't mean what's happening up there in the Atlantic or in the Pacific isn't affecting us. It's everyone everywhere's responsibility to take care of our oceans. I share an apartment in Cape Town with a roommate, but really enjoy going home to my village in Limpopo. I love this place because I associate it with my gran, who passed away earlier this year. I think I'm sentimental, but I'm really not attached to any objects. I store all my memories in my brain and I can access it whenever I want, by simply thinking about that time in the past.

MO

Hi, I'm Mo. I live in an apartment in Midrand that is styled and curated according to my own aesthetic. I love politics, arts, history and culture and all these aspects you'll see on the walls and in the textures of my home. I'm going through a serious indoor plant phase, which I love! I've been a vegetarian for several years now, and, honestly, it saves me lots of money that I can now spend on buying second-hand mid-century furniture pieces. I moved here from Joburg because I wanted to be closer to nature and out of the city for a bit. I love quirky objects with stories and decorate my house with them so that people can also enjoy my space. I'm extremely sentimental about my stuff, yoh! I hate losing, breaking or having to part with something.

Figure 6.2 cont. ⟶

RAINMAN

29, male
PTA
23 Jan '21
10:00 - 11:00
English

Hi, I'm Rainman. I share a house with five friends. Because I'm renting, I can't change too much around here, but I did start composting in the backyard. The guys seem to be more on board with this idea than my previous request of stuffing ecobricks! I find spending time maintaining the compost heap therapeutic, and I know it's good for me. I try to live a balanced lifestyle inspired by the yogic teachings. Especially after my mom passed away, I've had to find ways to look for the meaning of life. Why are we here if everything just ends? As part of this outlook, I try to practice non-attachment to objects. But I still have some objects that are valuable to me, like those left to me by my mom and those I more recently got on a trip in India.

JASMIN

26, female
PTA
30 Jan '21
10:00 - 11:15
English

Hi, I'm Jasmin. I live alone in a flat in Pretoria, but spend a lot of time at my parents' small holding in KwaZulu-Natal. In the city it's more difficult for me to practice my environmental consciousness, especially because much of the food I eat comes packaged in plastic. I have, however, been mostly vegetarian for some time now. In KZN it's much easier, because I've convinced my parents to grow their own organic vegetables without pesticides and to slaughter their own animals in line with Halaal principles. I'm a super sentimental person, I've always been this way. I have so many soft toys that have been gifted to me over time. Some are here, most back at home.

BENJAMIN

28, male
JHB
22 Feb '21
15:30 - 16:30
English

Hi, I'm Benjamin. Because I travel a lot for my work and would not want to expose my loved ones to COVID-19, I'm currently staying in Airbnb's, but I actually live with my uncle in an apartment in Johannesburg. We have a whole recycling system in place in our pantry: everything gets rinsed, sorted or stuffed into an ecobrick before we send it to the right organisations where it will be used for good. It's been quite a journey, I must say. I also run an eco-business that sells ethical clothing. It's still small, but it's growing. I would say I'm quite sentimental, especially about photographs.

LILLY

42, female
Klapmuts
6 Mar '21
15:00 - 16:45
Afrikaans

Hi, I'm Lilly. Since I got married 17 years ago, we've moved over 40 times! Since 2016 I'm back in the Western Cape and live with my husband and two daughters in Klapmuts, from where I also run my business: *Lilly Loompa* (our third daughter, so to speak!) originally started as a jewellery business, but has organically grown into a hip upcycling company that makes household products from waste materials, especially wine bottles from the region and cut off wood. More than once I've lost everything in my life, so over time I've taught myself not to be too sentimental. A lot of friends have helped me along the way, and these memories I cherish.

EARL

28, male
CT
7 Mar '21
10:30 - 12:15
Afrikaans

Hi, I'm Earl. I live in an apartment in Cape Town and although I have a car, I prefer to take public transport or walk where possible. I love to spend time with friends, especially around a braai, but am also increasingly looking for alternatives ways to have a good time without having a detrimental effect on the environment. We should have fun, whilst being responsible. I'd say I'm sentimental about certain things, but I'm definitely not on my mother's level, she's an absolute hoarder! I never wanna be like that. Because I'm a first generation graduate, my degrees are probably my most sentimental items. My degrees and my *Afrikaanse Woordelys en Spelreëls* (AWS) [*Afrikaans List of Words and Spelling Rules*]. You can borrow it, but you better bring it back!

CHRIS

25, male
CT
7 Mar '21
13:30 - 14:45
English

Hi, I'm Chris. I live with my mother in an apartment in Cape Town. I grew up in Komani in the Eastern Cape - dividing my time between my gran and cousins in the township and with my mother in the suburbs. Since then, I have lived and studied in both Cape Town and Pretoria. I'm the first person in my family to graduate and I am very proud that I am paving the way for my children one day. Because I see the effects of mismanagement in municipalities, like the one where I grew up, I would like to make a positive contribution towards social and environmental justice in the work that I am involved in. These things take time, but we can make a difference. I'd love to look back one day and see the change that I've made.

Throughout this chapter I engage closely with selected assemblages that unfolded during this study's interview process. This is done by discussing, separately, 1) participants' engagement with and understanding of environmental consciousness and 2) their relationships with their memory objects. This chapter centres on the territoriality of assemblages, which can be read alongside Chapter 7 to follow, where I will focus on deterritorialisations that occur when additional materialities are plugged into an assemblage. In the first section, I discuss the relations between, on the one hand, pleasure in environmentally conscious actions and, on the other, frequently mentioned platforms that inform participants' understanding of environmental matters, and participants' engagements with consumption and 'waste'. This leads to a New Materialist Analysis of prominent practices, beliefs, and feelings that participants connoted to 'environmentally conscious living'.

In the subsequent section, when I turn to participants' memory objects, I consider, firstly, how participants understand the term 'sentimental person' and how each describes him-/herself in this regard. Here, too, I conduct New Materialist Analyses of assemblages between humans and selected memory objects. These analyses point out the dominant themes associated with memory objects, including the relation between sentimental objects and family lineage, transience and death, tourism, life experiences, and personal timelines. I conclude with a brief summary of the chapter's content.

6.2 PARTICIPANTS AND ENVIRONMENTAL CONSCIOUSNESS

During the 21 individual interviews conducted early in 2019, late in 2020 and again early in 2021 in and around Pretoria, Johannesburg, and Cape Town, each participant and I discussed a range of topics related to the environmental consciousness discourse. One can see each interview between the participant and the researcher as an assemblage that is affectively brought about by multiple materialities, including humans, objects, ideas, spaces, utterances, and story-telling related to environmentally conscious living.

Words such as 'consciousness', 'awareness', 'mindfulness', 'footprint', 'responsibility', 'eco-friendly', 'sustainability', 'consumption', and 'waste' surfaced frequently. Each participant explained what the term 'environmentally conscious lifestyle' meant to them (Figure 6.3) (Appendix C).[3] All agreed that they pursued eco-consciousness, and some added that they 'try' or

[3] Appendix C contains the original Afrikaans transcriptions of quotations that have been translated to English and cited in Figures 6.3, 6.8, 6.9 and 7.2.

that they can 'do better'. Alta, Earl, and Sammy specified that they did not identify with the term due to certain associations they had with it, but saw themselves as acting in an environmentally conscious way.

In light of the model for measuring environmental consciousness proposed by Sánchez and Lafuente (2010:738), which consists of four dimensions (affective, cognitive, dispositional, and active), all participants can be regarded as 'environmentally conscious', albeit that these are centred on different dimensions. This was established through interview discussions and a standardised questionnaire that was completed after the interview, either in person or by e-mail (Appendix D).[4] We furthermore discussed the practices associated with environmental consciousness that each participant engaged in, including (most notably) the five Rs (Figure 6.4).

Drawing on the information communicated during each interview, I mapped the sources that participants said they rely on for learning more about environmental consciousness: notably, these included Google searches, online news outlets, scholarly articles, social media platforms, and conversations (Figure 6.5). I also assembled the most prominent reasons that participants provided for pursuing this lifestyle, which included pleasure from virtuous actions such as frugal consumption, taking action in their immediate environment, a sense of community, reduced financial strain, maintaining an overall healthy lifestyle, and being responsive to world events (or trends) (Figure 6.6). Finally, I compared each participant's 'relationship' with the term, noting that environmental consciousness elicited, predominantly, positivity and pride but, in some cases, also skepticism, frustration, and guilt (Figure 6.7). These factors are explored in Figures 6.3 to 6.7 below.

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[4] This combination of data collection methods (interviews and questionnaires) allows me access to detailed narratives *and* to systematic comparisons regarding the participants' environmental consciousness.

Figure 6.3 | what do you understand under the term 'environmental consciousness'?

JASMIN Okay so... Yoh, is that a test question? [Laughs]. So, basically how you impact the environment with your lifestyle. That's what I understand from it.

RIVER I don't think I had an idea of how wide can be understood at all. Or what it means. So, for me, environmentally conscious would always be about being aware in your day to day life, [and] think about what you do. Like, I would think before I buy something. […] So, that's what it is to me. I think, [the way] you live every day. What are you doing? Where can you use something less or cut out plastic or something like that.

LOLO I would say it is about reducing your consumption to what you need, uh, and limiting what you want, but don't need. And being mindful that, uh, once you've used what you need, making sure that you take care of it when your done with it in a responsible way.

MARY Okay, so, for me it links to the fact that one becomes more aware of the consequences of your actions on the… um, ja, the earth. And, specifically, the sustainability of the way in which you live. And that which you leave behind, your actions have an impact on the generations to come. […] So, it's a constant learning process, as you discover new aspects of it. And then making changes and choices in your life for the journey ahead.

JACK Well, I would say, for me it's about living consciously with regards to your impact on the environment. At least, what you believe to be good and bad for the environment. For example, participating in a recycling programme is not necessarily always a good thing, because people don't always recycle responsibly on a larger scale, but you live environmentally conscious by partaking in such projects. So, it's context sensitive.

SAMMY Like, just being aware and mindful about my impact on the environment, on animals, on other people and everything. So, it started, […] ja, watching documentaries and living in many places in the world. It's very easy to live in one small city and you're not aware of the pollution that is in the ocean in the Philippines.

CHRIS Um, so for me, when I think of environmental consciousness, I think of it in a way where the person is, firstly, conscious of their actions, but also that they… uh, try as much as possible that their actions do not negatively impact the environment.

NICHOLAS Well, the broader definition for me is to live in such a way that you are, well, obviously, conscious of the environment. But it also entails much more than consciousness: it also implies action. There's a difference between being aware of something and reacting to that awareness. […] I think it includes acts like recycling, and campaigning against air pollution. And, also, to be aware that you have an impact on the environment in which you are living.

GABO I think it's just to be aware of the environment, how you interact with the environment, as a person. And also, just learning from the environment itself, because it's not just… it's not there for us just to use it, but it's also more like a mutual relationship, to say. Like, you take care of the environment, the environment will take care of you.

RAINMAN Uh, I supposed just... being aware of how your actions, uh, if they're maybe what you eat, what you consume, what you wear, like, how this affects the world around you. Uh, because in many cases objects will have a life after your use over a long time.

Figure 6.3 cont. ⟶

HIBISCUS I think, to me, it means being I think, to me, it means being aware of your impact towards the environment and also your connection with the environment. 'Cause we are environmental humans, therefore we are one with the environment around us. So, the more natural anything you are surrounded by and [put] in your body… the better, so to say.

SUSANNA *Sjoe*, that's quite encompassing, broad. For me, I think it's about making as little a footprint as possible. So, I know it sounds like such a cliché now, but […] I think it's just a more sustainable lifestyle that damages the earth as little as possible.

HARRY Close to nature, um, systemic, our place in the ecosystem. Awareness of the bigger picture, as well as the small picture, which is my life and my family's life […] on the earth. We are also evolved beings, evolved… you know, of the earth: our bodies are of the earth. Um, so, environmentally conscious… yes, and that all interconnects. All the systems end in each other. And that we're living a closed circle. […] So, it needs to be sustainable. It's sustainable living. If you are a human, you are gonna make an impact and there's gonna be… creatures are gonna suffer. […] I'd say there's an honouring. Honouring where our food comes from and that there were other people who lived where we live, and there were animals who used to live here. So ja, I guess just an awareness of our actions.

EARL *Jog*, now I'm scared that I might give you a very superficial answer, but I think... environmentally conscious lifestyle... […] So, for me it's a purposeful decision that people make to ensure that the way they live their life is environmentally friendly. So, it doesn't affect nature, or the environment, in a negative way. [It] refers to the choices they make.

BENJAMIN I think, uh, for me, uh, it's just tryin' to be aware of your impact, uh, on the environment as much as possible.

CYNTHIA Okay. Um, I guess how I would read it is as sustainable living. So, something that has, like, the least harmful impact on the natural environment. And also something that, like, works towards not degrading the environment to a point where humans have to suffer? Um, yeah. But that's also very human-centric now [chuckles]. But I suppose, humans, animals, etcetera. Yeah.

MO Um. On first level I would say, like, environmental… the first thing that pops into my head is sustainability, looking after the environment, how we are connected to the environment, being healthy. But then on another level, which I think, when you talk about specifically memory objects, how I understand it, it's about my relationship with the space around me. My immediate space around me.

LILLY I'm a steward of the earth. […] It bugs me when someone leaves a light burning, or a tap running. It's that consciousness.

HELLEN For me, it's about having an awareness of how you live in your outside world. Understand? So, I've started long ago. But it's a process, it's small changes that over time make a difference: to not waste money, to not waste resources. To combine all of that in your own life.

ALTA So, the problem of the environment is a big systemic problem that is dependent on many things. So, I know that our contribution is very limited. But for me, it's about consuming less, to waste less. And about, I think, consciousness. To try to see where what I buy comes from, where it is going. […] To just try and have a sort of consciousness.

FRANCES I think it's all about just trying to minimise your impact on the planet in whatever way works for you. Um, and I've found it's certainly baby steps. […] And being aware of what the impacts are. Just try and educate yourself as much as you can.

Figure 6.4 | **what beliefs, attitudes and practices constitute your eco-consciousness?**

This Figure includes aspects of all four dimensions (namely, affective, cognitive, dispositional and active) of Sánchez and Lafuente's (2010) diagram for measuring eco-consciousness. Because they emphasise a pro-environmental behaviour-oriented outcome, I foreground the active dimension.

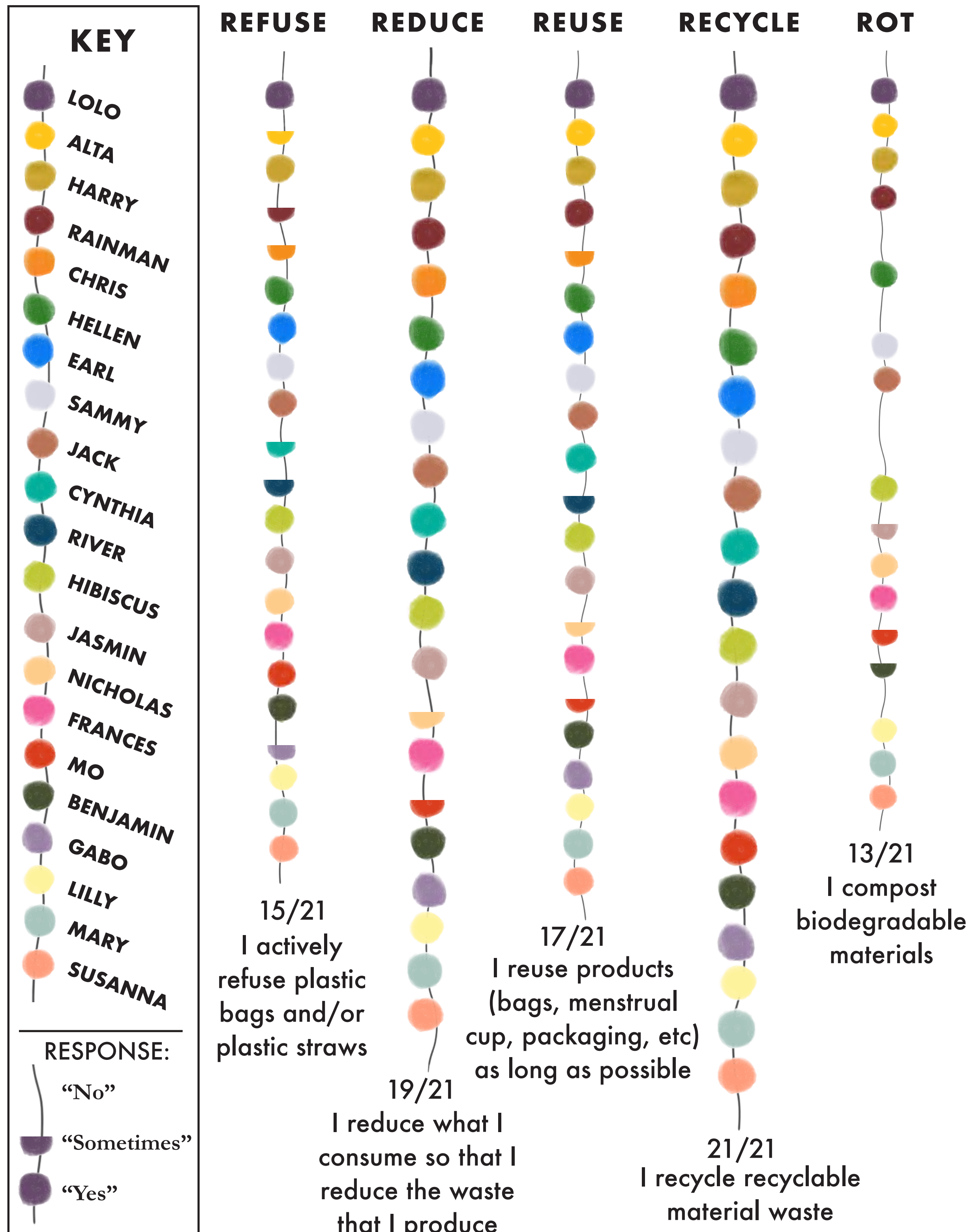
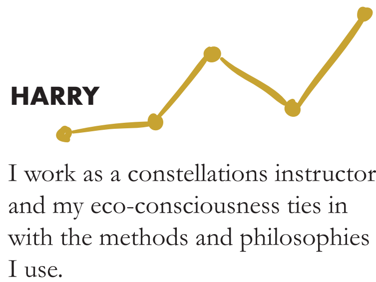


Figure 6.4 cont. ⟶

Figure 6.4 cont. →

PARTICIPANTS' ECO-CONSCIOUS COMMITMENTS

Inspired by, based on and/or aligning with their eco-conscious beliefs, attitudes, and practices, here are a few short- and long-term life and career commitments selected participants have made. *Wording by the author.



HARRY

I work as a constellations instructor and my eco-consciousness ties in with the methods and philosophies I use.

BENJAMIN

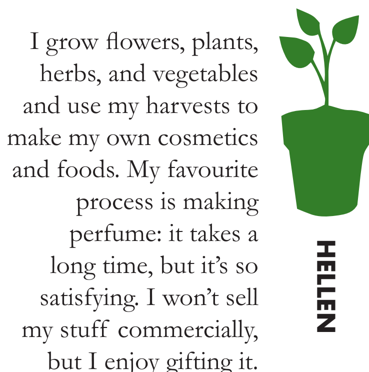
I can see that sustainability is increasingly important for some consumers. I sell ethical clothing and am committed to using eco-friendly materials, like hemp cotton and biodegradable packaging.

NICHOLAS

It's so *lekker* to see citizens involved in projects. I'm joining the next community clean-up!

RIVER

Although I'm actually trained as an architect, I've recently started studying sustainability. I think environmental degradation can best be fought from the top down, so my goal is to one day join this conversation in order to adjust the law.

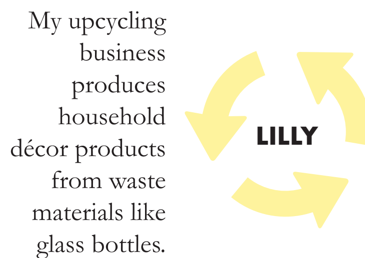


HELLEN

I grow flowers, plants, herbs, and vegetables and use my harvests to make my own cosmetics and foods. My favourite process is making perfume: it takes a long time, but it's so satisfying. I won't sell my stuff commercially, but I enjoy gifting it.

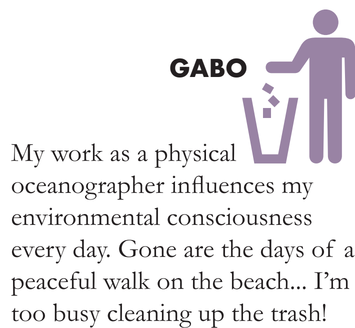
MARY

Inspired by my own needs as a new mother, I run a small business that produces cute and colourful cloth nappies.



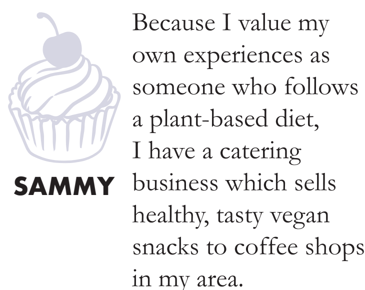
LILLY

My upcycling business produces household décor products from waste materials like glass bottles.



GABO

My work as a physical oceanographer influences my environmental consciousness every day. Gone are the days of a peaceful walk on the beach... I'm too busy cleaning up the trash!

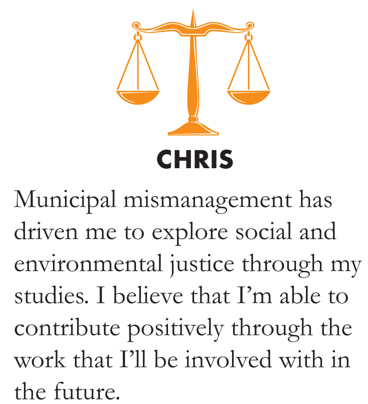


SAMMY

Because I value my own experiences as someone who follows a plant-based diet, I have a catering business which sells healthy, tasty vegan snacks to coffee shops in my area.

FRANCES

For a few years now, I've run a fun Plastic Free July competition at my office. I'm happy to see that more and more colleagues join the challenge each year.



CHRIS

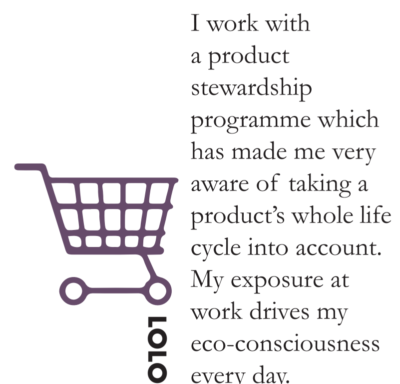
Municipal mismanagement has driven me to explore social and environmental justice through my studies. I believe that I'm able to contribute positively through the work that I'll be involved with in the future.

CYNTHIA

I work at an art foundation that is dedicated to correcting social and environmental injustices. We host exhibitions for a longer period, so that artworks don't have to be shipped so frequently and so that more citizens can enjoy them.

HIBISCUS

I'm one of the founders of a community art centre. We also promote health and wellness, which for me ties in with environmental education. Through my job I'm doing my part.



LOLO

I work with a product stewardship programme which has made me very aware of taking a product's whole life cycle into account. My exposure at work drives my eco-consciousness every day.

Figure 6.5 | **what sources inform your environmental consciousness?**

To answer different types of questions, a participant commonly consults more than one source. Almost all of the participants noted that conversations with other people is one of the most important ways to learn about eco-consciousness. This graphic is based solely on interview discussions and is therefore only a selected perspective.

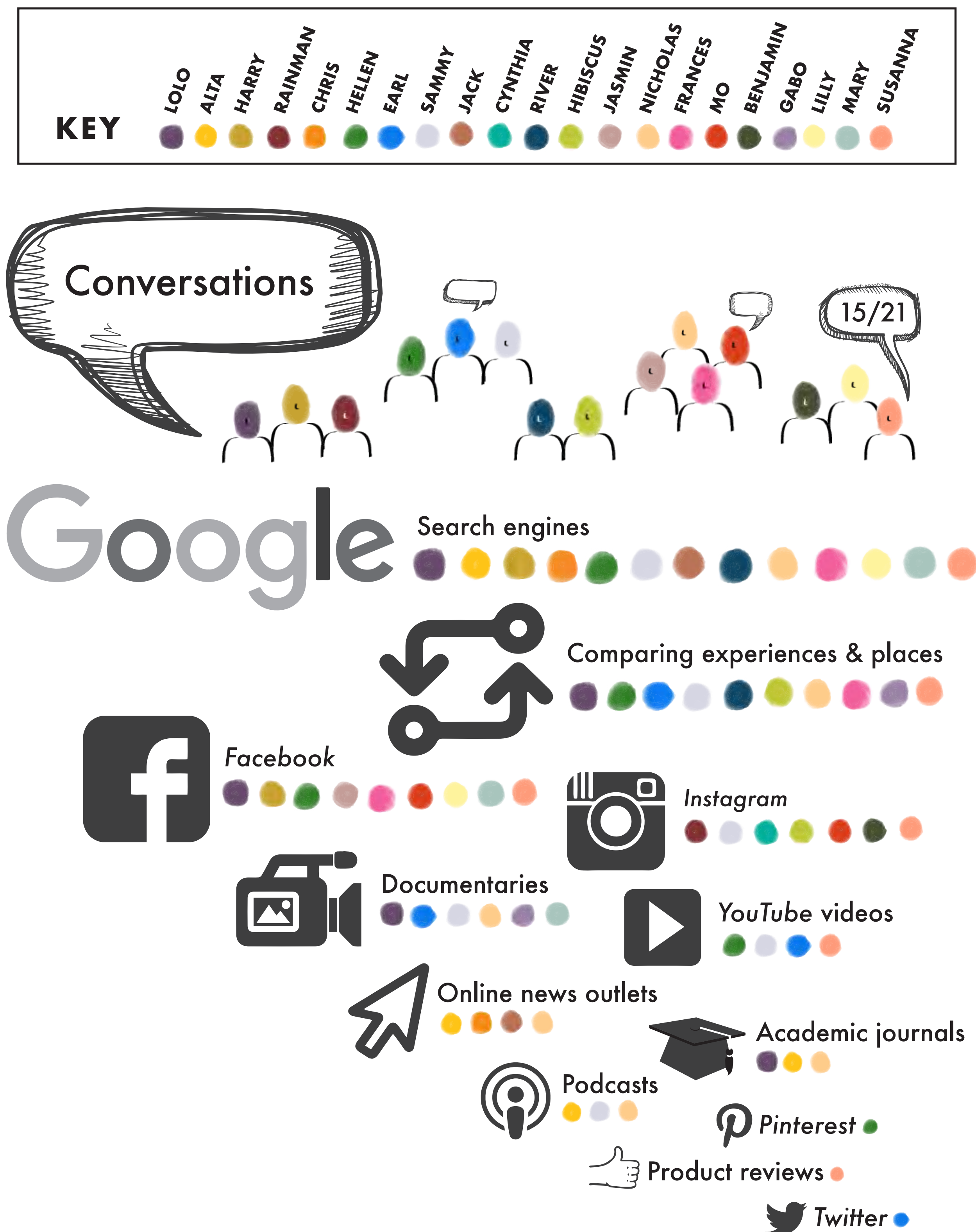


Figure 6.6 | **why do you live eco-consciously?**

All participants expressed a combination of factors. For example, Gabo's and Chris' eco-consciousness is propelled by memories of their youth and their education received at university, whereas Hellen and Mo's eco-consciousness is centred on saving money and keeping a general healthy lifestyle.

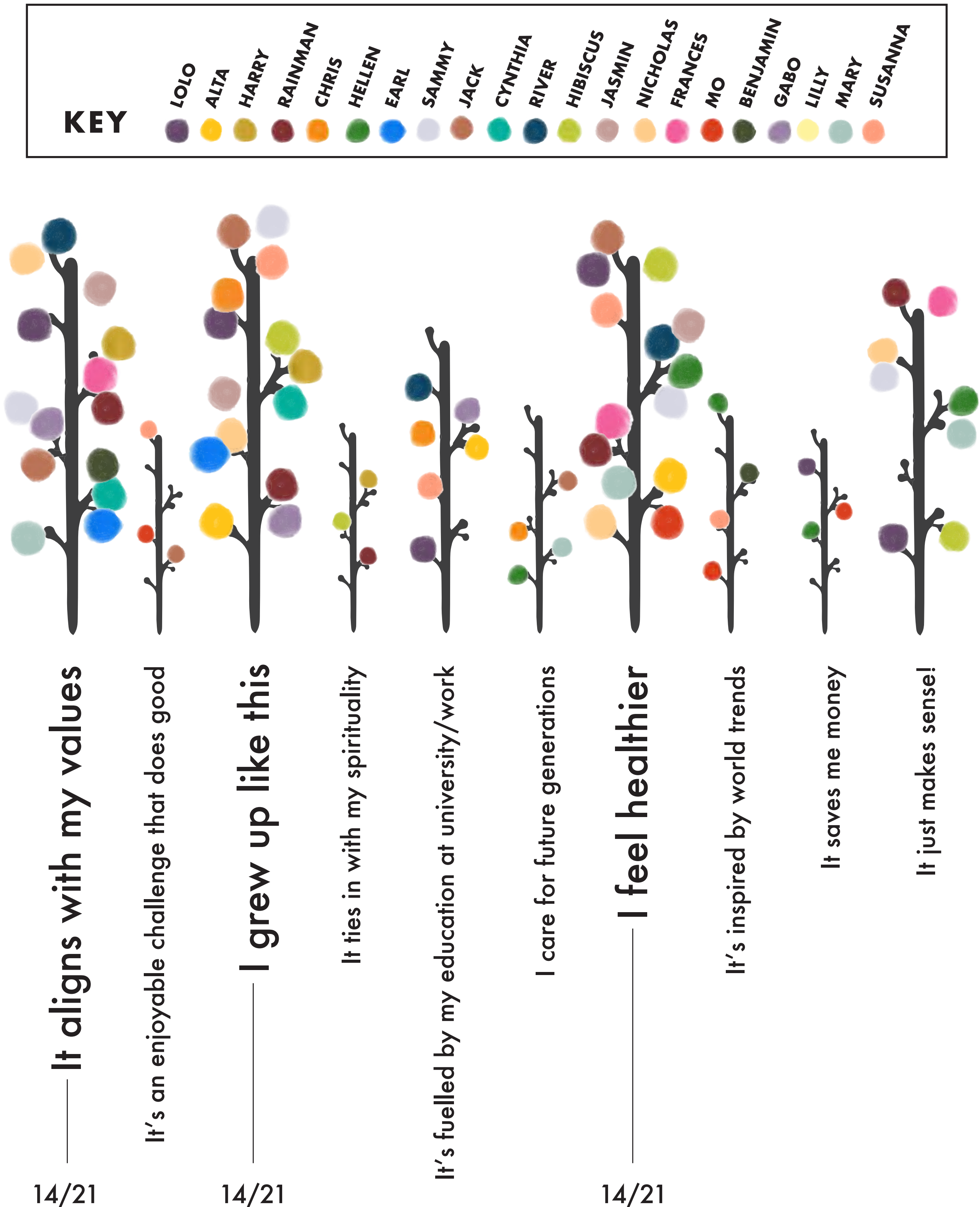


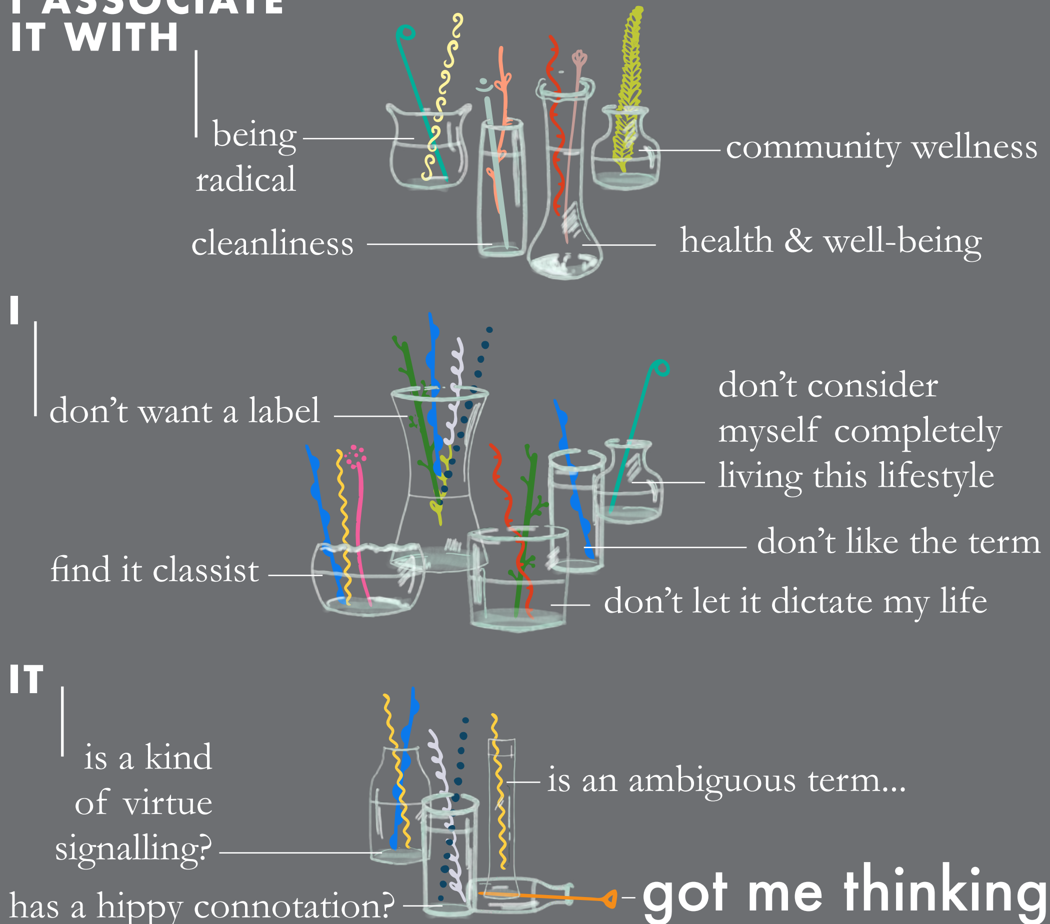
Figure 6.7 | **what is your relationship with the term 'environmentally conscious lifestyle'?**

KEY

- MO
- HELLEN
- EARL
- GABO
- BENJAMIN
- LOLO
- ALTA
- CHRIS
- SAMMY
- CYNTHIA
- SUSANNA
- MARY
- JACK
- LILLY
- HARRY
- RAINMAN
- FRANCES
- NICHOLAS
- RIVER
- HIBISCUS
- JASMIN

Positivity alongside skepticism is apparent in all the answers and highlights the ambiguity of the term 'environmentally conscious lifestyle'.

I FEEL



6.2.1 Hybrid understandings, beliefs, and behaviour

Generally, as can be seen in Figure 6.3, participants viewed an 'environmentally conscious lifestyle' as an awareness of 'the environment' and as a call to responsibility by systematically reducing one's 'environmental footprint' and by adapting one's consumption patterns. This correlates with general associations with such lifestyles as found in extant literature (Peattie 2010:208, Sánchez & Lafuente 2010:738, Rasmussen 2013:sp). A wide array of beliefs and practices associated with eco-consciousness informed participants' lifestyles. All participants expressed an awareness of different forms of consumption and waste, both 'visible' (for example, goods, packaging, and electronic waste) and 'invisible' (for example, emissions brought about by internet and online storage usage, transportation, and electricity) yet they engaged differently with each. For most participants, beliefs regarding consumption ('green' and otherwise) and waste intertwined bidirectionally: consuming less meant producing less waste, being aware of waste encouraged more thoughtful consumption. In general, the liminality of some objects, and the ways in which such objects move in and out of constructed categories (such as 'waste'), came to the fore.

All participants explained how they spent time managing their consumption and waste patterns, for example, remembering their reusable shopping bags, walking instead of driving, refusing (or not) plastic straws, rinsing recyclables before collection, picking out old books or clothes to donate, making their own products, filling the compost bin, and turning the compost heap, stuffing ecobricks, mending torn clothes and/or running a sustainable business. By managing domestic waste according to principles of self-scrutiny, the participants and their environmentally friendly practices and beliefs are entangled in new assemblages (Hawkins 2016:31). Although all the participants saw themselves as environmentally conscious, they expressed it in different ways – some of which are discussed shortly – which underlines the complexity of this identification in the Anthropocene

What became apparent in all the discussions was that there was a general awareness of *responsible* action: responsible consumption, responsible engagement with 'stuff', and responsible waste management. This awareness of responsibility is often coupled with pleasurable behaviour: participants tended to engage in actions that made them feel good, proud, and happy. Recent studies suggest that individuals who adopt pro-environmental behaviour are generally more satisfied than those who do not, even though such behaviour is often portrayed as "difficult,

aggravating, and potentially threatening [to] one's quality of life" (Venhoeven, Bolderdijk & Steg 2013:1372).

On the other hand, research also suggests that an awareness of what constitutes 'proper' eco-conscious behaviour sometimes caused guilt, irritation or a feeling of helplessness (although this seemed to be less prevalent and more short-lived). Self-conscious emotions, such as shame, guilt, embarrassment, and pride, play a central role in motivating and regulating almost all of people's thoughts, feelings, and behaviours. These emotions drive people to work hard in achieving goals and to behave in moral, socially appropriate ways in their social interactions and intimate relationships (Tracy & Robins 2007:3).[5] For example, guilt has been found to be central to reparative and prosocial behaviours such as empathy, altruism, and caregiving (Tangney & Dearing 2002).

Whereas simple emotions, such as fear or happiness, are assumed to have evolved through natural selection to facilitate survival and reproductive goals (for example, fear may cause an individual to run away from a predator, thereby enhancing her chances for survival), psychologists Jessica Tracy and Richard Robins (2007:6) argue that self-conscious emotions evolved primarily to promote and facilitate the attainment of complex social goals, such as the maintenance or enhancement of status, or the prevention of group rejection". Such social goals, in turn, facilitate survival and reproduction. These findings correspond with Hawkins' (2006:5) statement that environmentally conscious practices indicate important shifts in humans' relationship to waste, and how guilty or righteous it can make people feel.

In the context of this study, it seems as if self-conscious emotions also drove participants' readiness to engage or not in pro-environmental behaviours. Guilt involves a sense of tension, remorse, and regret over the 'bad thing done' and, although it is less painful than shame, it can nonetheless evoke feelings of pain. For example, in the midst of a guilt experience someone might report a nagging pre-occupation with their act, wishing they had behaved differently or could somehow undo the deed (Tangney 2001:130).[6] In other cases, pride may promote

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[5] For more research on these and other aspects of self-conscious emotions done in the field of psychology, see for example Weiner (1985); Retzinger (1987); Batson (1987); Baumeister *et al* (1994); Stipek (1995); Keltner & Buswell (1997); Leith and Baumeister (1998); Tracy and Robins (2004); Noftle and Robins (2006).

[6] Drawing on clinical psychologist Helen Block Lewis' seminal book on the topic entitled *Shame and Guilt in Neurosis* (1971), Tangney and Dearing dedicate their book, *Shame and Guilt* (2002), to teasing out the differences between these two complex emotions, which are often conflated. Shame is directly about the self. In guilt, the self is not the central object of negative evaluation, but rather the focus is a particular thing done or undone. This differential

boastfulness and other approach-oriented behaviours after a socially valued success (Tracy & Robins 2007:6). Generally, environmentally conscious individuals' identities have become "confused and contradictory, veering between the attempt to purify [them]selves through a total surrender to a radical eco-friendly lifestyle […] and a complete effacement of the human altogether" (Groes 2016:143).

To analyse such paradoxical perceptions regarding pro-environmental behaviours, environmental psychologists Leonie Venhoeven, Jan Willem Bolderdijk, and Linda Steg (2013) distinguish two kinds of well-being: hedonic (feeling *pleasure* when doing a certain action) and eudaimonic (experiencing a sense of *meaning* when performing a certain action because it is perceived as 'virtuous' for the 'right' reasons).[7] They found that, because the positive effects of individual eco-conscious behaviours are uncertain, complex, and situated in an uncertain future, those engaging in such practices cannot easily envision their actions' actual effects (Venhoeven, Bolderdijk & Steg 2013:1375). In contrast, the personal benefits of environmentally harmful behaviour, such as car use, is certain and immediate. These ambiguities make it difficult to judge the usefulness of personal engagement in eco-conscious actions. If the distant goal is *perceived* to be unattainable, it poses many negative consequences for humans' hedonic well-being (Venhoeven, Bolderdijk & Steg 2013:1375). This is often countered by reframing 'big goals' ('save the environment') into smaller, attainable goals ('switch off lights', 'recycle', 'use public transport'). Doing this motivates engagement and leads to hedonic well-being (Venhoeven, Bolderdijk & Steg 2013:1375).

Closer to the thought of Deleuze and Guattari, I turn briefly to the Spinozist ethics operating in *A Thousand Plateaus*. By means of his work on Spinoza, Deleuze (1988 [1970]:71) found a methodology for determining what is ethically good or bad, *without* any need to rely on an additional category distinction between what is good and what is evil. For Spinoza, what is good in the ethical sense for any specific body (or materiality, as used in this study) is just that which increases that body's capacity to act in a way that increases its power (*puissance*),[8] or its affective

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emphasis on self ("*I* did that horrible thing") versus behaviour ("I *did* that horrible thing") leads to very different phenomenological experiences (Tangney & Dearing 2002:18). The relation between these emotions and environmental consciousness specifically, is yet to be more thoroughly researched.

[7] A few empirical studies suggest that pro-environmental behaviour may lead to an increase in well-being. For example, 'green' consumption was found to be related to greater personal well-being, higher overall life-satisfaction, and more happiness. These results are, however, context- and location-specific and are based on correlational research implying that causality cannot be implied (Venhoeven, Bolderdijk & Steg 2013:1373).

[8] Two French words for 'power' exist, namely *puissance* and *pouvoir*. In Deleuze and Guattari's work, they are associated with very different concepts (although the terminological distinction is not consistently observed). *Puissance* refers to potential ('power to' do something) or a capacity to affect or be affected. It can be thought of as a

response (Deleuze 1988:71, Alaimo 2010:13). For example, if two materialities interact in such a way that they increase each other's capacity to act, then the interaction is good, and produces the positive affect of joy or pleasure. Conversely, if two materialities interact in a way that reduces each other's capacity to act, then the interaction is ethically bad and produces the affect of guilt or sadness (Smith 2012:385).

Placing this study within this context, it becomes clear that environmental consciousness and the practices associated with it fulfil an ambivalent role because, in some cases, materialities affect other materialities positively (bringing about pride or pleasure) and sometimes the same materialities can bring about negative affects (such as guilt, suspicion or, even worse in a Deleuzoguattarian sense, apathy). The affective engagement with ideas about environmental consciousness, physical spaces, waste and waste habits, make participants feel more (or less) like 'responsible consumers'. Groes (2016:143) holds that humans mostly show "hybrid behaviour whereby we are mixing 'modern' [practices] with persistent atavistic traditions".

Many examples of such hybridity concerning transportation, diet, fashion choices, electricity usage, consumption of goods, plastic, and more, were also prevalent in the interviews. I discuss some examples below. These outcomes correlate with a study by environmental theorists Dirk-Jan van de Ven, Mikel González-Eguino, and Iñaki Arto (2018:857), in which they found that individual views of environmentally conscious actions vary: "while some individuals are convinced about reducing their food waste and joining a car sharing programme, others might prefer to follow a healthy diet and recycle their waste".

Turning to the conducted interviews, Nicholas explained how he used to make use of public transportation instead of his own car, knowing that this would reduce his environmental footprint. After some time, he quit this practice, because "it's a time-consuming thing", and "personally not very convenient for me".[9] River, who did not own a vehicle, spoke about her initial inclination to use Uber instead of walking where she needed to be. Usually, she eventually

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degree of intensity of existence on a scale. In contrast, they use *pouvoir* in a sense very close to Foucault's: as an instituted and reproducible relation of force (a 'power over' something, a selective concretisation of potential (Deleuze & Guattari 1988:xvii).

[9] Nicholas: "Dis 'n tydrowende ding […] [Dis] persoonlik nie vir my baie gerieflik nie." A note on all the translations to follow: in accordance to this study's new materialist approach, I have paid specific attention to communicate the participants' way of speaking and vocabulary as accurately as possible. This means that, in certain instances, the sentence structure, and diction (whether slang or English) can be seen as grammatically faulty but, as in the case of the approach adopted by Chadwick (2020), is in keeping with this study's specific new materialist context. In short, I deliberately include diction, silences, laughter, and so on in attempting to foreground the affectivity associated with these factors.

convinced herself that she was simply being lazy and ended up enjoying walking when she chose this option. This reveals the interchanges between responsibility (driving less) and senses of convenience and pleasure (such as 'wasting' less time or enjoying the experience).

Concerning diet, many participants expressed their awareness of the increased environmental footprint associated with consuming meat. Whereas Sammy, Hibiscus, Cynthia, Mo, Rainman, Benjamin, and Jasmin have adopted pescatarianism, vegetarianism, or veganism – all diets more readily associated with environmental consciousness – other participants such as Lolo, Frances, and Harry had plausible reasons for not completely adapting their omnivorous diets. Frances, although "trying to have more plant-based meals", found it "difficult when you work full time and then you suddenly have to think of how to cook and maybe you don't feel… like, you just wanna do something easy, simple, that you know". She added that "there's gotta be quite a drive there". Lolo's husband "got sick a few years ago after our food diet, our year [of trying a new recipe every day in 2015], because that was 40 per cent vegan". Although she was not "happy about it", they were omnivorous for "health" and "practical" reasons and "that's a line in the sand now". For personal health reasons, Harry was also not a vegetarian:

> I, I tried to be a vegetarian and I was really losing a lot of… I've got a muscle condition called muscular dystrophy. And I just found that my muscle… I, I, my muscle weakness… it seemed to be speeding up my muscle weakness. So, I didn't want to mess with that. Ja [pause]. […] I don't like that I have to do that. But in a way, it's also… life has been like that. […] Our bodies need protein. It's just… and you can get it from a vegan lifestyle, but it just… I've tried it and I physically need to have meat.

Here, participants expressed awareness of broadly accepted environmental responsibility (eating less meat), but only slightly altered their diets due to factors like convenience, practicality, or health. Regardless of diet, all participants that mentioned food waste during our interview shared the motivation to minimise or eradicate this type of waste.

Regarding apparel, many participants touched on the idea that buying second-hand clothing was a more environmentally responsible option. Alta preferred not to buy second-hand clothing, whereas Earl had convinced himself to do so. Alta explained that "one of my resolutions is to buy more second hand", but felt that it was an unpleasurable experience that she had "to master":[10]

[10] Alta: "Dit is een van my voornemings om meer tweedehands te koop. […] Ek voel dis so half iets wat mens moet baas raak."

> You have to figure out how to do it, and I haven't figured it out yet. […] I hate those terrible second hand shops that only have those smelly heaps of clothing. So I try to figure out a way to make that shopping experience fun for myself.[11]

Earl's shift towards buying second-hand clothes was largely influenced by the documentary entitled *Sweatshop: Deadly Fashion* (Kleven 2015). Watching this documentary in 2017 "really changed my whole view about clothing".[12] After becoming aware of the detrimental environmental and social impacts of fast fashion, Earl found it "unacceptable" and, despite "never having previously loved a hospice" before that, he then decided to "hang out at hospice shops" and said: "sometimes you find really cool stuff there".[13]

Concerning energy consumption, all the participants who touched on this point during our conversation mentioned that they switched off lights when leaving a room. Earl spoke about how he loved to cook over a wood fire, but felt guilty about this and was looking at gas barbeques as an alternative. Lolo admitted that the anthracite heater in her home "look[ed] contradictory", yet again revealing deeper relations between responsibility ('greener' energy consumption) and other larger-scale factors (in this case, work related):

> Through my work, I was doing a project at the time with a community in Embalenhle near Secunda. Trying to get people to move away from coal in the homes, um, because the way they use it is very bad for your health. So, I wanted to understand, why are people using coal, we want them to switch away from coal. So, I bought this to learn about coal use in households. So that's my winter heating, which is obviously not environmentally friendly. But it's cheap, that's why people use it.

Susanna and Jack pointed out the controversy surrounding leather products. Susanna said that she preferred "leather products above anything else… like, leather shoes, a leather handbag, because I find it beautiful and there's that sentimental quality to it".[14] Jack also rather bought leather than another material, because he has found it to be "more durable", while it could be "exposed to use much longer than some other materials".[15] Although he said that he "feel[s] really bad for using an animal's skin",[16] he would continue buying leather. Here, the interplay

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[11] Alta: "Jy moet uit*figure* hoe om dit te doen, ek het nog nie uitge*figure* hoe nie. […] Ek haat daai aaklige tweedehandse winkels wat dit net sulke stink hope klere is. So, ek probeer nog 'n manier uit*figure* hoe om die *shopping experience* vir my lekker te maak."

[12] Earl: "Maar dit, daai *documentary* het rêrig my hele *view* verander oor my klere."

[13] Earl: Dit was soos, dit is onaanvaarbaar en ek was nooit iemand wat lief was vir 'n *hospice* nie. […] Ek hang uit by *hospice shops* […] en soms kry mens *rêrig* baie *cool* goed daar."

[14] Susanna: "[Ek sal altyd eerder] leerprodukte wil koop as enige iets anderster. Soos leerskoene, 'n leerhandsak... dis vir my mooi en daar's daai sentimentele kwaliteit daaraan."

[15] Jack: "[Leer is] meer duursaam. […] [Dit] kan langer aan gebruik blootgestel word as ander materiale".

[16] Jack: "En ek voel dan baie sleg dat ek... 'n dier se vel gebruik […]."

between responsibility (to consume less animal-related products) and factors such as aesthetics, sentiment, and finances (leather's durability) became prevalent.

Another contentious material within the environmentalism discourse are plastic products (*The Guardian* 2019). All the participants, to a greater or lesser extent, expressed their awareness of the fast-growing "worldwide revolt against plastic", in which plastic is increasingly treated as the scapegoat of environmentalism (Buranyi 2018).[17] Jasmin stated that, although she used plastic packaging "until it can't be used again", plastic was her "kryptonite". She added an anecdote before chuckling: "Yeah, so even this morning I was telling my friend […], like, listen, so you [the researcher] are coming over for the interview. He was like: 'hide your plastics!'". Similarly, Earl is aware of his 'moral obligation' (responsibility) not to make use of plastic straws, but nonetheless continues using them (for the sake of convenience):

> So, like, for example, this new straw phase [deep exhale]. I don't want to drink a double gin and tonic without it, can I please have a straw? I have… because it's convenient, it, it, it paces how much I drink. But now you have to adapt all the time and it's irritating.[18]

Sammy shared her contradictory emotions about buying a food blender on a Black Friday Sale special, revealing the relation between responsibility (not supporting a consumer craze) and finances (she bought something she needed, for cheaper):

> It was a Black Friday Sale. And *that* usually makes the hair stand up on my back. And it was the first time that I was actually aware of [the problems with over-consumption]… I've never bought anything on a Black Friday Sale. And it was very ironic that the first time I did, I was so aware [of this].

These examples foreground the exchange between environmental responsibility and a variety of factors, often leading to actions that may seem contradictory or hypocritical. All participants agreed that what actions individuals chose to engage with in the contemporary ecological climate, were up to them. Generally, the end result related to what Peattie (2010:218) describes as "a lot of individual jigsaw puzzle pieces", or simply, "well-informed confusion". With this as backdrop, the subsequent section turns to New Materialist Analysis as a tool for further engagement with the interviews.

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[17] Since the late nineteenth century, plastic was developed to increasingly substitute scarce natural resources. Ironically, due to its slow decomposition rate, the material itself became an environmental concern in the twentieth century. In a sense, this factor prohibits plastic from entering "back into systems of decay and regrowth" like organic materials (Davis 2015:353). For an analysis of plastic's pros and cons, see Stephan Buranyi's article in *The Guardian* entitled "The plastic backlash: what's behind our sudden rage – and will it make a difference?" (2018).

[18] Earl: "So, soos byvoorbeeld om, hierdie nuwe *phase* van strooitjies [diep sug]. Ek wil nie 'n *double gin and tonic* net so drink nie, kan ek asseblief 'n strooitjie kry? Ek het, want dit is vir my gemaklik, dit, dit, dit *pace* hoeveel ek gaan drink. Maar […] jy moet heeltyd net aanpas en dis irriterend."

6.2.2 New Materialist Analysis: environmental consciousness

Drawing on Fox and Alldred (2017), I use New Materialist Analysis as a methodological approach and, in the process, emphasise two central new materialist arguments. Firstly, no single element within any given assemblage possesses "primary agency": instead, I apply the concept of affect (the capacity to affect or be affected) to "reflect the ways in which assembled relations interact" (Fox & Alldred 2017:85). Secondly, I argue that the processes of social life involve contextual factors that operate at the everyday level, rendering these events "necessarily complex" (Fox & Alldred 2017:72).

The data gathered in the interviews, in which multiple material relations and affects are constantly interacting, reveal the sheer complexity of the affective flows between the materialities. The myriad affects within environmental consciousness and memory object assemblages variously (de)territorialise capacities and disclose huge variabilities in the micropolitical workings of the different elements. To discuss specific events and habits, I deliberately foreground certain affects and materialities in these examples (typically those that produced strong capacities in participants to feel or do something), while acknowledging that additional affects can be identified. In fact, the assemblages discussed below are typically composed of many more disparate relations than mentioned here. These assemblages, fragments of conversations with, and observations of the participants, can be read as providing a glimpse into particular aspects of their lives.

Using New Materialist Analysis, I analyse assemblages composed of participants, consumption habits, waste habits, ideas, and objects surrounding environmental consciousness. These assemblages integrate the prominent tropes associated with environmental consciousness that became prominent in the interviews, namely pleasurable emotions, a sense of responsibility, uncertainties, and common associations with 'nature'. Because the focus is on what a given element within an assemblage does affectively, rather than what it is (Deleuze & Guattari 1987:109), each trope present in an assemblage can thus be regarded as one such an element with affective capacities that functions with other elements (rather than finalising what this trope is, means, or where it comes from).

- ***Lolo – recycling – waste pickers – joy***

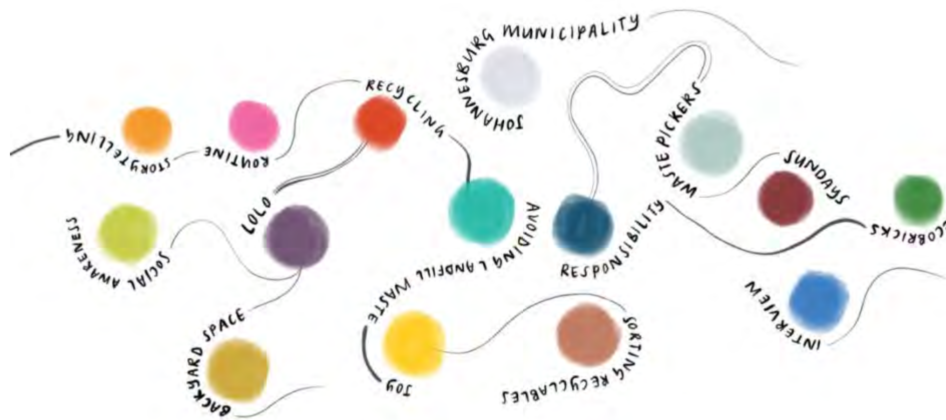
During our interview, Lolo spent almost four minutes explaining her recycling habits (among all the participants, this was the longest discussion on recycling) and, after our interview, took me to

her backyard to show me their "recycling station". Apart from Benjamin, who showed me a photograph of where he kept his recyclable materials, no other participant took me to the physical space where they sorted their recyclables. Because she described herself as "socially conscious", Lolo explained that she made a point, weekly, to sort recyclable materials for informal recyclers that pass her house. Although she acknowledged that she was "lucky" to have recycling management services in her city, she believed that the municipality should implement more rigorous waste management policies to make recycling in Johannesburg more efficient.

An assemblage between Lolo and her household's recycling practices could reveal (in no particular order) the following relations:

> Lolo – recycling – sorting recyclables – backyard – avoiding landfill waste – no black bins – responsibility – waste pickers – social awareness – environmental impact – joy – Sundays – routine – ecobricks – researcher – interview – storytelling

or,



As indicated, assemblages are made up of, and act upon, semiotic and material flows simultaneously (Deleuze & Guattari 1987:58). The relations between heterogeneous elements assemble because of the affects between them (Fox & Alldred 2019:24). The job of the "assemblage analyst", according to Feely (2019:9), is to "map these flows". Observing the formation of this assemblage therefore entails looking at what each element does to the others.

Identifying these forces involves returning to Lolo's narrative vignettes relating to recycling while continuously asking the question: "*What material and/or semiotic forces are affecting this story?*" (Feely 2019:7, emphasis in original). To unpack these relations, some narrative is therefore helpful. Lolo tries to avoid landfill waste and willingly spends time cleaning recyclables. She cares about informal recyclers and therefore sorts materials for them, even though this is not required in her area. She puts out the recycling on Sundays so that informal recyclers can take what they need before waste collection on Mondays. This reveals that the ideas of landfill waste and waste

pickers' livelihoods, as well as the physical recyclables, mediate Lolo's disciplined recycling habits (see Hawkins 2006:4). Similar to that which Feely (2019:3) notes, it was not simply that powerful discourses (in this case, recycling) triggered a shift in Lolo's habits: embodied sensations, beliefs, and emotions also shaped the discourses she adopted and the narratives she shared during our interview.

The often-assumed positive role of recycling in global waste management is increasingly contested, further foregrounding the complexities of 'proper' environmentally conscious behaviour in the twenty-first century (Schlitz 2020:451, McDonough & Braungart 2002:4.).[19] Nonetheless, the act of recycling indicates important shifts in human-waste assemblages (Hawkins 2006:5). Lolo is not simply an 'active' recycler managing her 'passive' waste: both form part of a network of used packaging, old newspapers, empty dog food bags (in which she places sorted recyclables), the informal recyclers, the recycling trucks, the companies that buy them, and the governmental and popular discourses justifying these actions (Hawkins 2006:108).

This relationship also reveals complex relations between waste and economy. Castigating waste as the 'end of value' denies its potential role in value dynamics: specifically, recycling shows how wasted matter can become a resource, a commodity, and a currency "subjected to the laws of profit and exchange" through businesses that implicate it in new transactions (Hawkins 2006:94). This is also evidence that 'value' is a contingent product of interdependent and shifting variables (Boscagli 2014:2).

For Lolo, the joy in waste management was also "not having to put [black] bins out on the road". Such pleasurable experiences, according to Hawkins (2006:ix), are relatively new: understanding pro-environmental behaviour is informed by how waste is framed. Because recycling makes someone "feel good", this "calculative benefit" also motivates a repeated performance of it (Venhoeven, Bolderdijk & Steg 2013:1373, Peattie 2010:207). Such minor domestic actions also have an "ethical resonance", because it affirms someone's investment in

[19] Especially in recent years, the appraisal of recycling has been ambivalent, pointing to the "intricate relationship between economic activities, material transformations and the governance of associated environmental implications" (Schlitz 2020:451). Apart from slightly dated issues regarding the social politics of recycling as *environmental* practice ("*virtue*-added disposal" predominantly associated with higher income societies) as opposed to recycling as *economic* practice (for the sake of survival more readily associated with lower income societies) (Hawkins 2006:34, Stenersen 2011:11), more recent contestations are rapidly surfacing. These include uncertainties about whether recyclable materials are, in fact, being recycled; the human and environmental health risks related to working with especially recyclable plastic waste and how the practice of recycling (through not reducing consumption of recyclables at the outset) inhibits a circular economy (see for example Geyer, Jambeck & Law 2017; Lerner 2019 and Schlitz 2020).

resolving pressing social matters and caring for 'nature' (Hawkins 2006:108). All these factors become "vital elements in the performance of environmental good" (Hawkins 2006:108).

By identifying the most pertinent material-semiotic forces affecting this narrative, one can thus include the physical architecture of Lolo's home, specifically the presence of a backyard which affords an enclosed space for sorting and storing recyclables. In addition, one might recognise the importance of embodied sensation and pleasurable emotions. The joy that Lolo explained she experienced when reducing her landfill waste and helping informal recyclers, acted as a continuous motivation to keep up her recycling habits. Lolo's habit can further be seen to have been affected by the Johannesburg municipal service that facilitated the act of recycling. These material and embodied forces are further shaped by discursive forces, including the construction of recycling as an honourable environmentally conscious act.

HETEROGENEOUS MATERIALS:

humans:	Lolo, myself, informal waste pickers
habits:	sorting recyclables, stuffing ecobricks, not putting black bins out
objects:	recyclable materials, the bags in which these are put, ecobricks
institutions:	Johannesburg municipality
routines:	putting sorted recyclables out on Sundays, avoiding landfill waste
architecture:	backyard space where her recyclables are kept, streets where waste pickers walk and waste trucks drive
words:	talking during the interview
feelings:	joy, responsibility

As mentioned, one could also highlight other relations within this assemblage, because New Materialist Analysis can be used to explore countless concerns and materialities (Fox & Alldred 2017:72). Another affective relation, for example, would consider Lolo's relation with the recycling of, textiles. She was "consciously hoarding" this "problematic bundle [of clothing] which might have made me look sentimental" but, she said: "I couldn't get rid of it because I just didn't know what [appropriate] outlet there was". She added that "some of it obviously contains synthetic fibres, plastic, you know, so, it can't be composted or, so… [chuckles] this was all sitting there, and then I found out last year about H&Ms recycling programme".[20] This assemblage would reveal, for example, relations between adapted consumer behaviour, extended producer responsibility regulations, product stewardship programmes,[21] and marketing strategies.

[20] As part of their garment collecting initiative, H&M collected 20 649 tonnes of textiles to reuse or recycle in 2018 and 29 005 tonnes, almost 10 tonnes more, in 2019 (H&M 2021).

[21] Product stewardship programmes assess lifecycle impacts of products. Because Lolo worked within this field this factor most probably already affected the current assemblage in some ways.

Law (2019:5) notes that assemblages "are endless" and prompts that one should know what one is trying to achieve in order to restrict them. Here it is important to note that, because researchers "inevitably become inextricably entangled in the assemblages they study", I, as a researcher with certain subjectivities relating to my age, class, gender, race and so on, also affected Lolo's narrative *and* my retelling thereof in this thesis (Feely 2019:8). In the current research assemblage, I included a condensed version of Lolo's account of her recycling habits, opening up new flows of her narrative to the reader (Feely 2019:11). Thus, this first New Materialist Analysis highlights only some aspects of Lolo's recycling practices, that might have been assembled differently.

- ***Alta – going 'green' – consumption – resistance***

During our interview it became clear that one of Alta's biggest environmental questions concerned the ambivalence of 'green' consumption patterns. The term 'green' (commonly coupled with the colour green) is increasingly used as a marketing strategy to sell products deemed environmentally friendly and simultaneously to suggest progressive politics and sustainability (Houze 2016:7). Although she saw herself as someone who was living a version of an environmentally conscious life which closely tied in with the minimalist movement, Alta tracked what she deemed to be an emerging trend in this movement's discourse:

> Minimalism has become a sort of consumption. […] The whole thing confuses me. How much am I trying to be, kind of, trendy and how much do I really care? So, it's just confusing to me. […] What I see now with my super, um, chic minimalist girlfriends, is that you now have this excuse to buy everything that is so luxurious on the pretext that it now has to *last*, but in the end… it just leads to another kind of consumption. And that I really try to resist.[22]

An assemblage of Alta and her beliefs surrounding environmental consciousness could yield the following affective connections:

> Alta – environmental consciousness – objects – consumption patterns – having less – value – care less about what I am surrounded with – individualism – not follow trends – resistance – confusion – influence my consumption choices – researcher – discussion

In this assemblage, the relation between Alta, her environmental practices, and the objects she had or did not have in her home were mediated by her awareness of societal structures,

[22] Alta: "*Minimalism* het 'n soort *consumption* geraak. […] Die hele ding *confuse* my, hoeveel ek nou net besig is om, so half, probeer *trendy* wees en hoeveel ek eintlik regtig omgee? So, dis net vir my *confusing*. […] Wat ek nou sien met my *super*, um, *chic minimalist* vriendinne, is nou het jy net 'n verskoning om soos alles so *luxurious* te koop onder die voorwendsel dat dit nou moet hóú, maar op die ou end… dit lei maar net tot 'n ander soort *consumption*. En dit probeer ek regtig *resist*."

capitalism, and consumer culture. Alta acknowledged that thinking about society in these terms also made her suspicious of environmentally conscious action in general, since "it's accompanied by a trend of sorts".[23] Affective and sensory reactions to dominant institutions, apparatuses, and discourses – which both constrain and enable certain affects – become politically powerful (Foucault 2010, Hamilakis 2017:175). According to Hamilakis (2017:175), assemblages are political, because their affective force is "subject to the rules that govern what is allowed to be sensed and what not, and what is determined as worth perceiving sensorially and recalling mnemonically, and what not". In this case, while Alta engaged with the topic by *interrogating* major discourses of capitalism and consumerism, these discourses typically governed the ways in which she thought about these issues (see for example Alaimo 2010:180).

Asking her what her relationship with the term 'environmentally conscious lifestyle' was, Alta responded that "it becomes a class thing":

> It becomes… uh, to live an environmentally conscious lifestyle means you read all the right things. You buy from the right places, you… so there's something there for me, uh… well, a part thereof, in a sense I claim it because I feel it distinguishes me. On another level I also feel… *embarrassed* about it, because I understand how problematic it is. And yes, I also think it comes with a sort of skepticism. I don't know if it helps in any way or if it's just a kind of signalling, virtue signalling. And sort of trendy. It says something about you more than anything else. So, for me it's kind of ambiguous.[24]

Returning to the model of Sánchez and Lafuente (2010:738) (as used to determine participants' environmental consciousness in this study), it became clear that the dispositional dimension of Alta's environmental consciousness, which related to her personal (positive) attitude towards her individual impact and readiness to take action, was low. Alta's uncertainties about what could be considered 'good' consumption, whether she was actually making a noticeable contribution and her general suspicion of practices such as recycling, caused her to act in certain ways: 'resisting' buying 'minimalist' household items, remaining cautious of social media's influence, and educating herself further to be able to answer the questions she has.

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[23] Alta: "[…] gaan gepaard met 'n soort *trend*."

[24] Alta: "Ek sou sê dit is 'n *distinguishing* ding. Maar weereens word dit 'n klasseding. Word dit 'n, uh, om 'n *environmentally conscious lifestyle* te voer beteken jy't al die regte dinge gelees. Jy koop die goeters by die regte plekke, jy… so daar is iets vir my, uh, wel, deel daarvan, *claim* ek dit op 'n manier wat ek voel my *distinguish* op 'n manier. Op 'n ander vlak voel ek ook… *embarrassed* daaroor en verstaan ek hoe problematies dit is. Um. En ja, ek dink dan gaan dit ook gepaard met 'n sort, um, skeptisisme. Ek weet nie of dit énigsins help nie… of dit nie net maar 'n soort *signalling, virtue signalling* is, um, ja. En 'n soort *trendy*… dit sê iets van jouself, meer as wat dit iets anders doen. So dit is maar vir my *ambiguous*."

Historian Frank Trentmann (2016:7) notes that a major framing force for consumption "has been morality, and it remains so today". Yet, what constitutes moral behaviour "also change[s] over time, as ideologies rise and fall and material realities change" (Trentmann 2016:7).[25] Since environmental responsibility is a growing concern for consumers in the twenty-first century, especially among younger generations, research efforts have sought to identify, analyse, and understand the 'green consumer' (Wilson 2016:395). The emerging picture of green, ethical, sustainable, or responsible consumption is of a process that is strongly influenced by consumer values and habits, yet is highly complex, diverse, and context dependent (Peattie 2010:195). Sustainable consumption scholar Tove Rasmussen (2013:sp) avers that the "diversity of consumption practices has increased and that sustainable forms of consumption have, at the same time, become more complex".

Research suggests that a sense of pleasure and reward is important in campaigns aiming to redirect consumption towards more sustainable practices (Soper & Thomas 2006:3). Within the eco-friendly and minimalist discourse, this pleasure often derives from purchasing 'high-quality items' that are said to have 'increased durability' because of a focus on the materials applied and the way a given item was made. Selecting such products is thus a *designed* consumer strategy "standing in opposition to the acquisition of mass-produced, cheap and low-quality goods" (Dopierała 2017:74). Green consumption is thus characterised by ambivalence: on the one hand, it is a "negation of hyper-consumption", while, on the other, "it remains in the realm of consumer logic, with the vector shifting towards high quality goods, experiences and sensations" (Dopierała 2017:81).

From this standpoint, the type of "contestation" proposed by green consumption is as commercialised as are other forms of rebellion, opposition, and resistance to dominant practices (Dopierała 2017:75). In the twenty-first century, sustainable consumption becomes a contested concept that is highly context dependent and multifaceted, both in theory and as a set of practices.

In conclusion, this assemblage traced the affective flows between Alta, environmental consciousness, readiness to change certain habits, beliefs, the effects of social media, hybrid consumption patterns, suspicions, and anxieties surrounding sustainable consumption.

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[25] For example, artist-designer William Morris's ideas in the second half of the nineteenth century promoted forms of consumption that focused on handmade production and craftsmanship, which re-enchanted that era's 'ordinary' consumption, namely the Victorian era's preference of industrial 'progress' (V&A 2018).

- ***Susanna – menstrual cup – embodiment – achievement***

While listing the lifestyle changes she made, Susanna mentioned that she was using a menstrual cup.[26] Over the past few years, reusable feminine hygiene products have become more readily available and have been increasingly considered to be 'greener' alternatives to conventional tampons and menstrual pads (Borowski 2011:5).[27] Susanna initially had many questions: is it safe to use? Can it be sufficiently cleaned? Will it hurt me? Who can use it? Although she had been using the cup for around a year at the time of our interview, she continued to feel "anxiety about going to [a public] bathroom":[28] it is messy, she heard somewhere that the blood could stain the toilet, she would have to wash it… Yet, she felt a sense of achievement every time she inserted it correctly.

Here, one assemblage between Susanna and her menstrual cup might look like this:

> Susanna – menstrual cup – bodily awareness – anxiety – public restrooms – messy – hygiene factors – reuse – new – experiment – information – how? – product reviews – less waste – tampons – smartphone application, *Lunar calender for women* – hippy – moon cycles – pride – personal accomplishment – interview – researcher – storytelling

Many affects assemble between these heterogeneous elements. Firstly, Susanna considered herself to be more environmentally conscious by using a reusable menstrual cup instead of tampons. This shift away from disposable feminine hygiene products (conventional tampons and sanitary pads) forms part of recent trends that indicate a growing backlash against disposable products, such as plastic water bottles, plastic straws, and HDPE shopping bags, due to their long-lasting environmental effects (Borowski 2011:17).[29] Susanna explained that she informed herself by looking for sources and reading reviews on eco-friendly hygiene products. Her practices were thus mediated by beliefs around 'green' consumption options and the physical

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[26] A menstrual cup, worn inside the vagina to collect menstrual blood, is typically made of flexible, non-absorbent medical-grade silicone that is sanitised between uses. Menstrual cups are reusable for an estimation of five to ten years. An increasing number of brands are being manufactured in several countries (Beksinska *et al* 2015:152, Borowski 2011:25). Apart from its 'green' benefits because of its reusability, menstrual cups are also considered to save users money over time (Beksinska *et al* 2015:152).

[27] The return of cloth nappies for babies and the elderly also forms part of this discourse and was sparked by the same environmental concerns of non-recyclable, single-use waste production. Another participant interviewed in this study, Mary, explained that she was the owner of a cloth nappy company, produced them herself, and used them for her child. Although sparked by a similar concern (reducing single-use plastic waste), an assemblage of Mary and cloth nappies would have looked vastly different than the assemblage of Susanna and a menstrual cup, which opens up possibilities for comparative studies.

[28] Susanna: "[Dis amper vir my meer van 'n] *anxiety* om badkamer toe [te] moet gaan in die publiek."

[29] Although menstrual cups have undergone rigorous scientific reviews since the 1980s, discussions on environmental and health concerns posed by the feminine hygiene industry remain few and far between (Borowski 2011:7,25).

implications of the menstrual cup itself. She recounted her initial skepticism because "it's something that you absolutely did not grow up with".[30] Yet, as part of a growing awareness of eco-friendly alternatives, she started using a cup. The preference of 'green' products resulted from a complex process influenced by her values, habits, and consumer context (see Peattie 2010:195). A combined sense of personal achievement and large-scale 'care' for the planet significantly influenced Susanna's continued use of the cup.

Further, Susanna willingly spent time familiarising herself with practices surrounding the use of and care for a menstrual cup. She considered it a "massive achievement to be able to say that I don't dirty anything or add to the earth's destruction by just being myself".[31] This shift in habit ties in with Douglas' (1966) unpacking of perspectives of the human body in which bodily boundaries are traditionally read as representative of ideas concerning purity, where fluids from the body, such as menstrual blood, are perceived as 'dirty'.[32] In Chapter 10 of *Purity and Danger* entitled "The System Shattered and Renewed" Douglas (1966:160) traces how cultures' structuring capacities come to classify and reclassify stuff as sometimes pure and sacred, and at other times as impure or dirty. Instead of consistent "dirt-rejecting" throughout time, she notes, one finds "examples of dirt-affirmation": in a given culture some kinds of behaviour, at a specific stage, are "recognised as utterly wrong", until "suddenly", some of them are singled out "and put into a very special kind of ritual frame" (Douglas 1996:166). Susanna – informed by eco-conscious discourses in the twenty-first century – therefore experienced (organic) menstrual blood (not long ago in history castigated as 'dirty' bodily 'waste') as purer than (inorganic) plastic sanitary products, which are increasingly framed as impure, wasteful, and polluting by said discourse (Douglas 1996:52).

Other materialities, such as media platforms that play a central role in the construction of contemporary consumer culture, including sustainable consumption (Rasmussen 2013, Peattie 2010:212), could be included in this assemblage: Susanna found "quite a lot of information"[33] on various online platforms, including YouTube and Instagram. She also chuckled when she showed me a menstrual cycle tracker application. She described the application on her smartphone as "very hippy", "ridiculous", "super useless", "Chinese" and "fake", laughed, and

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[30] Susanna: "Dis iets waarmee jy absoluut nie grootgeword het nie."
[31] Susanna: "Dit is wel soos 'n massive achievement om te kan sê ek maak niks vuil, of dra niks by die tot die aarde se verwoesting deur net myself te wees nie."
[32] Douglas's (1996) reading of the body became influential in reframing engagements of the human body as part of the cultural and performative turn.
[33] Susanna: "[So daarvoor was] redelik baie inligting [beskikbaar]."

continued that it was nonetheless “interesting”.[34] Plugging more components relating to these materialities into the current assemblage could reveal affective interactions between, for example, gender politics, marketing campaigns, and smartphone application experiences.

- ***Gabo – city and rural living – nature – pollution***

One of the first things Gabo spoke about during our interview was her experiences of growing up in a small village in Limpopo, a time in her life that she loved. She explained that her environmental consciousness stemmed from her exposure to the rural countryside as a young child where she was raised by her grandmother:

> I grew up knowing that, um, and also learning from the older generation – my grandmother and so – that everything in nature has its own timing. […] I think, if you don’t grow up, um, from a young age, um, like, closely with nature and living form *that* land itself, um… ’cause you know that’s where your food is coming from. […] So, you can’t just leave it, can’t just destroy… you can’t destroy it. So, it’s… you balance that life.

In 2010, at the age of 17, Gabo moved to Cape Town to pursue her studies in atmospheric science and nine years later, she received her PhD degree in oceanography. She remembered spending her childhood “in a very clean environment” in contrast to the “dirty” city where the first things she noticed “was the air [and] the noise”:

> *Oof*. The air is… it’s heavy. You know there’s this chemical smell of car exhausts, like the fumes, the, the factory. Noise. A lot of noise in the city, because [in the village] it’s quiet. […] So that’s one, that’s things that I’ve noticed when I arrived here. There’s a lot of noise and distraction and pollution. Ja.

Gabo’s engagement with her environmental consciousness could reveal the following relations in an assemblage:

> Gabo – village life – close to Polokwane, Limpopo – grandmother – balance – nature – youth – Cape Town – city life – pollution – air health – ocean health – interconnectedness – one system – plastic pollution – pollutants – studies – PhD – oceanography – France

This assemblage demonstrates that Gabo’s consciousness of environmental matters could have been closely mediated by her distinct ideas about living in a village versus living in a city. During our interview, Gabo mentioned that being in the village “helps [because] “it’s like an anchor”, whereas she “detaches [her]self from nature” when she is in a city because “there’s so much

[34] The only Afrikaans words in this description was “baie” (‘very’ before ‘hippy’) and “interessant” (interesting). Here is an opportunity for the study of a language assemblage.

distraction that you don't even appreciate your surroundings". She predominantly spoke about 'nature' in ways that evoked a nostalgic longing for a cyclic, gentle and balanced space free from pollution.[35] Gabo's experiences were thus further shaped by how she thought about 'nature' or 'the environment'. Because this culture/nature binary is constantly perpetuated and seemingly 'normal', romanticised views of nature as separated from humans continuously saturate human consciousness and the broader public's understanding of the natural (Eaton 2019:84). As Fox and Alldred (2017:154) note, there is "nothing to prevent" the micropolitical (in this case, Gabo's personal experience and memories) and the macropolitical (in this case, naturalised and often uncontested constructs such as 'nature') "being drawn into assemblage, to the extent that one may affect or be affected by the other".

Because this culture/nature binary is constantly perpetuated, romanticised views of nature as separate from humans continuously saturate human consciousness and the public's understanding of the natural (Eaton 2019:84, Emmett & Nye 2017:101). The "very terms in which the culture-nature relation is framed in much environmentalism limit how new relations might be imagined" (Hawkins 2006:9). This dovetails with a description made by columnist Tom Eaton (2019:82) of 'nature':

> When we talk about 'nature', what are we talking about? Well, most of us are probably talking about an idyllic expanse of geography teeming with life. It's not so much a place as a collection of places, untouched by humans, unscarred by parking lots and strip malls. It is a place completely separate from humanity, lying just beyond the graffiti-emblazoned, oil-smeared borders of our world. Humans, we have been taught, are not part of nature.

From an art-historical visual culture perspective, such myths about nature were significantly influenced by discourses of the landscape.[36] Landscape, anthropologist Jonathan Cane (2019:5) notes, is "always the attempt at transforming nature or land and the open-endedness of our relationship to these, into a space of ownership, possession, belonging; a stabilisation of the present and desired future formations of power into something seemingly permanent".[37]

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[35] For example, alongside Gabo, also Susanna, Jack, Sammy, River, Chris, and Hellen spoke about 'nature' as something serene, healthy, and cyclic. Like Gabo, River and Sammy felt that being close to 'nature' gives them the opportunity to be more 'connected' to the world around them, posing such experiences against their lives in cities.
[36] It is important to acknowledge the Eurocentric roots of constructions of nature and that not all cultures "embrace nature and landscape myths with equal ardour, and those that do, go through periods of greater or lesser enthusiasm" (Schama 1995:15).
[37] Within the field of literature studies, novelist and essayist J. M. Coetzee's influential book, *White Writing: On the Culture of Letters in South Africa* (1988), provides a perspective on the representation of the South African landscape by white writers who aim to demystify their relationship with the space.

Further untangling the dichotomy of urban (bad and unsustainable) versus natural (good and cyclic) spaces, childhood and sustainability scholar Karen Malone (2018:62) notes that, although the growth of urban living and sustainable development often seem incompatible, there is a strong possibility that cities will be the only way to create a sustainable future for humans and their nonhuman companions. If the human population does continue to grow at the predicted rates, high-density urban environments will be the most effective to accommodate and provide infrastructure to the billions of new inhabitants. This is because cities could potentially concentrate activities and provide resources such as water, roads, electricity, and sewage treatment that are commonly absent in rural areas (Malone 2018:62).

This (and other) combination(s) of childhood memories, her grandmother, beliefs, heightened awareness, observation, personal disposition, and knowledge have an affective impact on the way that Gabo engaged with environmental issues. This assemblage thus consists of material components – in this case the environments of a rural village and a city – and seemingly immaterial components which require materiality to be enacted, including discourses and beliefs regarding 'nature', Gabo's personal memories and the affective flows between these components.

- ***Compost heap comparison: Rainman – therapeutic – time | Jack – pleasure – degradation***

This section briefly compares how an enjoyment of the same pro-environmental action, namely composting, was brought about for Rainman and Jack in two different ways. The two assemblages may in each case contain, apart from a composter and the act of composting, the following diverse relations:

> 1) Rainman – composting – time – labour – garden – sunlight – therapeutic – routine – COVID-19 – lockdown – computer – accidental gem squash! – vegetarianism – yogic teachings – mother – loss
> 2) Jack – composting – "one of those great pleasures"[38] – organic material – biodegradable – kitchen – small container – pride – landlord – not smelly – not "grossed out" – little waste

In the first half of 2020, Rainman dug a compost pit in the backyard of the house he is renting with five other housemates. When he "was first setting it up I spent maybe a day, like, you know, digging a hole, basically [laughs]". He found that it was "actually nice to be outside, doing some

[38] Jack: "[…] een van daai groot plesiere."

manual labour": "once a week, once every two weeks I have to do a bit of digging so there's not too much [work]". He explained that the strict COVID-19 lockdown regulations that were in place for the larger part of that year, and especially spending time indoors "mostly just [sitting] at [his] computer" for hours further shaped his engagement with composting:

> Ja, so especially, like, when lockdown started, um… for a, you know, for a while, like, I guess we all probably went through a thing of… kind of like a twilight zone. And then, I, I started a thing where I said, okay, like, I put a chart of, like, things I wanna do. And I say, alright, like, like, each day if… if I just spend five minutes in the garden, pulling out weeds, you know. Like, as long as I get outside, get some sun, like, you know.

The affective flows between the materialities as set out above reveal how each impacts the other. Rainman's new habit – to turn the compost pile once every week (or once every two weeks) – was instilled by a combination of heterogeneous materials that co-exist in this assemblage. Reflecting on the shifts brought about by COVID-19, Erll (2020:862) notes that the crisis has "subjected people around the world to new rhythms": the pandemic and resultant worldwide lockdowns have shown how "seemingly 'natural patterns' of social time can break down and be thoroughly repatterned". Due to this new rhythm, organic waste's position becomes contingent, because the attention and time involved in managing a compost pile affects Rainman, as composter, emotionally and physically by changing where and how he spends time in his week (Hawkins 2006:119). Further emotional elements also tied to Rainman's engagement with composting and spending time outdoors. He mentioned the passing of his mother, who enjoyed gardening herself, in 2017. He mentioned that he "really got into [working in the garden] for a while" and found it to be "therapeutic": "you know, just those five minutes pulling out weeds, like, it really helped me to heal a bit". The memory of Rainman's mother further mediated his relationship with spending time in the garden and engaged his body psychologically and physically.

Whereas Rainman expressed the "health" and "healing" effects of *physically* managing a compost pile, Jack's habitual engagement with composting was centred on another factor: during our interview he shared his fascination with the natural process of organic matter's degradation in a compost pile. Although he was not in charge of their compost heap's upkeep (his landlord did this), he was proud that he could responsibly "deal" with his organic waste. Jack expressed that he enjoyed the idea of renewal implicit to biodegradable materials and therefore willingly spent time separating organic waste from recyclables and other waste. He stated that he felt proud

"every single time that I throw organic stuff in my container [in the kitchen] and then on the compost heap".[39]

In Jack's engagement with organic waste, a compost bin became a "site of beauty and fecundity" which revealed a "responsiveness to waste" (Hawkins 2006:37). Jack added that he was sometimes frustrated when friends came over who were "grossed out by these fruit [scraps] and stuff that is going through the natural process of decomposition, except when it [smells] bad. But is doesn't't".[40] The environmental discourse has reframed – at least in some instances, such as Jack's – organic waste, which was until recently seen as "destructive" or "dirty", as a "creative" solution to environmental problems (see Douglas 1996:160).[41] This shift is equally present in the case of plastic: to develop ethical justifications for the particular habits demanded by disposable plastic objects around the mid-twentieth century, it was promoted as a clean, pure, and convenient material (Hawkins 2006:26). To, again, develop ethical justifications for a *shift* in habits, plastic in the late twentieth century and into the current century is increasingly framed as environmentalism's 'scapegoat' due to its slow decomposition rate and detrimental effects (Hawkins 2006:26, Davis 2015:353).

Composting, in this sense, has altered waste's value for Jack, by turning his disgust at decay into a pleasure in renewal (Hawkins 2006:119). By denaturalising (organic) waste, it can be placed within the terrain of fluctuating cultural rituals and their symbolic meanings (Douglas 1996:160). The experience of composting, similar to other environmentally conscious actions, differs from person to person. Rainman's and Jack's pleasurable feelings associated with compost – albeit for different reasons – mediate their pro-environmental attitudes and habits.

These New Materialist Analyses gave a glimpse of how one might study environmentally conscious beliefs and practices through a new materialist lens. Paying close attention to assemblages of multiple materialities revealed the constant flux between them. Finally, studying the "entanglement of materiality and meaning" (Dolphijn & Van der Tuin 2012:91), allowed me

[39] Jack: "[Ek voel trots] elke liewe keer as ek organiese goed in my houertjie gooi wat ek dan op die komposhoop uitgooi."
[40] Jack: "Want as ek byvoorbeeld mense innooi wat nie bewus is nie, dan word sommige mense, um, nie baie nie, maar... uitge*gross* dat hier nou vrugte[skille] en goed lê wat nou besig is om deur die natuurlike proses van afbreek te gaan. […] [Behalwe as dit sleg ruik, en], dit doen nie."
[41] This deterritorialisation of organic waste brought about by emerging discourses is similar to how views on menstrual blood has been shifted, as discussed in the assemblage of Susanna and her menstrual cup earlier.

as researcher to embrace social life's "messiness" (Law 2004:3). I now turn to assemblages with humans and memory objects.

6.3 PARTICIPANTS AND MEMORY OBJECTS

6.3.1 Participants' experience of sentimentality and sentimental objects

After discussing environmental consciousness during the interviews, we turned to memory and memory objects. This felt like accompanying each participant – even those who did not consider themselves sentimental – on an assemblage journey, pausing at relevant points to greet a particular object, person, or event. Rhizomatic assemblages branched out between bodies, objects, and ideas. Some overlapped, linking multiple memories or objects at once, while others were more firmly anchored in very specific moments. I often heard words such as 'nostalgia', 'comfort', 'time', 'family', 'connection', 'value, 'meaning', 'attachment', 'burden', and 'hoard'.

Participants had varying connotations with the term 'sentimental person' (Figure 6.8) and further expressed sentimentality in many different ways (Figure 6.9). These connotations probably informed the wide range of positive, negative, or neutral relations participants had with the term 'sentimental'. Participants' associations with their sentimental objects included diverse emotions ranging from nostalgia, comfort, contentment, pride, and joy to anxiety (Figure 6.10). Together, we engaged with specific memory objects, some of which I photographed afterwards (Figure 6.11). Some took an object from a box, bag, or larger pile of items and held it in their hands, feeling its texture or weight. In some cases, the participant's eyes met mine, in others, their eyes remained transfixed on the object while telling its story. Some first pointed to an object, after a moment scooped it up and, while rolling it around in their hand, told its story. When an item was large or in another part of the room, some pointed to it while giving some background, while others got up, walked towards it, and slid a hand across its surface. Sometimes I was invited to a different space – the garden, the kitchen, the bedroom – where we inspected objects together.

Gabo, who saw herself as a sentimental person who 'stored' her memories in her mind, had no sentimental object to show me except for a photo of her son. Sporadically, an object was not present at all, as it was kept in a family member's home, safe, or storage. In Benjamin's, Lilly's, and Chris's case, I did not conduct the interviews in their home, which elicited another type of engagement with their memory objects. Benjamin brought along a tiny car toy that he used to leave in his car, whereas Lilly and Chris showed me photographs on their cell phones. Regardless of where the interview was conducted, some referred to what they saw, smelled, or felt. Hands

dotted significant moments in stories, silences spoke, and entire bodies took part in the conversation. The figures below explore these aspects, as gleaned from the interview narratives.

Figure 6.8 | **what do you understand under the term 'sentimental person'?**

EARL Oh! [Chuckles. Pause.] I think when I think of a sentimental person, […] I would probably... probably think of an older person. I'm actually now picturing someone like my grandma. Grandma with this massive photo album of everyone and she has that, that cookie jar with unnecessary stuff stored inside. Ja, stuff that she keeps and then takes out, "*ag*, look at this". It's like unnecessary shit from years ago that you keep somewhere in your house and talk about when someone visits.

ALTA So, I would say, sentimental is that you have a sort of... um, attachment to things that signify something for you. And then you attach that important thing to other things.

MARY I must say, for me, it's not a word with a very positive connotation. For some reason, I have a bit of a... if someone describes someone else as sentimental then it's not necessarily something that I admire about them. […] It makes me think of someone who's a bit *soetsappig* [soppy], hm, or, ja, someone who also lives a little in the past. […] There's also another aspect [to it] that is not so negative. It's maybe just someone who lives a strong emotional life that isn't necessarily about the past, but even someone that experiences life in a rich, emotional way.

BENJAMIN I think it's, uh, it just relates to, you know, associating value to memory. And that's… that for me, I think, is somebody that holds value in things that have happened and, uh, you know, it has an impact on shaping who they are. Hm.

NICHOLAS I think as a kid I was extremely sentimental. I was kind of a hoarder. I hoarded stuff and put it away and archived it. Made lists of things and had collections of stuff. And was hysterical if I could not complete a collection of something.

SAMMY Being sentimental is adding value to something. But also, to memories. Not just necessary things. Ja, so adding value and connecting memory to a thing or an event […] that happens.

GABO Um… [pause] I think that, for me, a sentimental person would be someone, like, you have really… they made an impact? In my life. And you know, they left you with, um, good memories that you can always go back to […] and still learn something from it or take something from it. Yeah.

FRANCES [Pause.] Um, [pause] I suppose I tend to see my aunt's house. My aunt is in England, my dad's English. And she has lots of books, so, lots of books. But she's also… like, she's collected a lot of interesting things throughout her life. She lived in Malta for many years, she travelled to India. So, she always had interesting things to look at. I think as a child that always fascinated me.

RIVER Um, ja, obviously people who add a certain value to stuff around them, stuff that have memories. That's what I think about. Not much else.

RAINMAN [Pause] Hm. So, like, I thought about this when you sent this message [asking me to think about what sentimental objects I'll show you during our interview]. So, when I say I'm… there's spirituality and all that, like, I don't just mean that I do stretching and stuff. So, um, in the yoga philosophy there's a very important concept, uh… I can't remember the Sanskrit word for it now, but it's basically non-covetousness. So, so you shouldn't covet after, uh, physical objects. But, at the same time, you know, I think, having sentimental value, like you can... you can have sentimental value for something but not be attached to it.

Figure 6.8 cont. ⟶

HARRY

I see my wife. She's sentimental. So, my association with the word… I mean, she likes to take lots of photographs. Uh, she likes to… save… sort of, heirlooms. She likes to document special dates. I think that sort of thing. […] It would be interesting to hear her view. Because it could be that she sees me as sentimental?

CYNTHIA

Sentimental… um, I don't understand how someone cannot be sentimental? [Chuckles.] Um, yeah. I think I just function in that way. Objects, like… you develop relationships with objects and then it ends up having quite a bit of meaning. Because of probably, like, who it came from or who you had an experience with, with the object. Yeah.

HELLEN

I think of someone who attaches value to something. Or a... usually I think of a something, a physical something. […] Probably also a place [with sentimental value]. Someone who is sentimental about... ja, places and vacations and stuff that people give them. Even if it's a small gift, a little flower.

JASMIN

I think that… I don't know how to answer this! It's such an abstract… [long pause]. I have sentimental things, you know. Things that have, like, a lot of meaning to me. Things… it doesn't have like, um, monetary value. There are things that come to mind... things that could never be replaced. Ever. […] But I think sometimes being sentimental can make you weak, you know? From personal experience, sometimes being sentimental can make you weak. 'Cause you hold on to these memories and the other person doesn't.

LOLO

Uh, in some ways I almost have a negative concept attached to the word sentimentality, because I think things can weigh people down. So, if you are too tied to physical objects, um, it creates burden, it's your freedom of movement. […] I think one can be too sentimental.

HIBISCUS

[Pause.] Ah, I always struggle with that actually [chuckles]. I thought about it. […] 'Cause for instance, my mom's a Libra, and she's really… she really attaches a lot. I think [that's] why I got the de-attachment thing. Growing up I was surrounded by someone who'se always just attached to items. And I always feel like, but it's just an item! I'd say [my mom] is, she really is. It depends, yeah. Your background really has a lot of influence on that, hm.

LILLY

I see my mom and my gran. My mom abides by tradition. […] She believes she has to be in Paarl every Christmas. And we try to tell her, "We don't have to, let's break tradition". "No, but we've been doing it for years!" [Laughs.]

SUSANNA

Um, I think it's someone who values… rather small objects or… even perhaps services... I am now thinking of the five love languages, for some reason... [Someone who] appreciates and cherishes anything small. If their house should burn down, they would rather take that than important documents. […] Someone who sits and... well, I am now going to describe myself, because I see myself as a sentimental person, but you can, for example, spend time with your stuff just to really appreciate it. Like, you make time to think back on what this object means to you.

CHRIS

I think… a sentimental person is someone who, who values things. […] Someone who holds particular things very dear to their heart, such that they would want to preserve them.

MO

Um, sentimental. It's someone who attaches… memory to objects. Memory, meaning, feeling, life, to objects. So basically, they're humanising objects. That's what [sentimental is] for me.

JACK

Someone who attaches emotional value, that cannot be quantified, to certain tangible [makes inverted commas with fingers] objects. In whichever form, big or small.

Figure 6.9 | **do you consider yourself sentimental?**

Below are participants' diverse responses to this question plotted on a continuum (which is also referred to in later figures as the "sentimentality continuum").

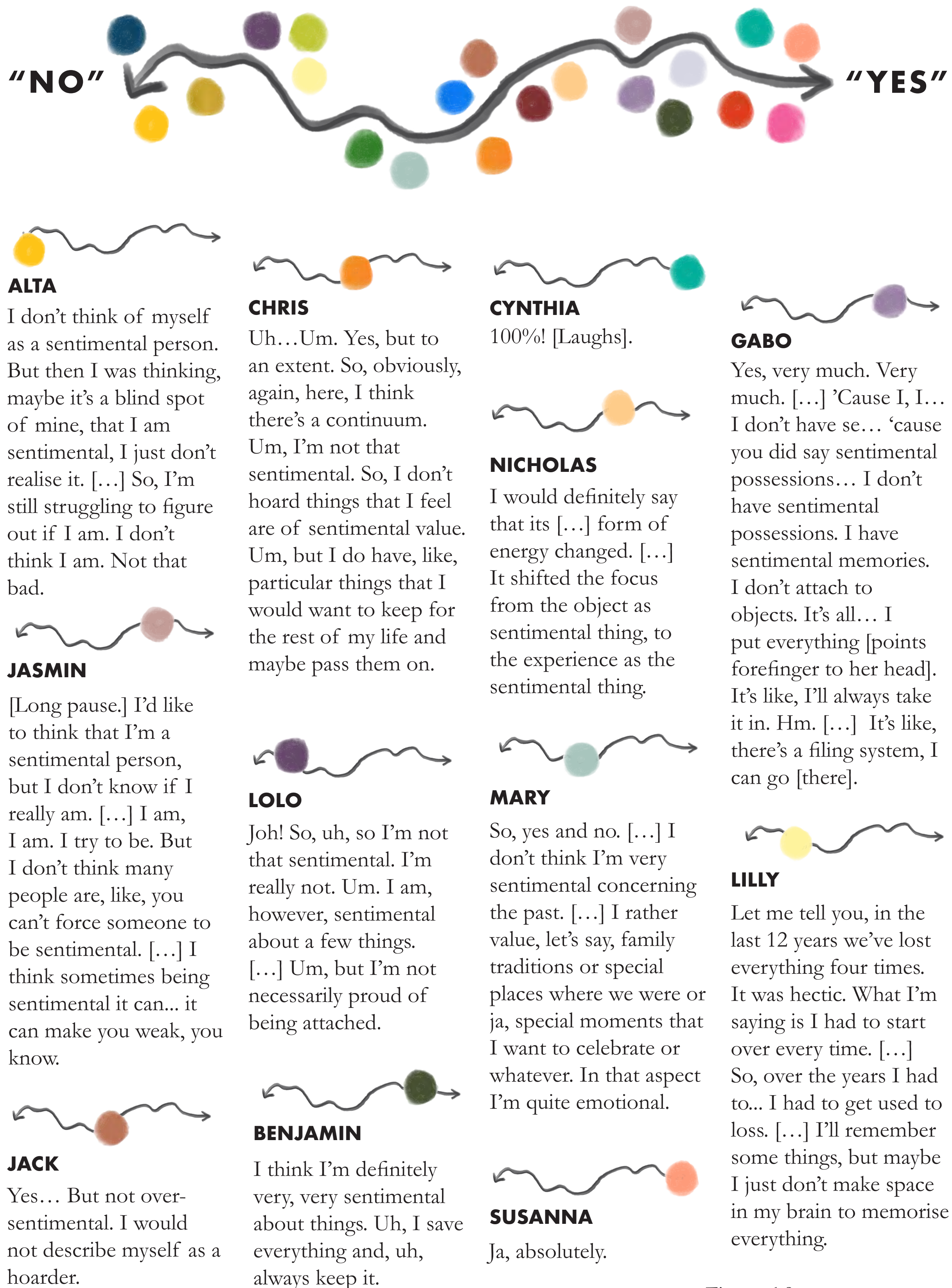


Figure 6.9 cont. ⟶

do you consider yourself sentimental?

RIVER

I'm not really. No. No. I mean, about weird stuff. And I have now realised that sentimental value is not necessarily... I've had something now for so long that it's become sentimental. Like, [chuckles], "We had it coming: I have moved around so many times with you, I now feel attached to you. I can't get rid of you. It's a part of me now!" […] But I'm not very sentimental.

FRANCES

Yes. Ja, I think it's a family thing. […] My parents also moved around a lot, so, they also have a lot of objects they collected on their travels. […] They didn't get rid of those collected items that they'd picked up, because that was part of their life.

EARL

Oof! To a ce... to a certain degree […]. I don't like hoarding stuff, but if something is extremely important to me or if... ag, it probably makes me a sentimental person, but the hoarding element I don't like. There are certain things that I attach sentimental value to, that I'll keep. v I just can't deal with hoarding. That frustrates me endlessly.

HIBISCUS

I always struggle because I'm an air sign who flows. I… attachment is really… [pause] I don't know how to put it, but I'm not a person who easily gets attached to… items. Perhaps when I'm like 80, and going through my life journey and some of the things that I have. "Oh, this is… this is what's happening here." That's when things would be sentimental?

SAMMY

Yes, I think so. I'm very sentimental. Especially with… I used to be with things. […] Now it's nice, just take some pictures of it and you store it on the cloud. But yes, I'm sentimental. With […] little things.

HELLEN

Ja, up to a point, because I feel that anything that… becomes an issue, you should rather let go of. So, if it fits in with your... if you have enough space, for example. But as soon as you don't have space anymore, then it's... then those sentimental things are actually a bad part of you. So, I try to keep things if it's really, really... I try not to attach sentiment to everything. I'm not sentimental about every little thing, except the stuff that I regard important, because of the people [I associate with the object].

HARRY

Hm... Not really. I might be, but I don't think of myself like that. I've had to learn to be sentimental in order to value the same things [as my wife].

RAINMAN

[Pause] Ja. I guess, I guess I would say so. Um, so there's something to say, I guess, like anyone who observes traditions. Like, a lot of it's there for sentiment or like to honouring, you know, our ancestors or honouring earth […] So yeah, I suppose.

MO

Hm [nods in agreement]. […] So, it's like, for me it's really hard […] to lend books. Like, I really… I feel like I'm missing a… even if I haven't read the damn thing or I'm not reading the damn thing, I really feel like a part of myself is being given.

Figure 6.10 | **what is the most prominent feeling when you think of your memorabilia?**

Participants described a range of feelings (commonly assumed to be positive, negative or somewhere in between) that they connoted to their memory objects. Taking the continuum into account, participants who describe themselves as sentimental and those who do not describe themselves in this way, often referred to the same feelings.

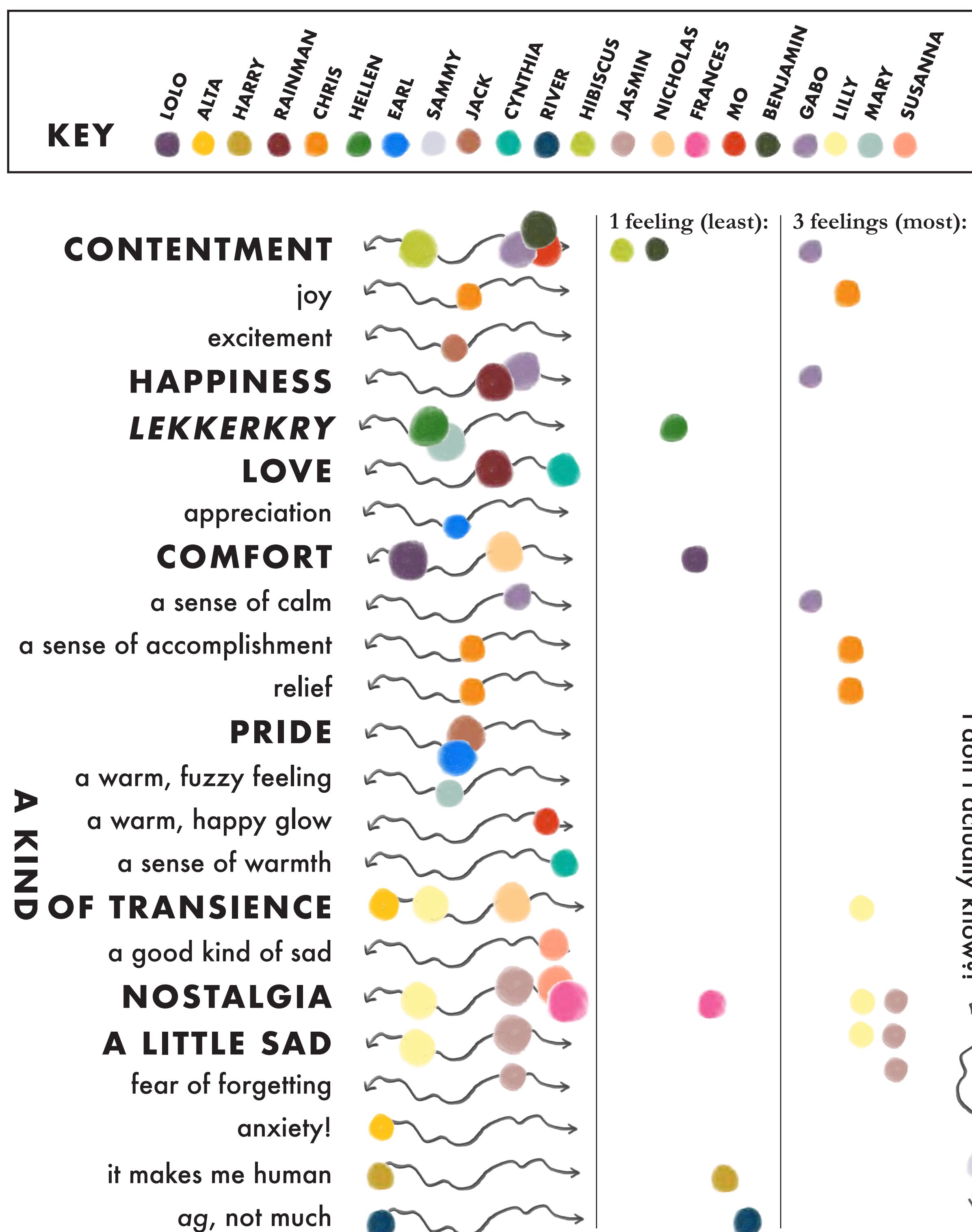


Figure 6.11 | **what objects are you sentimental about?**

This figure provides a glimpse of the sentimental objects that participants share their space with. First, similar objects mentioned by more than one participant are summarised. Thereafter, each participant's objects are treated individually. Although many memory objects were shared during the interviews, only photographs of the most prominent ones (generally, those we spent more time discussing) are included here. *Wording by the author.

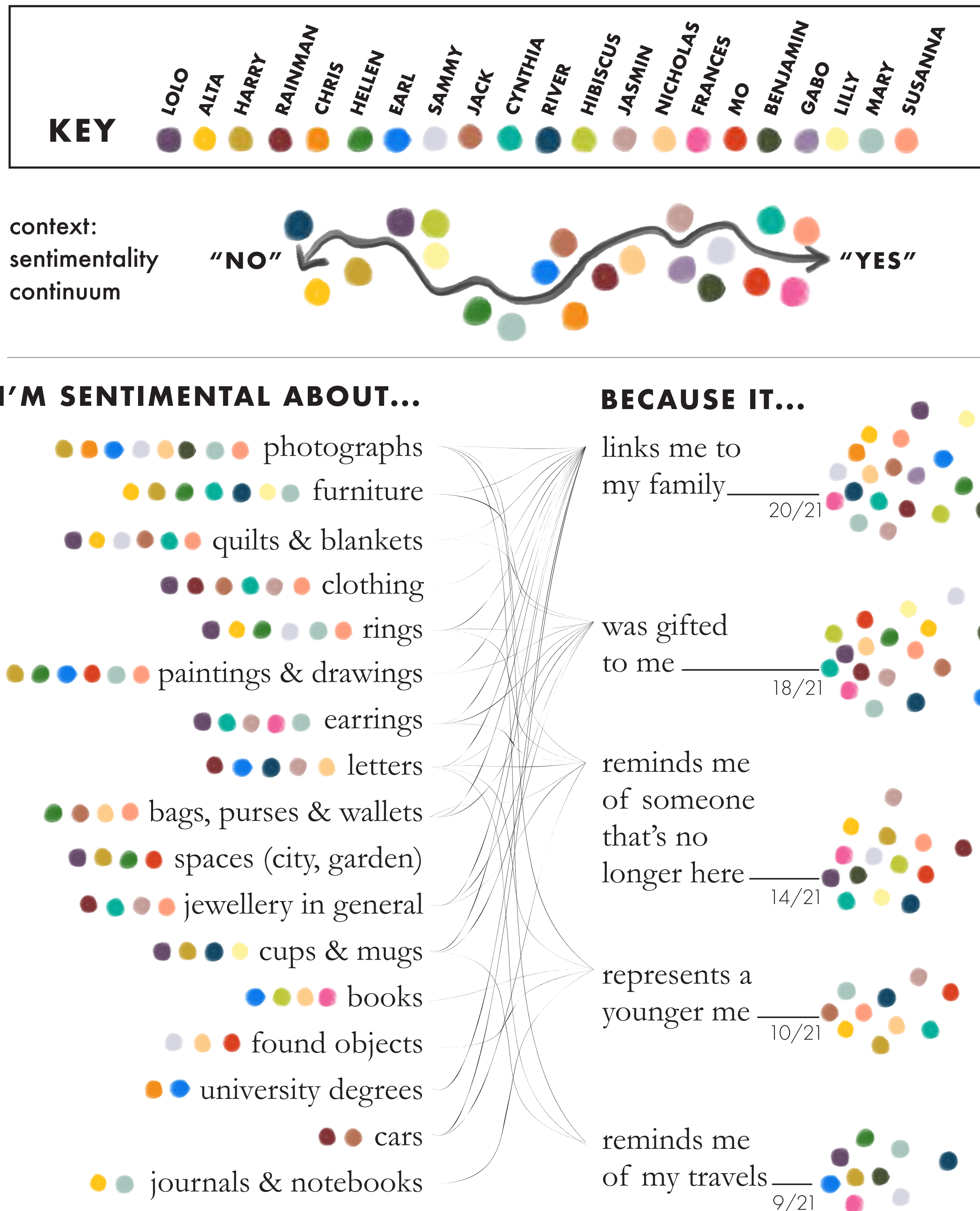
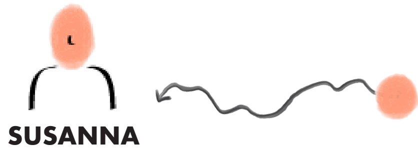


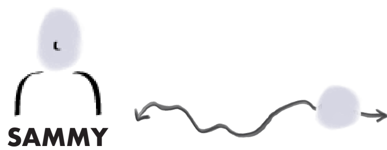
Figure 6.11 cont. ⟶



I value

• my gran's carved wood key holder and a painting I made together on my flat's wall • a quilt my gran made • my gran's ring and Kruger coin necklace gifted to me by my dad

(and) my gran's apron, my gran's handbag

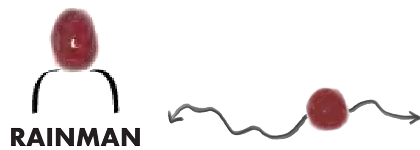


I value

• a ring I picked up on our school rugby field 16 years ago and a ring gifted to my mother by a lady she took care of • a quilt my mother made me • music boxes I got from my sister

(and) random glass bottles my mom collected, a travel pillow my mom made

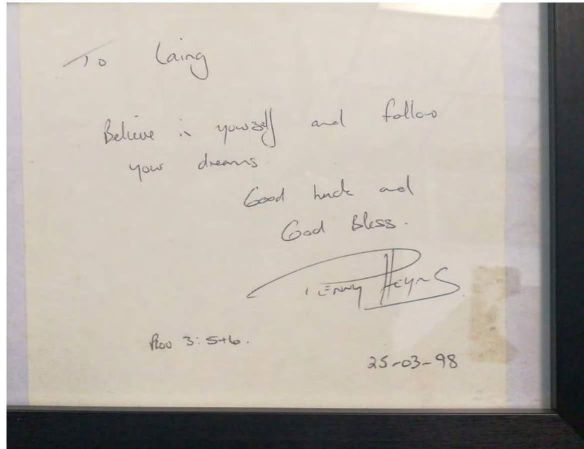
Figure 6.11 cont.⟶



I value

• a pendant that belonged to my mom before she passed away • two books I got in India and my Bible from my youth • a personalised note by South African swimmer, Penny Heyns, from 1998

(and) my mom's car, a loi gifted by a guru when I was in India



To Laing

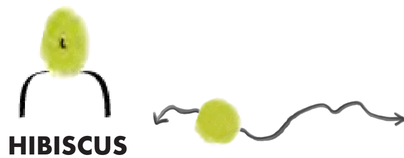
Believe in yourself and follow your dreams

Good luck and God bless.

Penny Heyns

Prov 3:5+6.

25-03-98

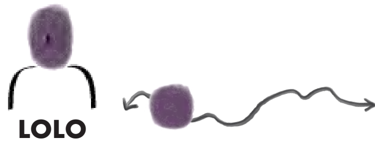


I value

• my gran's straw mat, snuff (mixed with cinnamon) I use when I speak to my ancestors, people's stories (like the ones told in this book, *Hot Type*) • my hands because they remind me of my mother

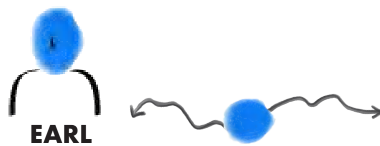
(and) my gran's calabashes (they are at my mother's house)

Figure 6.11 cont.⟶



I value
• the sewing machine that belonged to my sister before she passed away • three of my grandmother's rings • a quilt my grandmother made

(and) my gran's sewing machine, mugs from our travels, a few pieces of furniture, my sister's clothes



I value
• my books, in particular my *AWS* and *HAT* • cards from friends and students • a box with letters students made me when I left that school

(and) my university degrees, a painting a student made for me (these are at my mom's house)

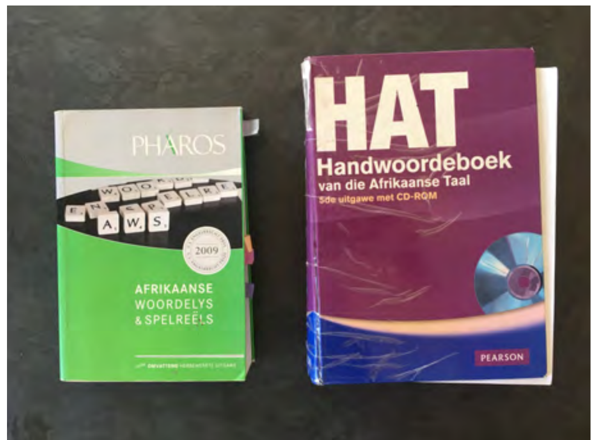
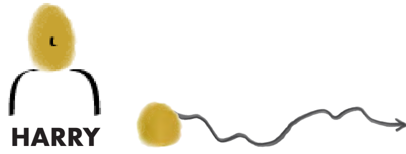
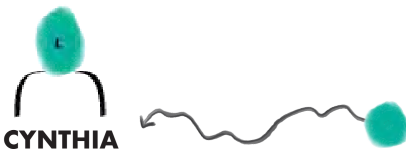


Figure 6.11 cont.⟶



I value
• my son's bike • a print of the Tree of Life • beautiful cups I bought on a trip in England

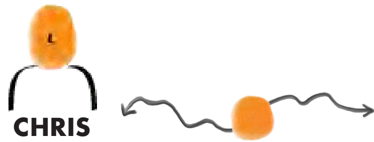
(and) my tricycle, a photo of my meditation mentor who recently passed away, furniture made by my father and grandfather, a kaballah drum, a painting of the Tree of Life my wife made



I value
• a jersey my mom knit me • earrings that belonged to my grandmother • a shirt from when I was a baby

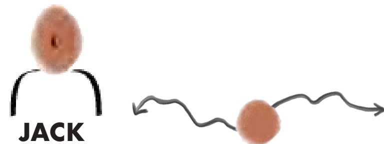
(and) other pieces of jewellery, clothes, a quilt my mother made, a few of my grandmother's recipes

Figure 6.11 cont. ⟶



I value
• an old photo, framed in my mom's bedroom, of me and my sister in a park in our hometown of Komani • my university degrees

(and) that's it!



I value
• two of my dad's jackets (I found 20-year old concert tickets in a pocket!) • my wallet from a good friend and my driver's license • my speaker

(and) the shoes my dad bought on his honeymoon, a blanket from my girlfriend, my grandfather's *bakkie*

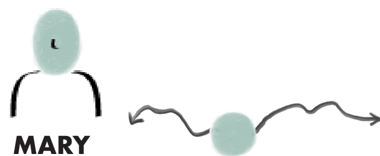
Figure 6.11 cont.⟶

NICHOLAS

I value

• a 'thingy' I used to carry around as a kid • a Bible and bookmarks from my youth • a cane my dad made me as a boy

(and) a red suitcase that used to belong to my mom, some knick-knaks that I store in this suitcase, books



MARY

I value

• my first year architecture notebooks • a pair of earrings bought on every memorable vacation • my grandmother's furniture

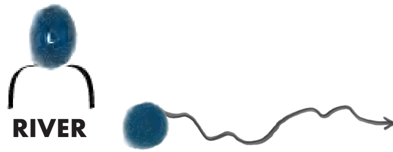
(and) photographs, my flute, a painting I made of my son and a friend, my wedding ring that I designed myself

Figure 6.11 cont.⟶

I value

• a tiny truck that I once found in a Kinder Joy egg at a decisive moment in my life

(and) photographs



I value

• notes from two friends & a boyfriend that I carry around in my purse since my university days • my grandmother's chest • a bag that belonged to my grandfather

(and) a letter from a friend in grade three, cups my aunt gave me

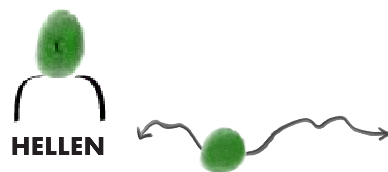
I value the memories in my head, I don't feel that I need any physical objects to remind me of my past.

Figure 6.11 cont. →

I value

• gifts (like the dried flowers, the artworks and the moon-shaped balloon) from ex-boyfriends, students and friends • cards from family and friends • my collection of teddies gifted by family and friends

(and) my grandma's scarf, my grandma's pendant necklace and some other jewellery

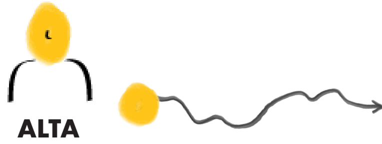


I value

• an artwork (based on a family photo) by my aunt • my garden • boxes filled with memories from my kids' birth • the plants in my garden

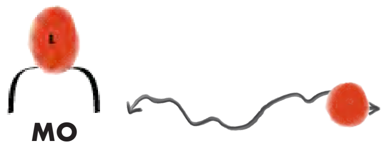
(and) more artworks by my aunt and by my cousin, a cheap ring my nephew once gave me, my gran's dining table

Figure 6.11 cont. ⟶



I value
• notebooks from when I was younger • a quirky quilt that my grandmother made (and hates) • my mother's wedding ring (it doesn't fit her anymore)

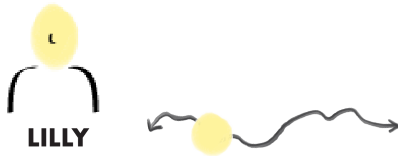
(and) some furniture pieces around our apartment, beautiful views of the city of Cape Town



I value
• a cushion an ex-boyfriend bought in Amsterdam • a quirky candleholder from an ex-boyfriend and a buddah's head from a friend • a paw print of my deceased cat and a kitsch balloon dog ornament

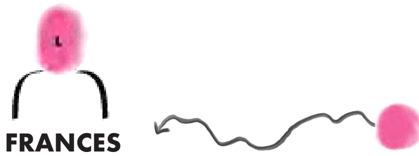
(and) printed artworks and posters around my house, other gifts from friends, some found objects

Figure 6.11 cont.⟶



I value
• my gran's foot stool that I found two years ago at a party at my mom's house • polka dot cups in my favourite colours • the first dining room table that I made (we still use in our home)

(and) two small tables I made, a painting gifted by my parents-in-law



I value
• books, books and books! • my two previous cats' ashes • my selection of 500+ earrings gifted to me by family and friends

(and) a stone my mother had painted for me after my one's cat passing, the cake toppers and ornamental glass bottles from our wedding day

As seen in Figure 6.8, there was no unified understanding of what a 'sentimental person' is, although 'adding value to something' was a prominent thread throughout the interviews. Yet, whereas some saw 'adding value' as a good thing, others experienced it in a negative sense. Similarly, participants had diverse opinions on their own sentimentality. Some believed themselves to be very sentimental, most notably Susanna, Frances, Mo, and Jasmin, whereas others felt uncomfortable with this term and therefore did not see themselves as sentimental, here most notably Alta, River and Harry.

The kinds of objects participants were sentimental about varied greatly in size and shape, age and colour, medium, placement in their home, and perceived value. Some objects – such as rings, quilts, travel souvenirs, and those connected to a kin group or a younger self – overlapped between participants, regardless of each participant's connotation with sentimentality. For example, both Susanna (who identified as very sentimental) and Alta (who identified as not sentimental at all) valued quilts made by their grandmothers. Similarly, Jasmin (who identified as very sentimental) and Harry (who did not like to think of himself as sentimental) equally valued the perceived link between an attachment with family members and sentimental objects. Or, both Frances (who identified as, yet again, very sentimental) and Mary (who identified as only somewhat sentimental) collected earrings, albeit for different reasons. The following section provides New Materialist Analyses of five assemblages assembled during my interviews with participants.

6.3.2 New Materialist Analysis: memory objects

In this section, I explore the affective flows between participants, memories and selected sentimental objects through New Materialist Analysis. Hamilakis (2017:173) holds that memory, alongside affectivity and sensoriality, can be considered key elements of an assemblage. Yet, it is important to note that memories remain just *one* element and "their effects will be balanced out by many other affective relations" (Fox & Alldred 2019:31). Several prominent themes spanned the conversations. Most prominently, in all the interviews the inherent relation between time and mnemonic experiences became apparent. As can be seen in Figure 6.12, Bergson (1991 [1896]:162) illustrates this relationship between time and memory as a cone: the apex touching the plane denotes the present, where all pasts are condensed and co-exist.

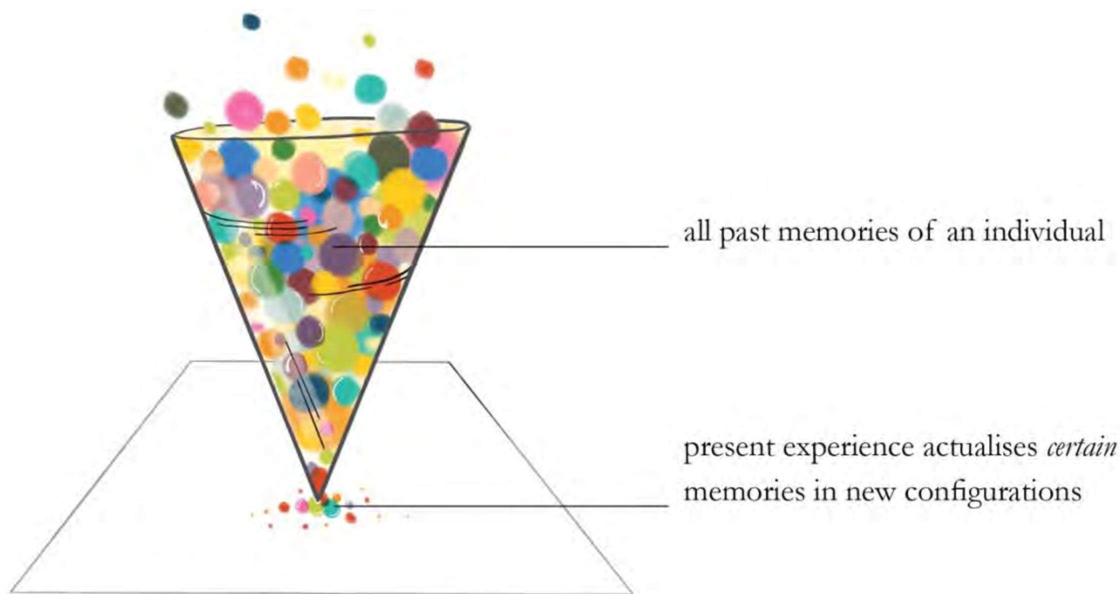


Figure 6.12 | **Bergson's memory cone**

Visual by the author after the original in Bergson (1991 [1896]:163).

For Bergson (1991:163), remembering is not to re-experience the same thing, but to experience something new and to draw the past into a new realm of possibility. Memory is thus not a series of mechanical steps, but rather a sensory and affective experience. Present perception, Hamilakis (2017:174) argues, is full of past memories, but only certain pasts are actualised at specific occasions:

> As far as human experience is concerned, in this process of actualisation [of the past], sensoriality and affectivity are crucial: at specific moments, certain planes of the past, or temporal occasions embedded in matter, voluntarily or involuntarily, acquire *sensorial intensity and affective weight,* and they thus become actual pasts. This is a process of inter-subjective, social memory whereby various rhythms of duration become attuned and synchronised (Hamilakis 2017:174, emphasis in original).

Hamilakis (2017:174) adds that it is precisely because humans are multi-sensorally entangled with and affected by matter that "we are able to actualise certain pasts", although one cannot be sure which past memories will be actualised by a certain affective or material experience in the present. In addition to memories, the physical presence of memory objects helps to "locate, define and freeze in time a fleeting, transitory experience" in the past (Gordon 1986:135). The assemblages analysed below are contingent and highlight specific human/object relations, while deliberately excluding others. In this sense, only certain entanglements with the past are actualised. Beyond temporality, the objects discussed introduce other prominent tropes

associated with memory objects that came to the fore in the interviews, namely transience and death, family lineage, travel experiences, and memories of a younger self.

- ***Frances – cat – painted stone - loss***

Arriving at Frances's home, I was greeted by Widget, her friendly cat. From the onset of our interview it became clear that Frances had always loved animals. Frances spoke about Pickles, the "little [grey] cat" from her youth that moved "with [her family] from Joburg to Venezuela to Canada and back". For the last "seven, eight… [long pause] … seven years of his life" Pickles was "getting insulin shots" and eventually, turned blind. After his death, Frances's mother had a curled-up cat painted on a stone (Figure 6.13). Frances also mentioned that she kept Pickles' ashes, despite some people "find[ing] this a bit morbid". Pickles was then represented by that stone, resting on a windowsill of Frances's living room, because "I like having my memories on display".

An assemblage between Frances and the painted stone could reveal the following relations:

> Frances – Pickles – cat – grey – female – death – ashes – nostalgia – stone – hard – painting – craft – mother – family – Widget – windowsill – sunlight – home – interview – storytelling – researcher

Figure 6.13 | **Frances's stone depicting Pickles**
(alongside her current cat's 'toy' shoelace).
Photograph by the author.

These heterogenous materials assemble because of the affective flows linking them (see Fox and Alldred 2019:24-25). The affective power of memories of Pickles entangled with memories of Frances's youth and her family, alongside the physical stone in her home and the social conventions that allowed her to commemorate her deceased pet, as well as her contemporary

cat, affected Frances's actions (keeping the rock after so many years, displaying it in her living room) and emotions ("I still… I *do* miss her" because Pickles was a "huge, huge, *huge* part" of Frances' life).

Death is a "conjuncture of changes and transformations of the physical body, social relations and cultural configurations" which marks a transition involving loss and adjustment (Hallam & Hockey 2001:1).[42] Facing death entails ritualised social practices involving, also, material objects. Assemblages of humans, spaces, embodied actions, memories, and memory objects are interconnected in highly personalised, yet socially recognisable, formations (Hallam & Hockey 2001:21). The stone mediated the past and addresses a lack Frances felt, which highlighted its memory value (Hallam & Hockey 2001:2, Baudrillard 1996:83). Hallam and Hockey (2001:8) further note that some material objects, such as stone, wood, bone, wax, metal, cloth, paper, and flowers, have cultural connotations of permanence and transience.[43] A fundamental property of matter is its ability to last: a specific material's ability to represent the deceased is therefore associated with its varying degrees of endurance (Hamilakis 2017:174). In this assemblage, the stone's materiality and its perceived capacity to preserve Pickles' "virtual presence" (Fox & Alldred 2019:25) over time, engendered not only the passing of time, but also the loss brought about by this.

This assemblage explored a particular relation between Frances and stone-Pickles. Law (2019:4) explains that relations are performative and fragile, constantly weaving different realities into being: "you cannot build a network, lock it in place, and throw away the key". Should, for example, the stone have gone missing, or Frances have moved and used a new windowsill, a deterritorialisation would have occurred that would have changed the assemblage again. The affective power of memories (alongside other relations) in the current assemblage assists in "making that event-assemblage do whatever it does" (Fox & Alldred 2019:25). From this one may conjecture, with Fox and Alldred (2019:25), that it is partly the "memories that individuals bring to events that link these events across time and space, in the process producing both social continuities and change".

[42] Hallam & Hockey (2001:15) hold that it is important to acknowledge that attitudes to death are culturally and historically specific and these contexts inflect the nature and ritualised use of memory objects.
[43] These connotations with materials also feed into the metaphors used to describe memory's capabilities (Hallam and Hockey (2001) dedicate a chapter to this), which engenders another assemblage for study.

- ***Grandmother comparison: Jasmin – scarf – smell | Hibiscus – mat and calabash – ancestors | River – trousseau chest – functionality***

In this comparison between three assemblages, I foreground kin relations mediated through objects. Family ties and the transmission of family possessions throughout generations are widely recognised as a crucial aspect of the reproduction of social systems, because such practices express kin groups' boundaries (Folkman Curasi, Price & Arnould 2004:611). As relationships with parents and grandparents were common threads throughout the interviews, I compare Jasmin's, Hibiscus's, and River's relations with objects received from their grandmothers.[44]

A comparison between these assemblages of which at least two materialities, namely granddaughter and grandmother, overlap, could potentially be presented as follows:

> 1) Jasmin – grandmother – cancer – scarf – jewellery – safe – scent – olfactory sense
> 2) Hibiscus – grandmother – loss – grass mat – calabash – snuff – ancestors – home
> 3) River – grandmother – Alzheimer's disease – trousseau chest – furniture

Jasmin's grandmother gave her a scarf before she passed away more than a decade prior to the interview. About jewellery that Jasmin received from her, she said: "I could still like let go of, but the scarf… I couldn't". She explained that she preferred not to wear the scarf:

> I don't wanna wash it, as well. Like, it still has her scent on it. And she like, had, like, this specific scent. You know those pink sweets? She smelled like pink sweets! It still smells like pink sweets. I don't want that smell to go away. So, I'll just keep it [in the safe in my parents' home]. Yeah, to let it stay smelling like pink sweets. Just stay there. And it's, like, a very, like… it's like that, um, um, that minty green colour. It's that colour. Like an ice-cream... It's like your glasses' colour. Ja, like that colour. And then it's got that pinky, sweet smell. Yeah, so it will just stay there. I like that.

Heterogenous materialities within this assemblage, including humans (Jasmin, her grandmother, myself as researcher), objects (the scarf, jewellery, my glasses), a sensory memory ("pink sweets"), spaces (the safe, her parents' home), anxiety ("I don't want that smell to go away") and choices ("I don't wanna wash it", "I'll just keep it [in the safe]"), form rhizomatic affective flows that mediate Jasmin's memories of her grandmother. Hamilakis (2017:173) holds that bodily senses "enable affectivity" and allow humans to be "touched by other bodies, by things, by the atmosphere, and by the world in general".

[44] Other participants who mentioned their grandmothers include Susanna, Alta, Lolo, Benjamin, Mary, Cynthia, Gabo, Rainman, and Chris. Except for Mo, all participants mentioned their parents and/or grandparents.

In comparison to Jasmin, who saw herself as very sentimental, Hibiscus did not consider herself this way but, when asked what she would take in a hurry, she mentioned objects that belonged to her grandmother, who had passed away only months before our interview:

> I think… the first thing I'd take is my grandmother's mat [Figure 6.14]. This mat was actually my grandmother's [points to the mat we are sitting on on the floor]. Yeah! So, I think that. And her *onkho* [calabash]. I don't have it here, it's at [my mother's house]. Yeah, a calabash. Yeah, her calabashes. Yeah, I think that's what I'd take.

Figure 6.14 | **Hibiscus's grandmother's grass mat**
(The calabashes also mentioned were at her mother's house at the time when the interview was conducted.)
Photograph by the author.

She later added that she might be "more attached to the calabash" than the mat, because "her mother [Hibiscus's great grandmother] used to make [the calabashes]". She explained that "I feel my grandmother" and it emphasised the "connection with her". In this assemblage, Hibiscus's memories of her grandmother was mediated, again, through various materialities, including humans (Hibiscus, her grandmother, her great grandmother), objects (the grass mat, the calabashes), a space (the floor we sat on, her mother's home), emotions ("I feel"), and thought processes ("I think").

Although River, like Hibiscus, did not consider herself a sentimental person and discarded many objects each time she moved to a new home, she explained that her grandmother's "stuff" were her most sentimental possessions. She remained particularly attached to her grandmother's

wooden trousseau chest standing in her apartment's living room (Figure 6.15).[45] Her "ouma was probably my favourite person":[46]

> I mean, I don't know why, because I was very young when… I mean, she died in my first year of university. And she had Alzheimer's in the last year. I didn't see her often, I saw her once or twice a year. But I'm just like, she was my favourite person.[47]

Figure 6.15 | **River's grandmother's trousseau chest**
Photograph by the author.

Here, a variety of materialities mediate an assemblage of River's memory of her grandmother, including humans (River, her grandmother), objects (the trousseau chest, her grandmother's "stuff"), space (her living room), changes and choices (moving, discarding objects), mindsets (unsentimental, grandmother as her favourite person), uncertainties ("I don't know why"), health conditions (Alzheimer's disease), and time ("my first year of university", the last year of her grandmother's life, not seeing her grandmother often).

These attachments are linked to all three participants' love for their grandmothers which affected the actions and memory practices of each. In all three of these assemblages, adding the material that the specific objects consist of (silk, dried gourd, and wood) would also reveal interesting relations. For example, Baudrillard (1996:38) notes that some materials (like wood, natural

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[45] As heirloom pieces, trousseau chests have a deeply gendered history as these are traditionally passed on from older to younger females in a kin group before the younger's wedding (Borbardella 2012:55, Higgs & Radosh 2012:55). Drawing on a notion provided by Weiner (1992), of 'inalienable possessions', heirlooms can be considered to be inalienable wealth (Folkman Curasi, Price & Arnould 2004, Higgs & Radosh 2012, Borbardella 2012). Law (2019:6) explains that further tracing might reveal other gender-relevant relations, such as modes of comportment, labour divisions, gendered kin relations, and legalities concerning heirlooms. It shows that the assumptions embedded in current arrangements could be different (Law 2019:7).

[46] River: "My ouma was seker my gunstelingmens."

[47] River: "I *mean*, ek weet nie hoekom nie, want ek was baie jonk toe… I *mean*, sy is dood in my eerste jaar van universiteit. En sy het Alzheimer's gehad in die laaste jaar. Ek het haar nie so baie gesien nie, ek het haar een of twee keer 'n jaar gesien. Maar ek is maar net soos, dis my gunstelingmens gewees."

leather, unbleached linen and beaten copper) "feed […] a high-priced nostalgia" which he calls 'warmth'.[48] A combination of these and other factors (potentially) influenced these objects' social and sentimental value for these participants.

- ***Mo – quirky poster – stories – younger self***

Mo described herself as a very sentimental person who enjoyed curating her space according to her personal aesthetic in a way that represented all of her interests: arts, politics, design, culture, and philosophy. Every item in her home had "a purpose for its being there, I've given it a function, I've given it a name" and she said that "it has a history". For our interview, Mo selected a few sentimental items to speak, about because "there's a story to them ", but added, "then again, there's a story for, like, a lot of the stuff in my place". It became clear that all the art on the walls and the quirky ornaments around her apartment could just as well have been discussed. Mo spent more than ten minutes discussing a framed silver poster she found in a zine, an ink paw print of a previous pet that passed away, a tiny Buddha statue a friend brought from Thailand, a cushion with Barack Obama's face on it, and a colourful candle holder – both from ex-boyfriends – a Koons-inspired pink balloon dog ornament she bought on sale at Mr Price[49] and a Venus of Willendorf figurine she picked up at the Parktown Gautrain station (Figure 6.16). I focus here solely on the assemblage of Mo and the framed poster she mentioned first, entitled "Drone Survival Guide", with various types of drones printed on a shiny silver background (Figure 6.17).

Mo recounted that she bought a zine from a bookstore with this poster showcasing "the different types of drones and stuff" which, for her, evoked "a surveillance, kinda, discussion". She received the gold frame from her boyfriend at the time and even though it was broken, "I thought it looked really nice and I, ja, I just loved the message". She explained why this specific object was "from when I was living in Cape Town":

> one of my favourite spots was on Lower Main in Observatory and so, there was an anarchist bookshop that I loved to go to. They served like vegan meals and things. It was healthy, but it was also just a nice space to have, like, meetings, political meetings and things like that. And go to talks and stuff. So, this kinda reminds me. […] [I]t just reminds me of a time in my life when I was being conscientised in Cape Town […] So, it's got all the politics that I was engaging with at that time as well.

[48] By the 1960s, virtually all organic materials had functional substitutes in the shape of plastics and polymorphous substances. Wood, stone, and metal gave way to concrete and polystyrene; and wool, cotton, silk, and linen were replaced by countless variants of nylon (Baudrillard 1996:38).
[49] Mr. Price is a clothing and homeware retail chain store catering for middle-income households in South Africa.

An assemblage of Mo and this particular sentimental object could contain the following materialities:

> Cape Town – Observatory – Bolo'Bolo anarchist bookshop – zine – poster – drone surveillance – Arabic – message – political meetings – political consciousness – black consciousness – undergraduate studies – broken frame – ex-boyfriend – on display – living room versus study – aesthetic – curation

Above:
Figure 6.16 | **Compilation of objects Mo is sentimental about**

Left:
Figure 6.17 | **Mo's framed "Drone Survival Guide" poster**

Photographs by the author.

Mo's memories of living in Cape Town several years prior to the interview, where she had been politically and racially conscientized, materially affected her body and her engagement with this framed poster. Turkle (2007:6) notes how neither "life nor the relationships with objects that accompany its journey" is lived in discrete stages. Objects have "life roles that are multiple and fluid" because humans live their lives "in the middle of things" (Turkle 2007:6). Physical objects, such as Mo's poster, provide a tangible link to the past and as such can be re-experienced (see Jones 2007:3). The stories surrounding objects, not only "comment on the passing of time and times past; they also enfold fragments of the past in themselves while they simultaneously transmute under the pressures of a changing social climate" (Hofmeyr 1993:xi).

Interdisciplinary scholar Beverly Gordon (1986:135) holds that objects "concretise what was otherwise only an intangible state". These objects, hooks (1990:103) argues, and "the way we looked at them, the way they [a]re placed around us", shape the way we live. Like Mo, many participants pointed out that sentimental objects captured and retold stories of past events. Alongside these physical objects, memories – which may or may not be accurate representations of the events upon which they were based – contributed affectively and made an event assemblage do whatever it does (see Fox & Alldred 2019:25).

- ***Harry – tricycle – family – entropy***

Harry grew up on a farmstead in Mpumalanga. As a child, he loved being outdoors, playing next to the river and exploring his surroundings. At ten years old, a gradual degenerative muscle condition, muscular dystrophy, began setting in. At the age of 25, he began using a wheelchair more regularly and at the time of the interview, at the age of 42, he permanently made use of one to move around. During out interview, Harry described himself as "not particularly sentimental" because "we cannot preserve everything":

> Ja. I think that's always in the back of my mind. Um. Ja. I mean, it could have its origin in my disability because… if I star… you know, I'm losing strength. So if I was attached to strength, I would really get upset. So, if I lose a function, I think just over the years I've seen it as a coping mechanism. So, it could be, I could be rationalising, that I'm projecting it onto these now, like… if it goes, it goes. So. It might be because of what happened physically that I've developed that attitude. Ja.

Generally, he explained that his view of objects was that "it's just an object":

> [Chuckles] With the world… everything… the third law of thermodynamics is everything tends towards atrophy… uh, entropy. Everything dies eventually.

Although Harry did not have many sentimental objects to show me, two objects that he did mention were a tricycle from when he was younger (Figure 6.18), and his four-year old son's bicycle (Figure 6.19). An assemblage between Harry, his tricycle, and his son's bike might contain the following elements:

> Tricycle – childhood – memories – outdoors – playing – parents – father – own child – wife – family – better understanding – movement – wheelchair – mobility – bicycle – growing – happiness – changes – entropy – "a little sad" – researcher – storytelling

Figure 6.18 | **Harry's tricycle**
Photographs by the author.

Figure 6.19 | **Harry's son's bicycle**

This assemblage constitutes a combination of physical, psychological, social, and cultural relations. Physical relations include disease agents such as genes, pathogens, time, ageing, and degenerative muscles, the body's biological responses such as the immune system and pain, and emotions such as happiness or sadness, mobility, and objects that facilitate mobility – such as bicycles, tricycles, and wheelchairs – as well as ideas surrounding transience and health. Psychological relations include environmental stressors and health beliefs, Harry's interest in meditation and Kabbalah, his childhood memories, emotional reactions, and attitudes. Finally, this assemblage also foregrounds Harry's sociocultural relations with his family network. These factors mediate Harry's relationships with his tricycle and his own bodily function, his memory of his parents, his son, his son's bicycle, and his son's mobility.

Health and illness are phenomena that have material, experiential, and cultural contexts: diseases not only affect a body's organs and cells, but also human experience and identity. These contexts are shaped by social institutions, cultural beliefs, and biology (Cromby 2004:798; Turner 1992:36). Applying a 'flat' ontology assists in establishing a materialist understanding that sees health factors not as attributes possessed to greater or lesser extents by individual bodies, but as processes that link bodies to their 'social' and 'natural' environment and define their capacities to do (Fox & Alldred 2017:132).

When I asked him about his sentimental objects in general, Harry responded that "maybe I'm sentimental about some of the things that were mine that [my son] plays with or he likes, or that were my father's and that he plays with". In elaborating on his tricycle, Harry referred to both his wife and son:

Harry:	It's hanging in the roo… in the garage. Uh. My wife says that she wants to start cycling it. I can't, I can't cycle it anymore. So, ja, that's, that's… sentimental.
Researcher:	Would you enjoy it if she used it?
Harry:	Yeah, I would. Ja. And my son really wants to use it. So, I might just keep it until he can use it. It might only be like, five years. 'Cause his legs first need to grow longer. So that's the one thing. It's like the real symbol of mobility.

Finally, he explained that his relationship with sentimentality was that it "becomes more defined when you have a family". Similar to what Csikszentmihalyi and Rochberg-Halton (1981:61) found on humans' connections with objects, in this case sentimental objects, there was for him also an implicit sense of responsibility for maintaining a network of social ties. Moreover, as Lucci (2018:2) points out, questions about the "permanence and conservation of human artefacts after the disappearance of the generations that have produced them" opens up questions about cultural legacy and what humans "intend to bequeath to future generations, as well as recognising what the past generations have passed on to us".

Within this assemblage, neither biology nor the social is privileged over the other (see Deleuze & Guattari 1987:336). Rather, Harry's health condition, his childhood memories, and his own kin, along with other bodies, objects, institutions, and ideas, interconnected to have an affective effect on all the other materialities within the assemblage. Just as the diverse components of an assemblage "come together over time; work together for a time to produce something; and, in time, will fall apart" (Feely 2019:6), this assemblage of Harry and his tricycle had undergone various changes since he first used it when he was younger. Removing or adding elements would reveal other flows and connections.

- ***Hellen – magnets – family – travel***

Hellen described herself as sentimental about things that related to her family. She explained that she, her husband, their son, and daughter adored their colourful collection of fridge magnets, brought home from "everywhere we went" (Figure 6.20).[50] For her, this was a practical souvenir, because "it's small, it doesn't take up a lot of space".[51] On some were names (Dikhololo, London, Durban, Temple Bar, Clarens, Chester, Malta), on others, images (a tiny Mona Lisa, Stonehenge in the late afternoon sun, multi-coloured painted sheep, a plump headless figure in

[50] Hellen: "[…] oral waar ons was."
[51] Hellen: "Dis klein, dit vat nie al die plek nie."

white stone). The collection was displayed in the kitchen, a communal space, for everyone's enjoyment. She explained that "when we walk past [the fridge] then we can remember we were there. […] We see it, the kids see it every day".[52]

Figure 6.20 | **A selection of Hellen's family's fridge magnet collection**
Photograph by the author.

An assemblage between Hellen and the fridge magnets could potentially reveal the following:

> Hellen – fridge magnets – small – memory – travel – carbon emissions – sentimental – abroad - family – husband – kids – home - fridge – electricity – food – garden[53] – interview – researcher

Here, the availability of physical magnets in shops and market stalls aimed at tourists were territorialising forces that shifted Hellen's body into the habit of buying the same souvenir from different destinations (see Deleuze & Guattari 1987:294). Hellen's tradition of acquiring this specific type of souvenir mediated the family members' relation not only with the physical object on the fridge, but also the memory of the vacation destination. When I asked her about their decision-making process, she replied that she would "look around a few times beforehand and when we're done, I'll quickly go and get one".[54] Although their children would sometimes help to choose one, they "are not so bothered".[55] Repeating "ag, nee wat" ("nah, not much") twice,

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[52] Hellen: "[As] ons daar verbystap dan kan ons sien ons was daar. [...] Ons sien dit elke dag, die kinders sien dit elke dag."
[53] I specifically include "food" and "garden" in this assemblage to highlight another way in which sentimental objects might relate in unexpected ways to one another: Hellen was also sentimental about her garden and used complex processes and instruments – including the fridge – to process its herbs and flowers for use as food or cosmetics.
[54] Hellen: "[Ek] kyk so paar keer voor die tyd en as ons klaar is, dan sal ek gou-gou ene gaan kry."
[55] Hellen: "[…] [hulle] is nie te veel gepla nie."

possibly related to Hellen's broader belief that one should not be over-attached to "earthly possessions".[56]

Tourism, intertwined with considerations of meanings, identities, and memories, is a "key contemporary process that recognises, ascribes and scripts the complex and variegated relationships between people and places" (Morgan & Pritchard 2005:29). According to Benjamin (1985:32), the souvenir is a prime example of a modernist commodity, since it marks the subject's "desire for authentic presence".[57] Furthermore, the souvenir is the commodity form that "most effectively denies its commodity status: it is often a "purposive product that proclaims its 'foundness' and, even if mass-produced, it claims uniqueness through […] the personal stories of its acquisition" (Goss 2004:328). Tourists, as consumers, reflexively use souvenirs after the original experience to (re)create those experiences: once acquired, fridge magnets gain a certain specificity and become visual metaphors of visited destinations and holiday experiences (Morgan & Pritchard 2005:40).

In this assemblage it became apparent that souvenirs' meanings unfolded in rituals and performances that were continuously woven into social life. This happened in various ways and was dependent on someone's – Hellen's – conception of their objects, value, and travels (see Morgan & Pritchard 2005:37). Travel souvenirs, as memory objects related to human-mediated memories, therefore acquire social meaning within specific cultural and historical contexts and become affective relations within event assemblages (Fox & Alldred 2019:31).

Taken together, these New Materialist Analyses gave a new materialist perspective on the constant flows between humans, memory objects, and a myriad other materialities. Being attentive to the affective capacities of assemblages, rather than autonomous materialities, reveal novel ways of thinking about the relations between humans and nonhumans. Conducting a New Materialist Analysis can be seen as taking a step closer to embracing social life's "messiness" (Law 2004:3) which, in turn, brings researchers another step closer to holistic understandings of the ways in which the world is structured and experienced.

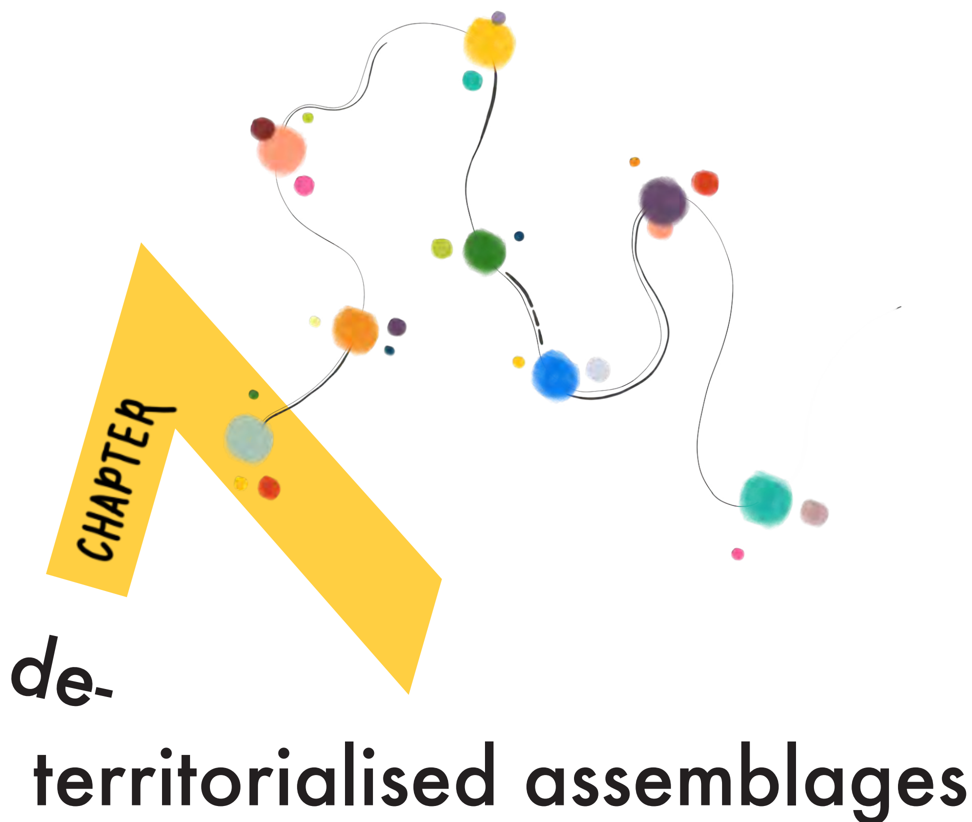
[56] Hellen: "[Aan] aardse besittings."
[57] For a study on travel photographs, or "visitor's snapshots", done within the visual culture studies discipline and with fieldwork in South Africa, see Wiegand's "The Photograph as Network Tracing – Disentangling – Relating: ANT as a Methodology in Visual Culture Studies" (2017).

6.4 CONCLUSION

In this chapter I introduced the research participants and treated, firstly, the affective relations between them and environmental consciousness and, secondly, between them and memory objects. Throughout, visualisations with additional comparative information accompanied these discussions. In the section discussing environmental consciousness, I pointed out the dominant themes common to many of the interviews, including finding pleasure in environmentally conscious actions, methods of staying informed on global environmental matters, and how participants engage with consumption and 'waste'. All participants can be considered environmentally conscious, albeit centred on a different aspect of eco-consciousness in each case. I then conducted five New Materialist Analyses, including one comparison, as examples of habits, practices, beliefs, and feelings that participants associated with 'environmentally conscious living', namely recycling routines, suspicions regarding 'green' consumption, reusing a menstrual cup, living in a polluted city, and finally, the pleasures of composting.

Thereafter, I discussed each participant's relation with their memorabilia. It became clear that participants' understandings of and relation with the term 'sentimental person' varied greatly. Further, participants viewed themselves as extremely sentimental, somewhat sentimental, or not sentimental at all. I then conducted New Materialist Analyses of five assemblages between humans and selected memory objects. These centre on the dominant themes associated with sentimental objects, including death, kin group relations, personal aesthetics, transient life stages, and tourism souvenirs. It became apparent that diverse material assemblages led participants to engage with their memorabilia in different ways, either by displaying it proudly, using it as a functional tool in everyday life, or storing it away. It was generally a combination of these engagements that made up assemblages with objects.

Whereas this chapter focused on predominantly territorialised, relatively stable, assemblages of 1) participants and environmental consciousness and 2) participants and memorabilia separately, I next elaborate on shifts that occur when these materialities are introduced within the same assemblage. Broadly, these shifts capture the de- and reterritorialising capacities that diverse materialities bring about.



de-territorialised assemblages

Ode to Things

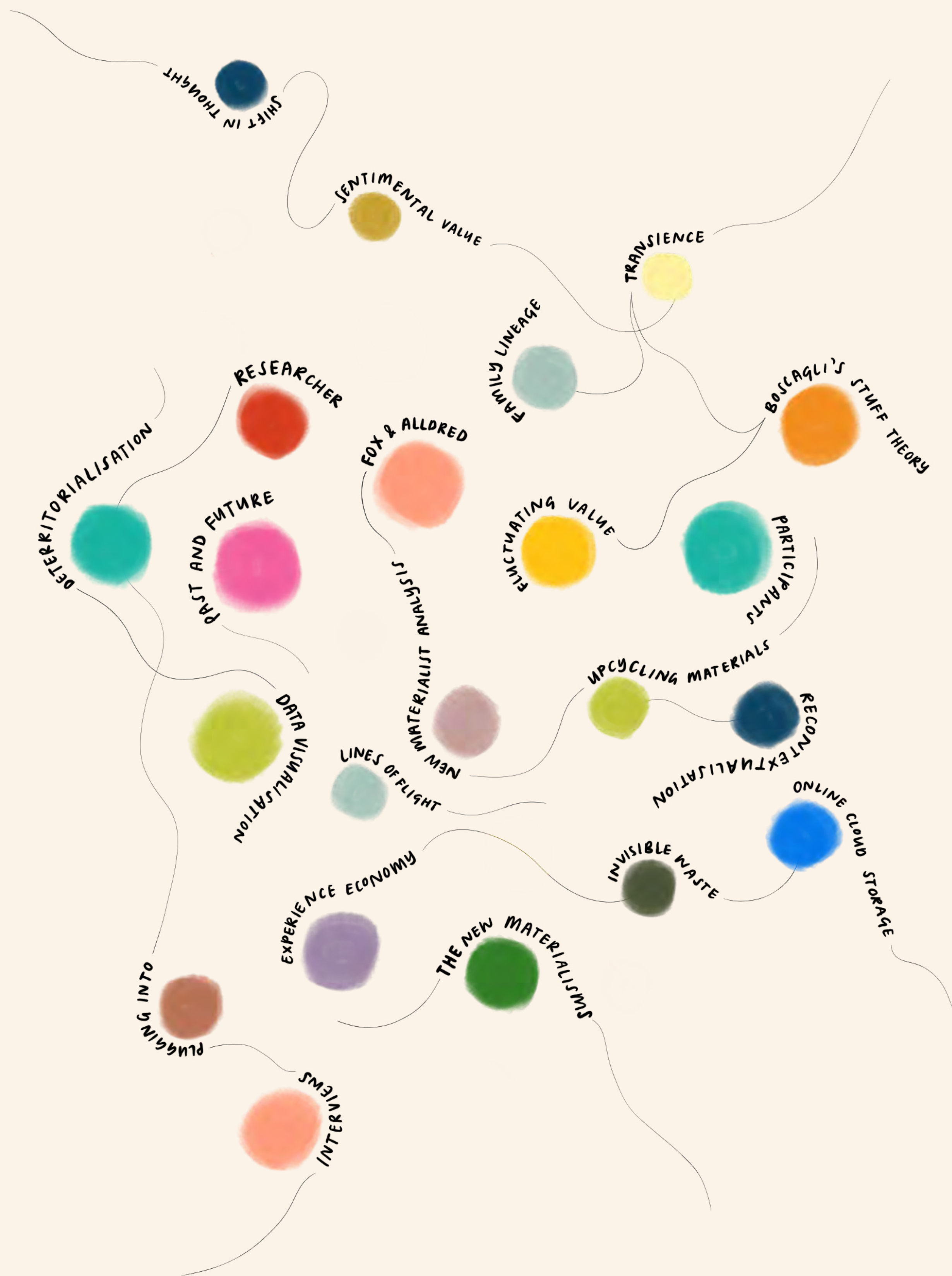
I like pliers, and scissors.
I love cups, rings, and bowls –
not to speak, of course, of hats.
I love all things, not just the grandest,
also the infinitely small –
thimbles, spurs, plates,
and flower vases.
[…]
many things conspired to
tell me the whole story.
Not only did they touch me,
or my hand touched them:
they were so close
that they were a part
of my being, they were
so alive with me
that they lived half my life
and will die half my death.

Ode to Broken Things

The plate broke, the lamp fell
All the flower pots tumbled over one by one
That pot which overflowed with scarlet
in the middle of October,
it got tired from all the violets
and another empty
one rolled round and round and round
all through winter until it was
only the powder of a flowerpot,
a broken memory, shining dust.
[…]
Let's put all our treasures together
the clocks, plates, cups cracked by the cold -
into a sack and carry them to the sea
and let our possessions sink
into one alarming breaker that sounds like a river
May whatever breaks be reconstructed by the sea
with the long labor of its tides.
So many useless things which nobody broke
but which got broken anyway.

- Pablo Nerudo

Figure 7.1 | **key concept visualisation**



CHAPTER 7: DETERRITORIALISED ASSEMBLAGES

7.1 INTRODUCTION

This chapter explores the degrees of deterritorialisation occurring in assemblages composed of the research participants, their diverse ideas, and practices surrounding environmental consciousness *as well as* their memories and memory objects. In other words, I explore how separate territories of eco-consciousness and memory are deterritorialised (with momentary or more longstanding effects) when these materialities are plugged into the same assemblage. With reference to the 21 interviews and the relevant literature, this chapter marks my study's main contribution to the research on memory (objects) in the Anthropocene (Figure 7.1). This chapter further serves to explore the practical challenges and advantages of studying assemblages through the use of new materialist tools.

Whereas the previous chapter zoomed in on environmental consciousness and memory objects as separate assemblages, I focus here on the lines of deterritorialisation that occur when environmental consciousness is introduced in assemblages of humans and their memory objects. These assemblages explore "a set of disparate circumstances" because it synthesises heterogenous elements "without hindering their potential for future rearranging" (Massumi 1987:xi). This experiment results, as do many others in academic research, from the "tension between territorialisation and deterritorialisation" (Dosse 2010 [2007]:254). I acknowledge that this part of the study's research assemblage (predominantly, its data analysis machine) is deliberately engineered to reduce some affects (for instance, assemblages of human memory *alone*) and foster others (for instance, how introducing environmental consciousness to human memory assemblages leads to new perspectives) (Fox & Alldred 2015a:411).

I start this chapter with a brief summary of the workings of assemblages, as discussed in depth in Chapter 4. I continue by laying out the degree to which the assemblages between participants and their memory objects were affected (or, deterritorialised) when environmentally conscious actions, knowledge, and habits were introduced as additional materialities in this existing assemblage. In attempting to affect this deterritorialisation, I explicitly asked participants how environmental awareness influenced the way they interacted with their memory objects. I analysed their responses by plotting the relations between participants and their sentimental objects *when looking at it through an eco-conscious lens*. In theory, this means analysing how environmental consciousness, when plugged into an existing assemblage of a participant and

his/her memory objects, produces comparative rates of affective flow that lead to deterritorialisation. This affective flow produces phenomena of either "relative slowness and viscosity" or "acceleration and rupture", which leads to varying ratios of deterritorialisation (Deleuze & Guattari 1987:4).

I subsequently turn to New Materialist Analysis as introduced in Chapter 5 and applied in Chapter 6. Again, I acknowledge my own role as researcher entangled in the research assemblage. New Materialist Analyses of selected assemblages open up space to discuss five prevalent tropes that emerged in the interviews. These tropes include but are not limited to: 1) materialities' fluctuating value with the passing of time, 2) ambivalences regarding the consumption of material and apparently 'immaterial' (which remains materially grounded) objects, 3) the sentimental and environmental impact of the experience economy in the age of the Anthropocene, 4) augmenting the sentimental value of environmental concern with specific reference to the ambiguities of future kin and, finally, 5) the simultaneous sentimental and environmental benefits of upcycling of what would otherwise be deemed as waste. While some tropes were more prevalent when participants discussed environmental consciousness and others were more readily associated with memory objects, this chapter aims to draw links interchangeably precisely to substantiate this study's rhizomatic potential.

The output of this experimental chapter is twofold. Firstly, I reflect on how participants' relationships with their sentimental objects were affected when they started thinking critically about environmental issues (or, how, and if, participants *perceived* deterritorialisations). Secondly, I foreground the potentials of changed perspectives, habits, and behaviour to "discover the knots of *becoming* tangled in the fabric of being", which open up vital possibilities for memory in the Anthropocene (Adkins 2015:141, my emphasis). I conclude with a brief summary.

7.2 A BACKDROP: DETERRITORIALISATION

As a starting point, this section briefly recapitulates the notion of the assemblage, and deterritorialisation in particular. An assemblage is a tetravalent system which is simultaneously material and semiotic and which functions as its horizontal axis along a continuum of stasis (territories) and change (deterritorialisation) as its vertical axis (Deleuze & Guattari 1987:88,504). Territories are distinct strata of social, cultural, and political practices where energy is captured and kept relatively unchanged in very specific space-time conditions. Within the context of this study, this is the focus of the preceding chapter: participants' relationship with their

environmental consciousness and their memory objects, separately, were found to be territorialised (or stabilised) by the routines and habits of daily life.

In this chapter, I focus on how small changes in routine habits, ideas, or knowledge can deterritorialise affect economies and destabilise a particular understanding of the world. Lines of deterritorialisation cut across a territorial assemblage and carry it away. Deleuze and Guattari (1987:333) call this the release of "a machine": a set of "cutting edges that insert themselves into the assemblage undergoing deterritorialisation, and draw variations and mutations of it". Deleuze and Guattari (1987:294,54) specify that the process of deterritorialisation "sweeps away selective pressures" and must be thought of as a "perfectly positive power that has degrees and thresholds (epistrata)". Deterritorialisations can therefore be relative or absolute.

Here, the relation between these two types of deterritorialisations needs attention. Relative deterritorialisations only change that assemblage in relation to its stability maintained over time. Absolute deterritorialisations effectively destroy that assemblage in the process of transforming it into something else. The former are "stratic or interstratic, whereas the latter concern [unformed, destratified matter on] the plane of consistency" (Deleuze & Guatatri 1987:55-56). The most prominent distinction is therefore between 1) lines within an assemblage whose connections serve to modify *that* assemblage so that it can maintain homeostatic relations with other assemblages, and 2) lines within an assemblage that connect with assemblages *outside* of itself bringing about a complete transformation of that assemblage (Deleuze & Guattari 1987:325). Thus, some deterritorialisations operate directly upon the territoriality of the assemblage (relative deterritorialisations) while others open the territorial assemblage onto other assemblages through abstract and cosmic machines in a certain decoding of milieus (absolute deterritorialisations) (Deleuze & Guatatri 1987:587).

In practice, assemblages are always interacting so that, in reality, the physical, the organic, and the linguistic (or, content and expression) are always machined together. What further separates absolute deterritorialisations from relative deterritorialisations is that the former deterritorialise by cutting across multiple strata. In these cases, an assemblage is transformed because a connection is made not only between two assemblages on the same physical, organic, or linguistic stratum, but between assemblages on different strata and thus between different levels of the collective assemblage. When an assemblage is absolutely deterritorialised "all prior

organisations of the assemblage are destroyed, allowing for the development of an assemblage that is unconstrained by its previous territorialisations" (Thornton 2018:196, Smith 2012:347).

Put differently, a connection is made between an object, an organism, and a word that brings about an incorporeal transformation in which everything changes. A line of flight, or absolute deterritorialisation, is like a diagonal line that cuts across both the assemblages' axes: the horizontal axis of the strata and the vertical axis of de/re-territorialisations. In this sense, it is also the line of flight which puts these two different axes into relation with each other (Thornton 2018:206). An assemblage, for Deleuze and Guattari (1987:8), is "precisely this increase in the dimensions of a multiplicity that necessarily changes in nature as it expands its connections". Conceptualising the assemblage in this way clarifies why the line of flight is an important characteristic of an assemblage: only by drawing a line of flight can "the necessary interassemblage connection […] be made, the added dimension […] be produced, and the assemblage […] come into being" (Thornton 2018:208-209).

Deterritorialisation, then, is the manner in which the assembled milieu components of a territory lose their territorial function (by virtue of an abstract machine) to communicate or meld with other assemblages outside it (Young, Genosko & Watson 2013:309). Lines of flight, or deterritorialisation, happen when some energy escapes or momentarily moves beyond normative strata and brings about a severance of these practices from their prior positions. These lines reach outside of the assemblage's structure and serve to connect such an assemblage to that which is outside itself.

This encapsulates the focus of this chapter: by plugging environmental consciousness into the territorialised assemblage of a participant and memory objects (or tracing the lines that reach outside of a particular assemblage's structure and connect them to that which is outside itself), I aim to establish what variations and mutations can come from the relation between these two notions. Broadly, separating practices from their normative social meanings, or territory, can provide novel perspectives on the world.

Furthermore, deterritorialisation's "flipside or complement", reterritorialisation, necessarily occurs when these practices are reconnected with a new population of ideas, bringing about new understandings of the world (Deleuze & Guattari 1987:54). Reterritorialisation is therefore the processes whereby such ruptures are recuperated to produce new territories (Deleuze & Guattari

1987:15). In some cases, discussed below, such a reterritorialisation has already occurred for the participant (for example, Lilly's relation with upcycling). In others, a deterritorialised line might reterritorialise if macropolitical shifts are brought about (for example, rendering more visible the environmental effects of digital storage units, electricity usage in the home and the workplace, carbon emissions as a result of travelling, or the use of huge quantities of water in the recycling process). In yet other cases, it is highly probable that a theoretical parallel drawn by myself as researcher will remain just that (for example, how fluctuating value affects both the environmental and the memory discourses).

Territorialisation, deterritorialisation, and reterritorialisation are thus means by which "lives, societies and history unfold" in an ever-changing world (Fox & Alldred 2015a:401). According to feminist theorist Maria Tamboukou (2008:360), humans "constantly move between deterritorialisations – freeing ourselves from the restrictions and boundaries of controlled, striated spaces – and reterritorialisations – repositioning ourselves within new regimes of striated spaces".

7.3 DETERRITORIALISING LINES IN THE INTERVIEWS

7.3.1 "Can you see any links?"

As indicated in Chapter 6, each participant was able to express their relationship with, respectively, environmental consciousness and memory objects. Through the interview process, it became clear that the majority of participants had relatively clear, stable and, in most cases, predominantly separate understandings of these two notions. After discussing these topics separately, I aimed to establish how the distinct assemblages – between 1) participant and environmental consciousness and 2) participant and memory objects – might have been (or could be, after the discussion) deterritorialised when thought of *in relation to each other*.

Announcing this part of the interview, participants' reactions communicated that most saw no explicit links between environmental awareness and sentimentality. In most interviews, I detected uncertainty through lengthy silences, facial expressions, or other bodily and verbal cues. Lolo, for example, stated "I'm very curious to see how you're bringing this together!", followed by a burst of excited laughter. I was similarly curious to see how *she* would bring them together. Sammy and River expressed that they found it an "interesting" connection, whereas Earl repeated that he found it "fascinating".

In fact, where I went was where each participant led me. I asked each participant a series of questions, of which the first was:

- Do you think that your environmental consciousness is changing/has changed your feeling towards your sentimental objects? Why?

The responses, some provided only after an extended silence, were as diverse as the participants themselves. Irrespective of whether the relationship was perceived as altered, all participants expressed positive (leastwise neutral) associations with this 'new' assemblage. Frances, Susanna, Jasmin, Hibiscus, and Lilly said that their relationship with their memorabilia remained unchanged after adopting becoming more environmentally conscious. Mary "processed the question a bit"[1] and said she did not think it changed. Mo said that her relationship with her memory objects remained unchanged, but added that *this* relationship inspired her environmental consciousness so that, in a sense, "it's actually the other way around". For example, Mo mentioned that she had been sentimental about vintage furniture (often found in second-hand stores) for a long time, but more recently "also like[d] the idea" that buying second-hand items was considered to be environmentally conscious.

Hellen and Benjamin said that their relationships changed only somewhat, whereas River and Alta said their relationship perhaps changed. Gabo explained that her eco-consciousness stemmed from her childhood where she was raised by her grandmother who had recently passed on. This set of circumstances somewhat changed her relationship with sentimentality, because, she said, it "makes me want to have something to make me remember her". Others, such as Jack, Harry, Lolo, Rainman, Sammy, Cynthia, and Chris said that their relationship with their memory objects did change. Earl was unsure, but eventually decided that his relationship with his memory objects also changed. Nicholas was completely unsure: he kept mulling over the question, exploring potential relationships that he could have had with his memory objects and his environmental consciousness.

Figure 7.2 below tracks these responses. Following directly thereafter, Figure 7.3 provides an overview of four prominent shifts that occurred when participants' relationship with their memory objects changed.

[1] Mary: "Laat ek net die vraag bietjie *process*."

Figure 7.2 | a changed relationship?

This figure treats participants' experience of their relationship with their memory when looking at it though an environmentally conscious lens. This question allows a glimpse into potential deterritorialsations when environmental consciousness is plugged into a memory assemblage.

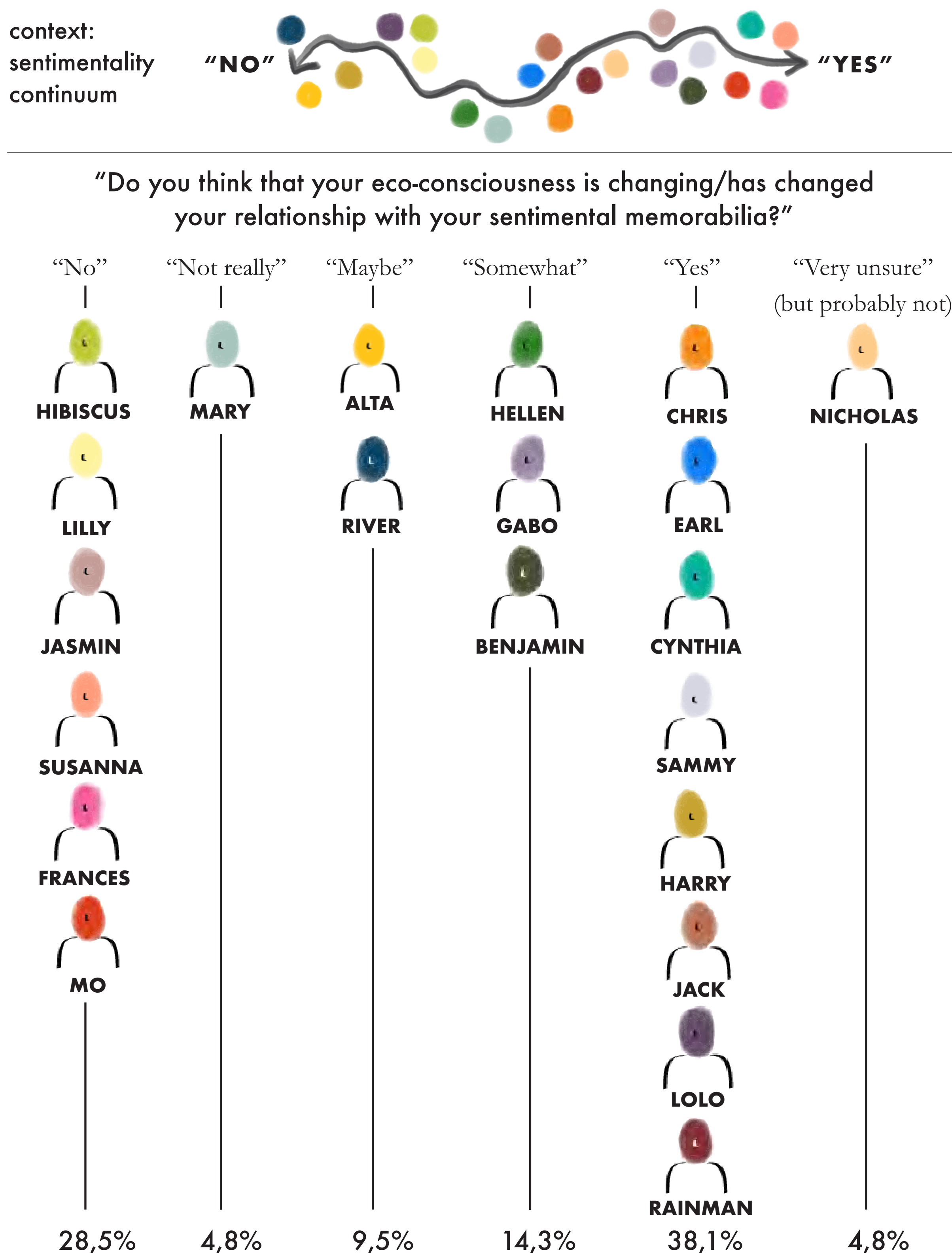
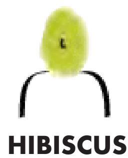
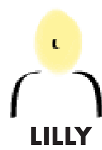
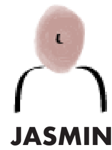


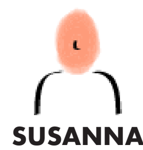
Figure 7.2 cont. ⟶

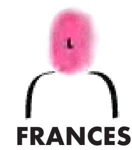
"NOPE, NO CHANGE"

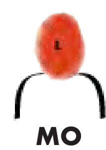

HIBISCUS


LILLY


JASMIN


SUSANNA


FRANCES


MO

"

I think [eco-consciousness and memory] embody each other. One cannot be detached from the other. More so, 'cause most of my sentimentality is on the […] spiritual plane and [that] co-exists with the environment and nature. […] [Humans] embody it actually. It's often hard to be aware of it, because we live in such a fast-paced environment. So, having both and having a balance between both kind of brings a sense of self-awareness. It's not something I was conscious of [before this interview].

"

[Pause.] Hm, I don't think so, let me think. Um. [Long pause.] No. I know that the stuff that I'm sentimental about [has a] story and it was made in the old-fashioned way, right? I think it's, it's, it's... it fits in with my values of environmental consciousness. Like, I definitely think one of the things that I realised stepping into this business world, especially [the business] of furniture making is [that] the old ways in which people built stuff is... it was a longer [process], [stuff] was stronger, it was just more... sturdy. I have a lot of respect for that. And I think that's a dying art. […] What I'm seeing is this old man in his workshop with wooden shavings and these hand tools. And he's happy, he's not rushed. That's how it should be done.

"

Jasmin: [Shakes head.] No.
Researcher: Have you ever thought about this question?
Jasmin: [Pause.] No, I haven't, but I don't think [eco-consciousness and memory objects] really… because of what my memorabilia are, I don't think they really relate to each other. [Shakes head "no"].

"

Long pause.] No. Um, I mean I can say I have thrown out a few things, or, kind of… let go of them, to donate or whatever. You know, to someone who can use them or to a shop I can sell them to get some money for charity. Um… so I think I'm better than when I was younger. [...] And I ended up giving up a lot that was just… junk, almost. […] Um… and… but I mean I think for the most part, I don't think my relationship with [my memory objects or anything] else has changed [since I've become more eco-conscious]. […] I don't think it was ever really a question. Um, because I supposed, for me, the environmental side of things are focused on, you know, what's coming in and out of your house. And most of the memorabilia is already here and it's not going anywhere.

"

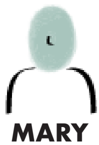
No, for example, I will still, if I feel sentimental about a photo, have it printed. [My eco-consciousness] doesn't encourage me to look at my possessions as if they have more value than before. I wouldn't say that my eco-consciousness… I wouldn't say that it overlaps […]. It's not contradictory [notions]. It doesn't bother me. […] I must say, no. My first reaction is to say no. There's no friction. […] I don't think that my sentimental stuff is bad for the environment, which is probably good? I can't think of something [amongst my sentimental objects] that will be bad for the environment.

"

Uh. [Long pause.] Nah, hey... No, it's the other way around. Like, I've always been like this. I mean, ever since I… I mean, honestly it started off at varsity, at Rhodes, and then just falling in love with vintage things. […] My emotional connection to my objects led me to attempting an eco-conscious lifestyle. With my goal of curating the objects around me, I am serious about what I want to get from them. I like vintage objects, but I also like the idea that I'm buying quality products that will last. […] No, it hasn't changed, honestly. Always been vintage.

Figure 7.2 cont. →

"NAH, DON'T THINK SO"



MARY

Let me just process the question a bit… I don't think so. I think it will affect how I will let new memorabilia into my life, but I don't think it really affects the relationship with that which is already in my life. […] I think [eco-consciousness and sentimental objects] are still very reconcilable. Like, memorabilia are things that should be extraordinary and valuable. In other words, there should be a degree of permanency to it. […] So, now I would actually ask myself before I let something into my life: "Do I want this, do I want to keep this for a long time or will I grow tired of it quickly and then its meaning will fade quickly?"

"AG, MAYBE"

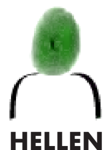
ALTA

RIVER

I think so, because objects are also about consumption in a way. You want something and then you buy it. And in the end, it has to go somewhere. Um, so I think it's definitely… um, there's a further detachment from objects because I try to own less; and to attach less value to what I have. […] And yes, caring less about the things that surround me as a, kind of, environmental conscious mentality. […] Everything kind of links together.

Pause.] I think so, because if I look at the clothes that I'm sentimental about, it's stuff that I know was manufactured locally. […] So, as soon as I know something is made in a more ethical manner, I attach more value to it. Definitely. There's love there. […] It's also about what you do in the future, about new stuff that you'll have. [The link between eco-consciousness and memory objects] is more about the future.

"YEAH, SOMEWHAT"



HELLEN

GABO

BENJAMIN

I think it fine-tuned [my relationship with my sentimental objects], if I can put it like that. I had to think about it at some stage and decided that I'm not going to – just because I feel that I don't want anything – get rid of things that are actually important to me. So, I told myself, "It's okay, keep your few, but special, things". So, it did change, but not drastically, not into another direction. I'd rather just say I don't buy unnecessary… don't attach too many emotions to too many earthly belongings.

Like, with the memories that I have… because now I'm in the city, right? The environment is different. But with the memories that I have of the country[side]... [Pause.] Given the fact that my eco-conscious lifestyle stems from my childhood [in the countryside] and being raised [by] my grandmother who has recently passed on, has made me somewhat sentimental. It makes me want to have something to make me remember her other than memories. At the moment, it is her favourite song.

Benjamin: [Pause.] I think slightly, because a lot of the stuff I would've printed as photos and things. Uh, [now] I tend to go against it because I don't wanna… don't wanna print unnecessarily. Um, but before I used to be quite aggressive with the printing. So, definitely has that impact. […]

Researcher: Have you ever thought about this question?

Benjamin: No, never. Never. This is the first time I've even considered that there could be a link between the two.

Figure 7.2 cont. ⟶

"YES, IT HAS CHANGED"

[Long pause.] That's tough. [Long pause.] I think in the context of the [framed photograph that I'm sentimental about]... Yes, it has. Um, had it not been for my environmental consciousness [...] that picture would not be of sentimental value. [...] It would've been another, just another picture for me, because it would not have had an impact. Hm. [...] I think, had I not been someone who was environmentally conscious at the time [of looking at the picture again], I don't think that my relationship with that picture would've changed. But it's changed because I am, and was, environmentally conscious at that particular point. Um, so ja. With the other things not so much, because there's not that much of a connection between my environmental consciousness and the other objects.

Yes. Um... I suppose, yes. Because... let me think... Let's just digitalise things... Let me get my thoughts together... [...] Did my eco-consciousness... change my relationship with my sentimental objects? [Pause]. I'd say yes, because this digitalisation of, of, of memories. It's not necessary for me to have physical things. Let's take a picture, put it on Instagram. Instagram is essentially to a degree, at least for me, a collection of memories. And then, I suppose, this new thing I do where I want to look at an electric barbeque grill. Because, see, a braai is also... it's not just meat that you eat. It's an experience. So, I suppose it's one way in which I try to change... like, we can still have those memories, but it doesn't have to be detrimental to the environment. So, I think it's stuff that I'm trying to do now.

Harry: [Pause.] Yes. I'm more willing to pass [my sentimental objects] on to others if I don't use them.
Researcher: Have you ever thought about this question?
Harry: I've never, up until now. This is the first time I've connected sentimentality, which I consider to be... Ja, I actually have a bit of a negative association with it. Um. I just thought it was... [Sigh.] I don't even know what the word is, it's like... I was impatient with it. You know? It just doesn't feel... meaningful enough, somehow. That sounds like a paradox! [Pause.] But now that you're doing this study, I'm beginning to understand how it actually may be extremely crucial to understand how people relate, as individuals and emotional beings, to their environment. Ja. To their own things. To work out ways that... we can help... just, to live better. Daily. Ja. Did it answer the question? 'Cause I feel like...

Cynthia: I think, yeah, definitely.
Researcher: In what way did this relationship change?
Cynthia: Um... I think maybe just making more of an effort to, to take care of things. Um, and... yeah, I think maybe not the need to always be buying new things or wanting new things. I think it took away, like, part of that desire. Yeah.
Researcher: So, you enjoy what you already value as sentimental?
Cynthia: Yeah, it makes me more aware of the quality of the item. That influences how well I preserve and take care of [it] for a more extensive use.

[Pause.] Yes, I think so. I think on the one hand, like you said, it adds more value to the few things I have. But also, it makes you realise, it's just things. It's really just things. If, at the end of the day... it's just things. [It's] not gonna make me a healthy, happy person, carrying these rings on my fingers. Or having, like, this quilt [that my mom made], although I love it. It doesn't define who I am [or] define my relationship with my mom. It's a symbol of it, an absolute symbol of the love she put into it, but that doesn't define my relationship with her.

Figure 7.2 cont. →

"YES, IT HAS CHANGED" (CONT.)

Yes. It became more… [The relationship] has strengthened and became more intimate. I started grasping the value of what I have at this specific stage. And there was a reason why I've… why I've had these things for such a long time and why I want to keep them. I appreciate that that paradigm shift served as a catalyst… that's the wrong word, but a catalyst to my relationship, or stronger relationship, with my possessions. […] I grew up in a poor household. So, that taught me to take care of what I have, regardless of its' value. […] There was a time when I wondered, for example, now I use these things and then, you know, at what point do I say, "This is one too many uses, it's going to get damaged now"? Or, "I'm using it beyond the point of reason… where I can no longer use it afterwards"? But then I argue, "Well, now I just have to be a bit more cautious when working with it". […] It's made to be used, not to be stored away somewhere, because then I have to buy something to replace it. And actually, I want to use it and to have that feeling that goes with using it.

[Long pause. Exhale. Pause.] I… Look, I think it might have changed what I will call memorabilia to start with, in a sense. [In] this clean-up process that I'm going through, um… there are things that I'm surprised that I've been able to get rid of. […] Um, there's some books I've kept and some, I was, you know, saying, 'surely someone else can get better value or use out of these, they need this as a tool for their education'. So, I've been quite surprised that I've been able to let go of certain things. […] So, I suppose my answer's on the other side of what you've said. A lot of stuff that I thought I was sentimental about, I've let go. And it's with […] an environmentally conscious background in mind. Ja, so there are not a huge number of things that I remain sentimental about. And I'm keeping them because I use them [and] while I can use them, I'm being environmentally and socially conscious in doing so. When I no longer have a need for them, the right thing to do will be to give them to someone who will benefit.

[Long pause.] Hm. [Long pause.] Yes. Increasing my eco-consciousness had increased my understanding that all objects have a life beyond our initial use of them. […] Everything is temporary [which] has taught me to appreciate sentimentality of objects without the burden of attachment. […] Like, maybe... maybe I would say, like, [my mother's] car [that I find sentimental] is one thing. I've got it, well, like, um... So, we're going against this notion of environmental consciousness if you're using petrol and fuel and it's like, you know, it's damaging the environment.

"*EISH*, I'M VERY UNSURE"

BECAUSE...

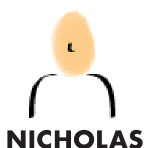


Figure 7.2 cont. →

RESEARCHER: "Do you think that your eco-consciousness has changed your relationship with your sentimental objects?"

NICHOLAS: "I'm just going to react spontaneously now..."

KEY

12:54 } Total amount of time spent answering the question

minutes seconds

00:33

[…] Can these objects [that I have in my possession]… cause harm? And I can't, my first reaction is 'no'. […] Nothing of this stuff, um, takes up so much space or so much… because they are relatively manageable, small things […] I'm not keeping my gran's coal stove, you know.
[…]

01:40

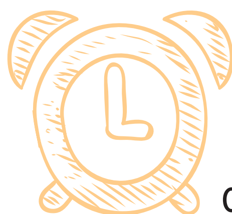
Um [tone of voice changes], it maybe makes me aware of the… uh, the word 'unnecessary' pops up in my head? [Long pause. Looks down at the objects on the table]. When you see this stuff now, you can't help but think, "ugh, okay, it's just lifeless objects anyway, so why does it have meaning?".
[…]

02:33

But concerning the environment, I think… how I've change over the years, maybe. [Long pause]. […] I think about documentation, for example. If I think about all the unnecessary papers I've, you know, stored away in my life. And this mass of paper I've thrown away. […] So, currently I'm definitely experiencing a sense of guilt. There's a bit of… "*ag*, I should have managed that clean up session better". But concerning my immediate response to your question… I separate the two issues, I don't necessarily feel differently about it.
[…]

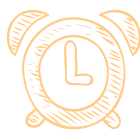
04:09

Um, what does make me happy […] is the fact that I own less [objects than before]. Look, this what you're seeing is the bare minimum. This is everything I'm sentimental about.
[…]



05:07

Also, nowadays I ask myself whether I should keep something or not. […] So, how will this contribute to my life? […] Can I use this every day? […] In a sense, giving stuff away instead of buying something, I think, definitely has [less of] an environmental impact. Stuff like old clothes, for example. […] So, maybe, like, in terms of functional objects, yes. […] I think, in terms of the stuff I have here: it won't necessarily have value for other people. It's so personal, it can't fulfil any other function in any other place except the function of sentimentality in my own life.
[…]



08:04

For me, there was no correlation [between sentimentality and eco-consciousness before the interview], but obviously when you start digging into something, yes, because there are connections between everything.
[…]

09:43

I think sentimentality has a strong element of protection. And environmental consciousness as well. That could perhaps be an intersection? Both are forms of conservation, the one perhaps just more personal. […] If I have to think about an intersection between the two, the word is 'conservation'. With different motivations.
[…]

10:59

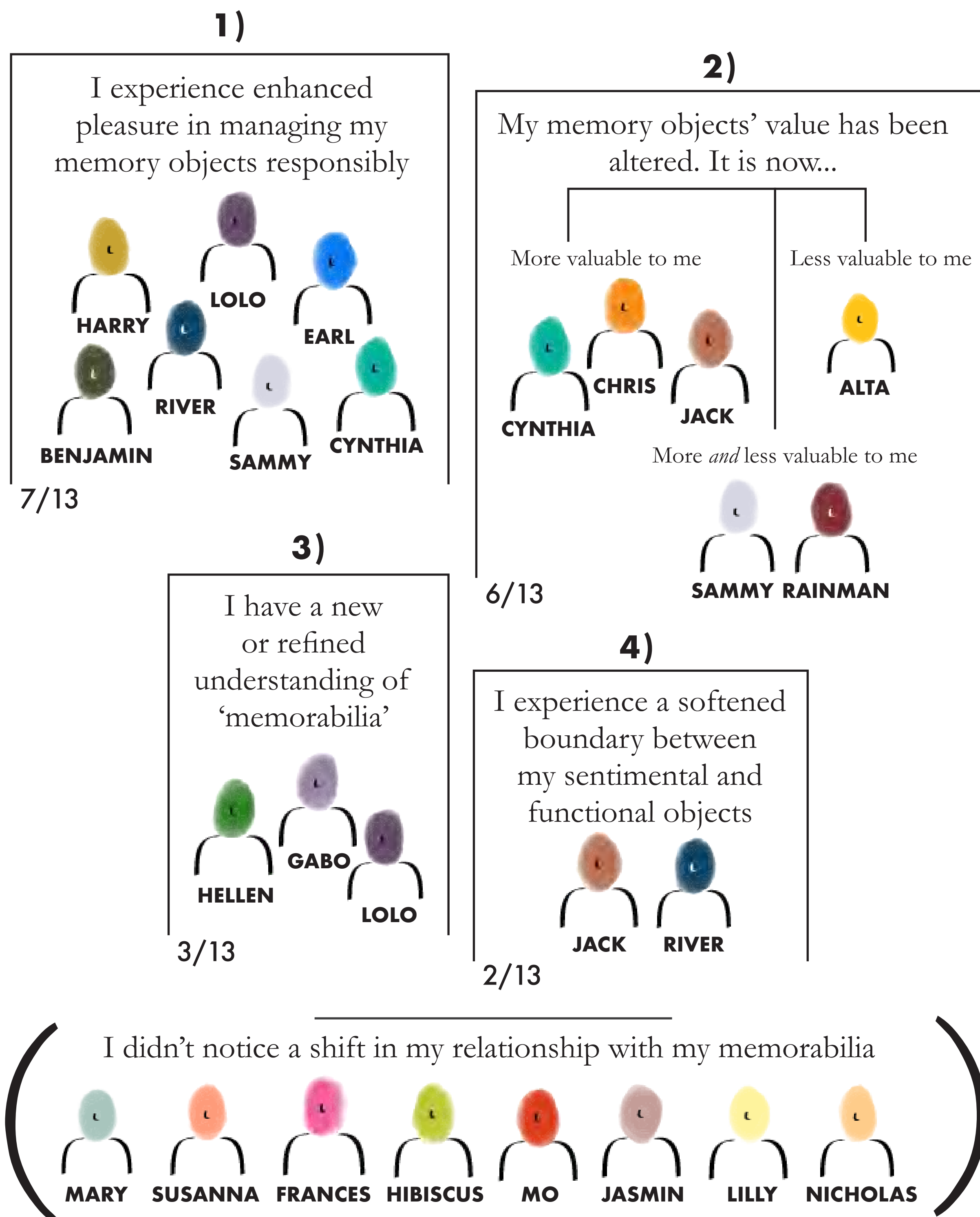
Look, I don't know what the literature says about hoarders, because for me there's definitely an environmental impact there!
[…]

12:17

I still think, on a hypothetical level, say I decide to get rid of this stuff: now that I've had this conversation, I'll definitely have a look at eco-friendly ways to get rid of it to not, you know, just chuck it out.

Figure 7.3 | **perceived shifts in participants' relationship with memory objects**

This figure highlights four prominent shifts in the ways in which the 13 participants who experienced a change in their relationship with their memory objects engaged with these objects since becoming more environmentally conscious. Some engage differently in more than one way. *Wording by the author.



As can be seen in Figure 7.2, participants provided variegated responses to the question. By plugging environmental consciousness into the assemblage, it became evident that participants experienced the relationship as either remaining unchanged, changed, or lingering somewhere in between. Susanna did not experience "a friction" or "contradiction" between environmental consciousness and sentimentality and said that it "doesn't bother [her]",[2] Nicholas felt comfortable with his decisions because he "separate[s] the two issues"[3], Mary found the two notions "reconcilable",[4] for Mo "they feed off each other" and for Hibiscus, the one "cannot be detached from the other". Chris and Benjamin mentioned that it changed their relationship with sentimental photographs, but not much else. Earl drew a parallel between "having fun" – which led to memorable experiences – and doing so in an eco-friendly manner. For Harry it was "nuanced" and for Frances it was similarly "not black and white" but "a continuum" where you "gotta find where you fit". Hellen felt that "the one thing [you feel strongly about] doesn't have to be in conflict with the other thing you feel strongly about".[5]

Furthermore, drawing on the 13 cases in which participants' relationship with their memorabilia *did* change (albeit only somewhat), I noticed four pertinent shifts (as introduced in Figure 7.3 above). Most prominently, in River, Earl, Benjamin, Cynthia, Harry, Mary, Lolo, and Sammy's cases, environmental awareness seemed to enhance the pleasure of responsibly managing their sentimental objects. For example, owning few or fewer objects, disposing of or distributing them responsibly, and being conscious of ties with potential future memorabilia, brought them joy. Secondly, Jack, Alta, Chris, Rainman, and Sammy perceived a changed mind-set regarding their memory objects because environmental consciousness heightened *or* (in Sammy and Rainman's case, *and*) diminished a participant's experience of a sentimental object's value. Thirdly, an increased environmental awareness prompted River and Jack to soften the boundaries between 'strictly' sentimental objects and functional objects. Finally, for Lolo and Hellen introducing environmental awareness elicited a new, or refined, understanding of what they considered to be memory objects.

Susanna, Frances, Nicholas, and Jasmin added a comment about the possible, *tangible* environmental impact of their mentioned memory objects. All four argued that these objects posed no necessarily negative threat to the environment, because they already existed (Frances),

---

[2] Susanna: "Dis nie [vir my] teenstrydig met mekaar nie. [En] dit pla my nie. […] [Ek ervaar nie] 'n wrywing [nie]."
[3] Nicholas: "[…] [Ek] skei die twee sake."
[4] Mary: "Ek dink die twee [aspekte] is steeds vir my baie versoenbaar."
[5] Hellen: "Ek voel nie die een hoef in konflik te staan met 'n ander ding wat jy oor belangrik voel nie."

there were not many of them (Susanna), the *type* of sentimental objects shared posed no obvious environmental threat (Jasmin) or, similarly, they were "relatively manageable small stuff" (Nicholas).[6] In general, participants saw no link between a few sentimental objects and a negative environmental impact, because of the responsible way in which they interacted with and managed their sentimental objects.[7]

To introduce the functioning of deterritorialisation that is discussed in the subsequent section, it is insightful to briefly refer to specific cases where participants tried to make possible links with environmental consciousness that stretched beyond the boundaries of their *own* memory objects. For example, Harry and Nicholas pointed out that the notion of 'preservation' might be prevalent in both environmental studies and memory studies. Susanna and Rainman noted that new objects produced from recycled material could potentially become sentimental (Susanna referred to *Au Terra*, a local artisan business that creates jewellery from repurposed circuit boards metals and Rainman mentioned earrings made from sea glass that he saw at a flea market). Rainman further noted that environmental organisations' social media pages (such as the *World Wildlife Fund*'s Instagram page) could be a potential link. All four participants shared that they had never thought about potential connections between memory objects and eco-consciousness. Therefore, the deterritorialising force of the question elicited novel links in their thinking about two notions that they believed to be distinct entities prior to the interviews.

7.3.2 New Materialist Analyses

In this section, I focus on assemblages of six participants, namely Nicholas's shifting engagement with objects due to their perceived value; Benjamin's storing of his memories digitally; Sammy's bodily experience of losing weight; Chris's sentimentality related to his education on environmental justice; and, finally, a comparative section focused on upcycling by using the narratives of Lilly as a business owner alongside that of Cynthia as an artist. These participants perceived different degrees of changes in their relationship with their memory objects since becoming more conscious of their environmental footprint.[8]

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[6] Nicholas: "[…] [Dis] redelik hanteerbare, klein goed."

[7] Such perceptions about the assumed impact of the size of objects, namely 'small' taken to mean seemingly harmless versus 'big' taken to be more threatening and harmful, must be investigated further. For example, pieces of plastic less than five millimetres wide that have ended up in the ocean by 2020 amounted to more than 40 million tonnes and have had grave effects on not only the sea life that live among it, but also for creatures further up in the food chain (Readfern 2020).

[8] The relationship changed for Sammy, Chris, and Cynthia; Benjamin's changed somewhat; Nicholas was unsure whether his relationship had changed; and Lilly's relationship remained unchanged.

Through these New Materialist Analyses, I tease out ambivalent tropes surrounding human/nonhuman relations; materialities' fluctuating value; the sentimental, material, and environmental consequences of digital storage devices; the links between the experience economy and embodied (environmental and memory) habits; and, finally, the potentials of upcycling in the environmental and memory studies discourse.

- ***Nicholas – value transition – uncertainty – management***

During our interview, Nicholas recounted the hysterical fits he had in his youth when he lost something, most notably the "dingetjie" [little thing][9] that he used to carry around in his bag "every single day of my life" (Figure 7.4). Now, Nicholas described himself as being at ease with "carry[ing]" fewer items with him. During the interview, he shared distinct ideas about his environmental consciousness and his relationship with his memory objects. Upon introducing the third and final part of the interview, concerning the potential links between his environmental consciousness and his memory objects, he communicated many uncertainties about the relation between these two:

> Um, I'm sitting here thinking… And obviously I'm trying to make connections now. My very first spontaneous reaction was 'uh, *is* there even a link between these two things? Is there really a link?'[10]

Figure 7.4 | **The 'dingetjie' Nicholas used to carry around as a child**
Photograph by the author.

[9] 'Dingetjie' is an Afrikaans word that loosely translates to "thingie". Anything small and unidentified can be a 'dingetjie'. It can also be a term of endearment or rejection, depending on context and tonality.
[10] Nicholas: "Um, ek sit nou en dink… En natuurlik probeer ek nou konneksies maak. My heel eerste spontane reaksie was 'uh, is daar ooit 'n verband tussen hierdie twee goed? Is daar rêrig 'n verband?'"

For the following 13 minutes he discussed what he deemed potential links by using words such as "unnecessary", "guilt", "management", "meaning", and "preservation". An assemblage of this conversation might reveal something such as this:

> Nicholas – environmental consciousness – memory objects – any link? – preservation? – functional objects? – youth – changes – meaning? – guilt? – clearing out clutter – responsible management – changed way of thinking about sentimentality – preservation – future choices – researcher – storytelling

Here, a myriad of materialities is interacting and forming rhizomes of questions and potential new understandings that Nicholas might have developed with his memory objects since becoming more environmentally conscious. In this case, the assemblage had been deterritorialised, but although there was a momentary shift in the way Nicholas engaged with the question, it is probable that there will not be longstanding effects of environmental consciousness plugged into the assemblage of Nicholas and his memory objects. A machine, or a set of cutting edges that have inserted themselves into the assemblage undergoing deterritorialisation, draws variations and mutations of that assemblages, without completely changing it (Deleuze & Guattari 1987:367). In other words, although Nicholas spent a substantial amount of time during our interview thinking about this relationship, he would most likely continue to view his eco-consciousness as separate from his memory objects.

Although it is unlikely that the practical engagement with his sentimental objects would change, it remains possible to unpack this assemblage further on a theoretical level, which has deterritorialising potentials. For example, below I discuss the notion of fluctuating value in relation to memory objects *and* waste by drawing on Boscagli's *Stuff Theory* alongside Nicholas' awareness of how his sentimentality "is a, a completely different experience now"[11] from when he was younger. Nicholas described his sentimentality as an "energy that changes shape": his sentiment "is now displaced from stuff [...] to the experience of something, and the memories of them".[12] He was no longer "so sentimental", he said, "about [these] objects that I need to touch them or use my senses to engage with them in order to reach that sentimental feeling", although he still thoroughly enjoyed it.[13] To investigate objects' liminal value status, recounting the interview as event is useful.

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[11] Nicholas: "Dit is 'n, 'n heeltemal 'n ander ervaring vir my nou."
[12] Nicholas: "[Dis 'n] energie wat van vorm verwissel. […] Dit [het verander van] die objek as sentimentele ding, na [...] die ervaring as die sentimentele ding [en die herinneringe daarvan]."
[13] Nicholas: "[Ek is nie meer] so sentimenteel oor [hierdie] objekte dat ek nodig het om daaraan te raak of met my sintuie daarmee moet omgaan om 'n sentimentele gevoel te kry nie."

Before our interview, Nicholas took out his mother's old red suitcase (also a sentimental item) in which he kept most of his remaining sentimental objects (Figure 7.5). In my presence, Nicholas opened it for the first time in a long time:

> So, for me it will be just as big a surprise to see what is inside. Um, I know of a few things that are in there I can now definitely recall being there, but I think there will be things in there of which I don't know what they are. And that's quite exciting. Because objects recall memories. Like when you touch them. There are triggers. Absolutely. Of course, there are also scents that accompany them, like how certain things still smell after all these years and you're not quite sure how.[14]

Figure 7.5 | **Nicholas's suitcase that belonged to his mother**
Photograph by the author.

It felt like miniscule energy jolts were released in me by the unveiling of the objects inside (Figures 7.6 – 7.9). He took out (almost) every object individually and explained where it came from and why he kept it. Or that he was not sure why he *still* kept it. His meticulous organisation of things round, things stringy, things with words, things shiny, things from far, things from hospital, was noteworthy. From the suitcase emerged orthopaedic plaster casts (he had surgery as a child for his club feet), small pieces from a 'doedelsakkie' (a word his parents used for "small bags with stuff in"; which has the further meaning of a tiny set of bagpipes, while ringing with Afrikaans words related to 'doing', 'sleeping', 'doodling'),[15] coins from different countries, tiny shiny objects (a green fish, a transparent triangle with a pink flower in it, two flat round plastic moulds with flowers cast in it), a tiny turtle ornament, porcupine quills, letters, a piece of his parents' wedding cake ('8 Mei 1982' marked on the side), his first lock of hair, photographs. *Stuff.*

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[14] Nicholas: "So dit gaan vir my net so 'n verrassing wees om half te sien wat daarin is. Um, ek weet van enkele goeters wat ek definitief nou kan oproep wat ek weet daarin is, maar ek dink daar sal goed in wees wat ek nie weet wat dit is nie. En dis nogals opwindend. Om te weet dat dit… want dit is so dat objekte roep herinnering op. Soos wanneer jy daaraan raak. Daar is snellers. Absoluut. Daar is dan ook natuurlik geure wat daaraan gekoppel word. Soos hoe sekere goed dalk nog ruik na al die jare en jy weet nie hoe nie."

[15] Nicholas: "[Doedelsakkies is] sulke klein sakkies met goedjies in."

Figure 7.6 – Figure 7.9 | **Stuff in the red suitcase from Nicholas's youth**
Top left to bottom right: Figure 7.6: Four plaster casts, Figure 7.7: Coins and other round objects, Figure 7.8: A general overview with boxes and found objects, Figure 7.9: A turtle ornament made from stone.
Photographs by the author.

Stuff, according to Boscagli (2014:5) is "unstable, recyclable, made of elements put in place by different networks of power and meaning" and encounter one another by chance. She further claims that the word 'stuff' appropriately expresses

> the everydayness of hybrid materiality: it has a mundane ring that also speaks, nevertheless, of the potential threat that all our possessions pose to us. "You have all that stuff?"; "What are you going to do with your stuff when you are away?"; "Too much stuff!" (Boscagli 2014:5)

The term 'stuff' highlights all matter's plasticity, its transformative potential, and how it comes into being, inextricably, with the human (Boscagli 2014:2).[16] It is "always on the verge of becoming valueless while never ceasing to be commodified, awash with meaning but always

[16] As introduced in Chapter 3, Boscagli (2014) is the only theorist I could find who treats the unstable value of *both* memory objects and waste (along with clutter, fashion and home décor).

ready to become junk or to mutate into something else" (Boscagli 2014:2-3). Hawkins (2006:77) holds that it is difficult to sustain "essentialist claims about the identity and fixed life cycle of things" since objects are constantly, through material practices, reincorporated into new systems of exchange and use. It also implies scenarios in which materialities and humans make contact in intensely intimate, somatic and unpredictable ways (Boscagli 2014:2-3). Unruly stuff, according to Boscagli (2014:3) "radically recasts fundamental questions of human and material agency".

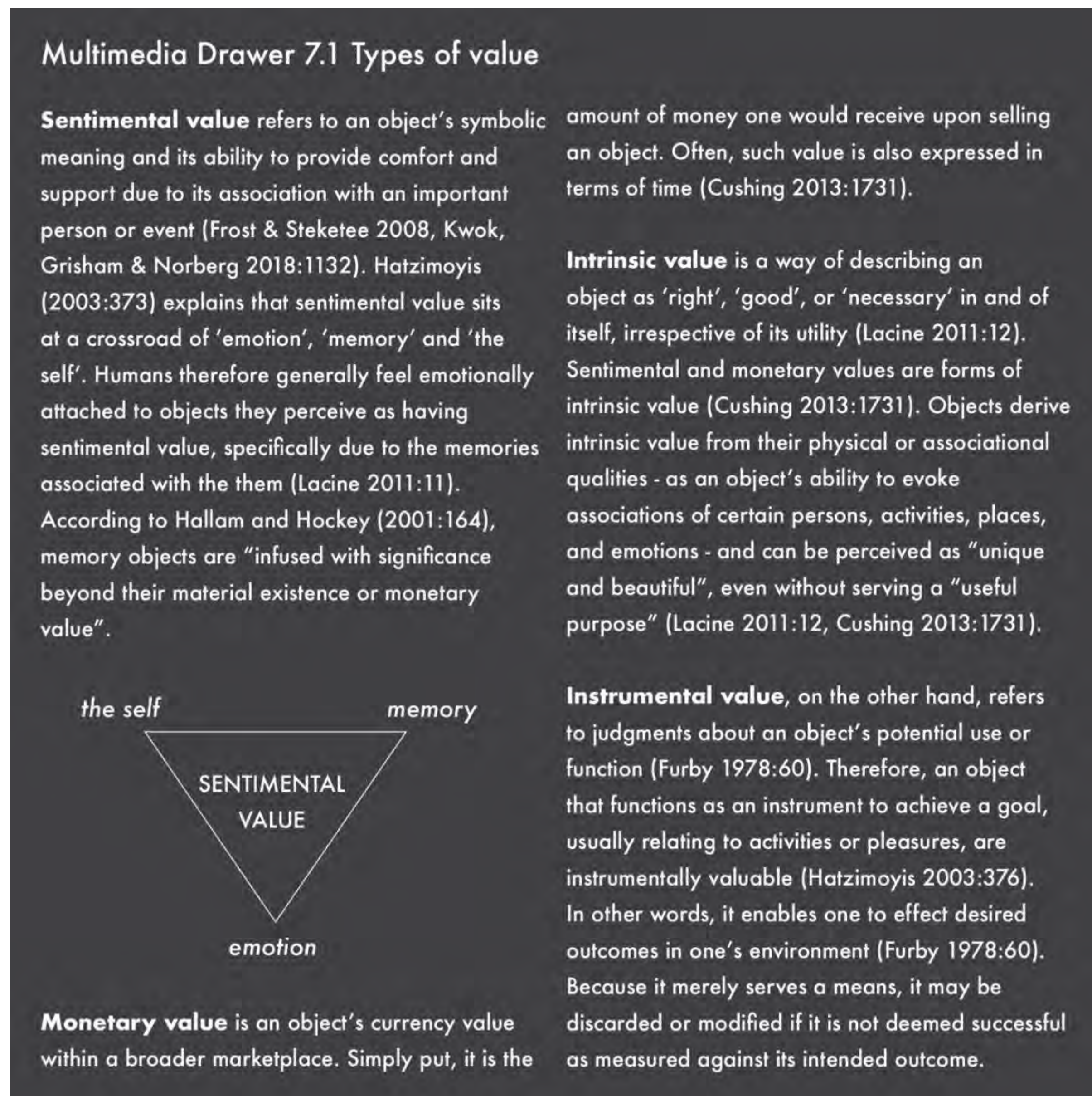
Thinking about memory objects (as in Nicholas's case above) *and* waste as stuff, one can see such objects not as designated "for one type of matter, forever fixed, but [as] a category into which various objects can enter, and exit, in different historical circumstances" (Boscagli 2014:14). It contains objects that have "interacted with the world and its subjects, and have a story to tell" (Boscagli 2014:14). Crucial in this regard is that, after the unveiling of the red suitcase's content, Nicholas stated that he was going to discard some objects once I had left, such as a paper from a visit to the South African Mint, a disk from Sun City, and a key chain with the words 'Elke dag is 'n geskenk van God' [every day is a gift from God], because upon seeing them again, they no longer had meaning for him.

I suspect that an increasing number of things would not fit easily into either category (of waste or memory objects) and a continued demand on sharp distinctions between culture and nature would only highlight this critical shift. Let us consider waste again. In a sense, waste can be seen as "evidence of translation, as part of this proliferation of hybrids" (Hawkins 2006:10). Waste certainly indicates how mixed up these two categories are and how everything contains elements of both:

> The abandoned car body rotting quietly in the landscape is alive with the activity of corrosion, it's become a habitat, it looks perfectly at home, it's both organic and machinic. The shifting and contingent meanings for waste, the innumerable ways in which it can be produced, reveal it not as essentially bad but as subject to relations. What is rubbish in one context is perfectly useful in another. Different classifications, valuing regimes, practices, and uses, enhance or elaborate different material qualities in things and persons – actively producing the distinctions between what will count as natural or cultural, a wasted thing or a valued object (Hawkins 2006:10).

Once-sentimental objects might just as well become recyclable (or unrecyclable) stuff, whereas waste materials might just as well gain value through composting or upcycling. Although material objects are rooted in a certain historical production and specificity, they may have varied uses at later stages in their social lives, recontextualising them (Hallam & Hockey 2001:7). Within the context of this study, then, objects in this process of moving into and out of categories can be

seen as assemblages becoming de- and reterritorialised. Humans, as a component of this assemblage with other objects, are affected by objects to perform practices of valuing and classification which, in turn, cause deterritorialisations (Hawkins (2006:13). How materiality is apprehended is therefore a key aspect when it comes to valuing transformation. I noticed that participants interpreted and applied the notion of value in many different ways. Multimedia Drawer 7.1 lays out the types of value that participants referred to.



Hawkins (2006:76) holds that emerging writings on material culture have begun to focus on the conversion processes from valued to valueless states. Without necessarily realising it, participants made value distinctions about memory objects (between objects with or without sentimental value, sentimental items with or without monetary value, and so on) and about waste (between

objects that are recyclable, upcyclable or not, compostable or not, donatable or not, and so on). Boscagli (2014:12) claims that humans are better positioned to accept this inevitable transience if they acknowledge all materiality's hybridity to be scattered and fragmented, because matter "takes shape and is experienced, knotted through different encounters, deterritorialised, and reterritorialised".

Value judgment and critical engagements with objects became specifically apparent around discussing minute and massive transitional phases in participants' lives: from cleaning up the kitchen after dinner to undergoing a life-changing experience. For example, many objects that previously carried much sentimental value were later meaningless, while others became more precious with time. Similarly, waste matter that would previously have been condemned to the black bin, were then more meticulously sorted and treated as recyclable, compostable and so on. Such malleability and transformation in value are "evidence that objects are not locked into categories", but liminal, always bordering on gaining or losing value (Hawkins 2006:78). In summary, the relationship that Nicholas expressed to have with the sentimental objects in the red suitcase, had been deterritorialised over time *not* because of his eco-consciousness, but rather because of his engagement with them as objects with fluctuating value that could no longer be neatly categorised.

- ***Benjamin – photographs – online storage – memories***

In response to questions about his sentimental objects, Benjamin said that he thought "photographs are [his] thing": "the fact that it's captured and that somebody that's in there might not be there at this time next year, I think that holds a lot of weight to me". Elaborating on how he stored his photographs, he explained that "most of it's digital, because I don't wanna be printing on anything":

> I save it [digitally], I mean, there's no need to really have actual photographs when everyone has access to clouds, digital… access to anything now, really. There's no real, uh, need for a physical photograph unless you're displaying it in your house. Which there's a lot of, but I think my main source is digital.

Despite printed photographs carrying more sentimental "weight" than digital ones for Benjamin, he added that he nonetheless preferred storing them online for environmental reasons. When asked if his relationship with his memory objects changed after becoming more eco-conscious, he explained that it changed "slightly" and alluded to a new habit: whereas he "used to be quite aggressive with the printing", he then, he said, "tend[ed] to go against it". In

this sense, the assemblage of Benjamin and his sentimental photographs had been deterritorialised, since he shifted his behaviour from printing photographs to storing them online because he believed this to be more environmentally friendly. By virtue of an abstract machine brought about by deterritorialisation, the assemblage's territory (in other words, printing photographs for sentimental reasons) lost its territorial function by melding with other assemblages outside of it (in other words, storing sentimental photographs online because he wishes to be more environmentally conscious). This shift in habit supposes additional materialities as well as adapted beliefs and actions.

An assemblage between Benjamin and his practice of storing (sentimental) photographs online for environmental reasons might reveal the following:

> Benjamin – photographs – memories – friends – sentimental experiences – hard drive – online storage – digital – environmentally friendly – convenience – less printing – changed relationship – researcher – storytelling

In this assemblage, a myriad of relations with mnemonic and (assumed positive) environmental implications come to the fore. All the participants who touched on online storage facilities highlighted their positive effects, and there was no mention either of potential negative environmental implications or of the electronic devices (cell phones, computers, tablets) that made viewing these photographs on screens possible. Similar to the ways in which naturalised views of nature has seeped into human consciousness, the same has happened, it seems, through the discourses surrounding 'immaterial' online activities.

Turning to the questionnaire completed after each interview for a moment, it is interesting to note that in responding to the statements 1) "I am aware that ('invisible') online storage units are run by visible machines somewhere out of sight"; 2) "I would rather store photos and sentimental media digitally than printing them out" and 3) "I am trying to minimise my e-waste footprint", participants predominantly responded "yes" or, in some cases, "maybe". No one responded "no" to any of these questions.

Lay discourse often suggests that the digital world is predominantly immaterial. For example, the misleading marketing concept of the 'cloud', used to refer to computing and internet networks, suggests something "impalpable, fluffy, untouchable, light, and transparent" (Lucivero 2020:1019, Holt & Vonderau 2015:72). Such language strategically obscures the *materiality* of the infrastructure, its geographical presence, and its environmental impact. In reality, cloud

computing is a highly tangible assemblage of "material and heavy stuff" composed of cables, wires, servers, IT facilities, cooling systems, ventilation systems, and shelves in buildings all around the globe (Lucivero 2020:1019) (Figures 7.10 and 7.11). With the rapid growth of increasingly larger data centres worldwide, such centres are becoming energy intensive processes accounting, in 2017, for over one per cent of the world's electricity usage. Cooling IT equipment alone can amount to over 40 per cent of the centres' total energy consumption (Zhang *et al* 2017:2047).

Figure 7.10 | **An example of how cloud computing is commonly visually communicated as something purely 'digital', 'intangible', 'secure' and 'harmless'.**
(Marr 2020)

Figure 7.11 | **Tanks containing coolant for servers at a Google data centre in Saint Ghislain, Belgium, which highlight the detrimental environmental effects of cloud computing.**
(Burrington 2015)

Lucivero (2020:1018) notes that referring to data as an "unlimited and superabundant resource" implicitly suggests that data are *virtual* goods that are ever-increasing and never-ending, in contrast to limited 'natural' resources (such as oil, water, or land) that need careful management. An editorial in *The Economist* entitled "The World's Most Valuable Resource Is No Longer Oil, but Data" (2017), suggestively rehashed a correlation increasingly used by several speakers in the policy, industry, and academic environment: data *is* the oil of the digital era. In the same way in which oil, a finite resource, was a driver for change in the last century, so is data, an equally finite resource, in the twenty-first century (*The Economist* 2017, Lucivero 2020:1019).

Using language that deliberately conceals data storage's material implications induces false assumptions about the continuity of offline and online life. Such assumptions created by misleading words not only influence people's understanding of the data universe and economy,

but also *shapes* their attitudes towards it (Lucivero 2020:1019). Benjamin's belief that online storage is more eco-friendly is an example of how major discourses continuously territorialise certain attitudes. Humans' technological habits and choices entangle in assemblages not only with cultural, social, political, and ethical dimensions, but also very tangible environmental dimensions. An assemblage which foregrounds the environmental component in online memory storage would reveal something such as this:

> photographs – hard drives – online storage – 'cloud' – myths about immateriality – physical space – detrimental implications – cooling systems – carbon emissions – environmental degradation – e-waste – exportation

Unpicking the myth that the world is dematerialising is done by drawing attention to the physical presence and the material configuration of digital services, data, and electronic apparatuses (Groes 2016:86). Places, infrastructures, and buildings all play a role in constituting the online world, and vice versa: online behaviour also has material implications (Holt & Vonderau 2015:74). The 'material turn' is also being investigated in internet studies and science and technology studies by considering material and physical infrastructures as socially constructed, and societal relations as constructed by such infrastructures that benefit some and marginalise others. Storing large numbers of photos on cloud services has, like other seemingly 'immaterial' online activities such as buying bitcoin or binge-watching series, serious material implications, as they require resources such as space, water, electricity, and fuel (Lucivero 2020:1019). The consumption of data is no less environmentally problematic than the consumption of material goods. Equally, paperless, computer, and data intensive practices are "not an ultimate solution to environmental issues, but instead creates new ones" (Lucivero 2020:1019, see also Tenner 1996). Groes (2016:86) warns against the e-waste[17] "new materialities" of the digital age and its dumping grounds that are emerging across the developing world. E-waste has very concrete environmental implications despite the idea that the virtual world consists of dematerialised experiences (Groes 2016:132).

Concerning memory processes, contemporary digital culture is driven, organised, and shaped by databases that provide apparently endless storage and retrieval possibilities (Pister 2016:215). Rigney (2017:474) notes that objects, by threatening to disintegrate, demand to be looked after. Often, this fear of material degradation wends individuals towards digital storage. This evokes a core characteristic of memory in the twenty-first century which, according to Groes (2016:355),

[17] E-waste includes any electrical or electronic equipment that has been discarded, damaged or permanently stored, and is no longer in use (Ichikowitz & Hattingh 2020:44).

is that, due to the “ferocious power of the digital, technologies and machines”, the role of the human mind in memory is increasingly marginalised.

More recently, memory studies has increasingly researched the role that distributed agency, in particular the use of the technologies and apparatuses that “make possible the storage and transmission of memory, underscoring the fact that even childhood memories, which might strike us as the most private and authentic forms of recollection we have, are triggered and shaped by mediating objects such as photographs, home videos, souvenirs, oral stories, and written documents” (Bond, Craps & Vermeulen 2017:13). Memory storage is an increasingly non-biological process. The human brain becomes “a porous, permeable container” and through “instant, repeated and shared retrieval processes, memories are increasingly dynamic and protean, but also migratory and distributed across platforms, media and technologies, and other people’s minds” (Groes 2016:356).

Here it is helpful to mention an experience that Benjamin had that confirms memory’s fragility and dependence upon various material relations and technologies to function. In 2010, directly after the last Soccer World Cup match, which Benjamin watched live in Johannesburg, he flew back to KwaZulu-Natal. He “got back home and [his hard drive] just didn’t work”: he lost five years of photographs, including the latest ones taken during the world cup events. Although the memories were, as he said, “imprinted in my brain”, he added the following: “I don’t have those videos that we took on the buses, and those kinds of things”. He added that “I’m still pretty bleak about it” and it was “not a great feeling” because “I’m never gonna get that back”. ‘Outsourcing’ memories to digital technologies is a precarious task, especially when the material effects of doing so are aggressively foregrounded as in the case above.

As material objects are slowly ‘disappearing’ into ever smaller devices and cloud computing, human identities are changed in the digital age (Groes 2016:86). This affirms the continuous relationship between online and offline activity which further challenges the virtual/real distinction (Pink *et al* 2016, Lucivero 2020:1018). By challenging the relation between the digital and the material by acknowledging the material character of digital infrastructures, content and context, the questionable online/offline dichotomy is linked closely to the new materialisms’ critique of binaries (Groes 2016:133).

Another way in which memory boundaries become blurred, as Pitsillides (2016:115) notes, is when online platforms increasingly contain information "from birth to death and beyond": the "archives of the living and the archives of the dead […] blur as more content is added after death through the technological interaction of loved ones with dead people's accounts and profiles online". This interaction with the digital furthermore shifts the impact and role of memory. This poses interesting new questions about presence and absence, since humans increasingly 'live on' on the servers and in the hard drives of others (Pitsillides 2016:114).

Finally, digital culture allows "very explicitly for endless series of new combinations, orderings, and remixes of its basic source materials" (Pister 2016:215). Yet, it is only recently that the ambiguous relationship between visions of sustainability and the detrimental effect of data centres (which include storing sentimental data often in the form of photographs), has been more readily acknowledged (Lucivero 2020:1015). The combination of the assemblage of Benjamin and his online habits as well as the additional assemblage of these habits' environmental impact, then, not only point out a common link between the digital world, memory, and environmental consciousness, but also the discrepancy in the public's understanding of this relationship brought about by language discourse and broader societal structures such as capitalism. The more the stark distinction between material and 'immaterial' memories becomes clouded, the more de- and reterritorialised assemblages might be enabled (Hamilakis 2017:170).

- ***Sammy – body weight – minimalism – experiences***

The following assemblage draws together two interrelated strands that most prominently connected Sammy's environmental consciousness and her memory objects: losing weight and, consequently, favouring experiences above 'physical' memory objects. Early in our interview, Sammy described herself by using terms such as 'vegan' and 'minimalist', which seemed to continuously mediate our discussion and her broader worldview. She explained that becoming environmentally consciousness changed her relationship with her few sentimental objects, because she found herself to be both more *and* less aware of her memory objects.

Concerning the first strand, Sammy recounted how she "started off with a lot more stuff, I had stuff, lots of *stuff*. Lots of stuff. And always little trinkets and everything. I wanted things." In 2017, she had a "whole, kind of, transformation. Health journey. Um, where I shed a lot of weight": in a short period she lost 17 kilograms while living in Thailand where "it was very hot",

and she felt more "comfortable". She also felt healthier: she "shed" the need to smoke cigarettes, to consume alcohol and to accumulate things. As her "weight dropped off, […] things dropped off". With her partner's help, Sammy "learned to let go of things" and to appreciate something in its context, such as a shell on the beach, without feeling the need to have it as a keepsake. Moving back to South Africa after six years abroad, Sammy and her partner returned with only "30 kilograms each. *That's it.* My whole life was in 30 kilograms". Although this process of selecting "the really important things" was "really tough", she found it to be "so liberating".[18]

To explore the second strand, Sammy's perceived sentimentality was noteworthy. She explicitly stated that "being sentimental is adding value to something, […] also to memories, not just necessarily things". Since her drastic changes in lifestyle, Sammy 'made' memories through living experiences instead of collecting objects, because "stuff gets in the way of life". She "do[esn't] need a lot, we travel a lot": "like, buy plane tickets. And going, sitting on the beach, reading. That's memories to us".

Similar to the way in which Benjamin's habit of printing photographs had been deterritorialised by his environmental consciousness, Sammy's awareness of environmental degradation was reshaped not only her memory habits, but also her entire lifestyle. In other words, Sammy's habit of keeping sentimental "stuff" earlier in her life was altered, or deterritorialised, when she more readily started valuing experiences as sentimental 'objects'. Taking the continuum between territorialisation and deterritorialisation into account, it can be said that, due to the radical changes that Sammy underwent in multiple areas of her life, an assemblage between her and her memory objects seemed to be deterritorialised to a larger extent than in the case of Benjamin.

Taking the vignettes above into account, an assemblage between Sammy, her environmental awareness, and her memory objects could look something like this:

> Sammy – environmental consciousness – veganism – weight loss – health journey – "healthy, happy person" – fewer objects – minimalism – "just things" – stuff – value – less value – "doesn't define me" – more value - tiny living – partner – experiences as memories – travel – relationships – researcher – storytelling

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[18] Alta had a similar experience when she moved to the Netherlands and back to South Africa three years later. She found it easy "leaving everything behind" and "exceptionally liberating to arrive on the other side with only one bag". (Original Afrikaans: "[Toe ek Nederland to gegaan het,] het ek alles gelos [en dit was maklik]. En dit was vir my verskriklik bevrydend om daar anderkant aan te kom en ek het net een tas.")

Broadly, Sammy's account of her contemporary relationship with memory objects was accompanied by rhizomatic affect surrounding memories, weight loss, veganism, and environmental consciousness. Attending to the affective flows at work in this assemblage, it can be said that Sammy's engagement with objects was affected by many factors, including her bodily experience of physically becoming lighter when she had lost weight, which was accompanied by "shedding" emotions (such as unhappiness), habits (such as smoking), and physical (memory) objects. These deterritorialisations also resulted in reterritorialisations of new habits, practices, and identities, such as following a vegan diet,[19] becoming a minimalist, and preferring experiences to objects as memory-making. Analysing such an assemblage demonstrates that affectivity (of memories, or eco-conscious habits, for example) is always contextualised within a broader affect economy derived from multiple interacting relations (Fox & Alldred 2019:30).

Sammy's newly adapted plant-based diet can also be seen as an assemblage with certain bodily and psychological effects. Hamilakis (2017:177) notes that, as food substances "flow in and out of bodies", not only does the "boundary between inside and outside become blurry, but also the binarisms of the subject and object, and of an active human and the passive and inert food substance, fall apart". Both food and humans are living assemblages to start with but, through the process of assemblage making, "bodies and their individual organs, separate food and drink substances, material culture and space, cease to exist as autonomous, bounded entities and become part of a unified affective and sensorial field". That is why, according to Alaimo (2010:12), the sensorial assemblage of eating encourages one to shift to a trans-corporeal, in-between sensoriality.

Turning to the second aspect, experiences, I gathered that Sammy perceived her relationship with objects as relatively straightforward. In short: have fewer things and rather value experiences. Many participants shared the sentiment of valuing new touristic or other sentimental *experiences* as much as, or sometimes above, tangible memory objects. A New Materialist Analysis of this narrative would reveal a more complex relationship with objects. Specifically, this shift highlights two ironic impacts on the environmental and memory discourses. Firstly, the environmental footprint associated with touristic travel and, specifically, air travel, often outweighs the environmental impact of physical souvenirs through carbon

[19] Fox and Alldred (2019:30) documented similar experiences during their interviews (for example, when one of their respondents' descriptions of past eating experiences was intermingled with many affective forces, including memory).

emissions and other detrimental effects (Wong 2004:450).[20] Although some participants alluded to this, others (such as Sammy) did not necessarily point out this discrepancy during the interview.[21]

Secondly, although some participants perceived favouring lived experiences above the buying of objects as an 'anti-consumerist' action, this notion ironically correlates with recent economic shifts towards the 'experience economy' (Pine II & Gilmore 2011 [1999]). In the final decades of the twentieth century, the then dominant service-based economy was increasingly challenged: economic structures transcended selling merely goods and services and started commodifying, by *customising,* services (Pine 2004:2).[22] This meant designing a service for an individual, turning it into a "memorable event" or an *experience* (Pine 2004:2).

According to Pine (2004:2), humanity is therefore in a fourth economic era where "experiences are becoming the predominant economic offering". Just like seemingly immaterial online storage units are made up of physical materials, experiences remain and cannot be separated from being grounded in materiality. Consumers skim off a specific experience that they believe to be immaterial (and is therefore believed to be 'more environmentally friendly'), yet the material base is constantly maintained by service providers. Matter makes possible certain capacities and therefore constantly has an affective impact on humans, whether they are aware of it or not (Barad 2012:59). Despite popular beliefs that stuff acquired by or coming in contact with the self is at the heart of this environmental problem, equally disastrous environmental impacts linger from sources, such as travel experiences made possible through various forms of transportation or online storage options, often *perceived* to be immaterial.

Furthermore, and linking even more closely with memory, Pooley (2010:71) notes that this shift towards experience has induced a "new yearning for individual self-fulfilment through authentic

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[20] For detailed discussions on the environmental impacts of tourism on the 'natural' environment, see for example the eight chapters of "Part VII: Tourism, the Environment and Society" in *A Companion to Tourism* (Lew, Hall & Williams 2004).

[21] Furthermore, even though Lolo, for example, stated her awareness of travel's "huge environmental footprint, I'm not going to stop […] doing that" because "that's a line I'm not going to cross". This resonates with the discussion in the previous chapter on hybrid behaviour, since participants continued to engage in such actions despite the ambivalent environmental impact they might have been perceived to have.

[22] To trace these shifts further back might be useful. Whereas commodities such as minerals, animals, and vegetables were the basis of the agrarian economy for millennia, the Industrial Revolution in the eighteenth century brought about a shift from an agrarian to an industrial economy: goods replaced commodities, since transforming raw materials into manufactured goods became more prevalent (Pine 2004:1). In the second half of the twentieth century, goods became commodified, meaning that people did not care where they came from or by whom they were made (Pine 2004:1). Since, as mentioned above, customisation occurred.

experience", which calls on humans to "embark on quests of self-discovery that promise to affirm […] uniqueness". What complicates this matter is that a "romantic fantasy of nature still saturates our unconscious" and is thoroughly intertwined with such expectations, because "when we travel to a 'wild' or 'beautiful' place in the natural world, we experience it in a way that no other species can: like a god. If we get wet or cold, we'll dry ourselves off and warm ourselves up, and call it an adventure" (Eaton 2019:84). Materialities such as planes and cars, 'natural' spaces, humans, maps, towels, and jackets affect and necessarily entangle with human memory.

The world is made up of a concrete, complex materiality of heterogeneous bodies immersed in social relations of power (Braidotti 2012:16). Generally, humans are posited as 'owners' of lifeless 'possessions' that simply facilitate human endeavours, because the socially constructed human experience of objects is often not "part of the equation" (*even* when taking the prickly point of our unescapable anthropocentric perspective into account) (Boscagli 2014:271).[23] In short, "human subjects are alienated from matter and its terrific, implacable weight" (Boscagli 2014:271). Yet, Sammy's urge to 'let go' of 'unnecessary stuff' in her life provides a glimpse into and challenges the idea of humans as autonomous entities that cannot be influenced by other materialities. Sammy's experience highlights the affective traffic between humans and nonhumans and "affirms their hybridity and multiplies their contact zones and entanglements" in ways that expose and contest the workings of the world, instead of merely replicating it (Boscagli 2014:271).

- ***Chris – education – environmental justice – sentimentality***

Chris, one of the participants who preferred to meet me in a public space instead of his home, suggested conducting the interview at the University of Cape Town's Upper Campus (Figure 7.12). Upon arrival, I quickly realised that Chris had an intimate relation with the space, as he pointed out important buildings, well-known sports grounds and the university's on-site recycling bin system. From where we sat next to the Otto Beit building, at least five sets of two bins were visible.

Eerily, from where we sat the Jagger Library was also visible. Around a month after our interview, a rampant wildfire fuelled by high winds engulfed parts of Table Mountain and the surrounding areas, including this part of the university's campus, leaving the library's reading

[23] As discussed in Chapter 4, this view is similar to the way data are often perceived by researchers to be simply "raw material" that are problematically posited as "intrinsically 'ours'" (MacLure 2017:51).

room and considerable archives charred (Figure 7.13). UCT's executive director of libraries, Ujala Satgoor, voiced her "deep sense of sorrow and devastation at the loss" (Burke 2021). In another overlapping assemblage, this event brought about yet new entanglements of the space, memory, loss, and environmental problems in the twenty-first century.

Figure 7.12 | **The view from where Chris and I conducted our interview at the University of Cape Town's Upper Campus** Photograph by the author.

Figure 7.13 | **A photograph, taken from the same position around a month later, of the Jagger Library in flames** (Burke 2021)

Chris completed his undergraduate studies in marketing management, then his postgraduate diploma and, in 2020, his master's degree. For a large part of our interview, Chris discussed his ethnographic master's study on social and environmental justice, in which he focused on littering and illegal dumping in townships.[24] Reaching the second part of our interview, I asked Chris if he was sentimental about any objects. He showed me two photographs, the first of his degrees side by side (excluding his latest degree, which he was still waiting for, and would find equally sentimental) (Figure 7.14). "If there's anything that I do not want to lose at all", he explained,

[24] Because I met Chris at an online academic conference where he mentioned his research when asking a question, his focus on his university studies during our interview could have been caused by certain expectations he had concerning why I requested to interview him. In short, our acquaintance in an academic context might have shaped his responses to centre on his academic career.

"that's my degrees […] because I am a first-generation graduate" and "[my family is] so proud of me".

The second was a framed photograph of him and his older sister, taken around 20 years prior to the interview (Figure 7.15). Elaborating on its history, Chris explained that it was taken in the Hexagon Park in his hometown, Komani, and "it looked beautiful in the picture but now, it doesn't look like that" because "this background doesn't exist anymore". In his master's dissertation, Chris further wrote that this space was "where some of my earliest and fondest childhood memories were forged, but in the same breath, is also a place that I no longer even want to look at because of the way in which it is so dilapidated and filthy". He added that the space was "the way it is today because of the way in which people litter after having sat in that area".

Above:
Figure 7.14 | **Two of Chris's degrees, the objects he is most sentimental about**

Left:
Figure 7.15 | **A framed photograph of Chris and his sister taken when he was young**
Photographs provided by the participant.

Upon asking him whether his relationship with his memory objects changed after becoming more environmentally conscious, Chris was silent for quite some time. He interrupted his thinking with, "that's tough", and proceeded to think for a little while longer. He then explained that, for him, these two notions have become intrinsically linked:

> Yes, it has [changed]. Um, had it not been for my environmental consciousness […] that picture would not be of sentimental value. […] It would've been another, just another picture for me, because it would not have had an impact. Hm. […] I think, had I not been someone who was environmentally conscious at the time [of looking at the picture again], I don't think that my relationship with that picture would've changed. But it's changed because I am, and *was*, environmentally conscious at that particular point. Um, so ja.

In Chris's case, the stable territory of his relationship with the ('neutral') photograph was deterritorialised when he saw it again, felt its affective ('sentimental') pull and used its story to shape his postgraduate research. Whereas it "would've been […] just another picture", it has been de- and reterritorialised as a sentimental image because Chris looked at it through an eco-conscious lens. With these narratives and this explanation in mind, an assemblage might reveal the following:

> Chris – university experience – master's degree – first generation graduate – pride – environmental and social justice – photograph – park – family – ethnographic case study – waste – waste management – townships – local governments – Eastern Cape – mismanagement – Cape Town – home – change – impact – researcher – storytelling – UCT Campus – recording

This assemblage includes heterogeneous materials that include humans, spaces, feelings, knowledge, experiences, and objects. The location of this impromptu photoshoot, Chris mentioned, invoked feelings of "malaise and angst" in him, because what "used to be a beautiful park and recreational area is, today, a shadow of its former self". The paradox of environmental issues lies in the recognition that, while looking for answers concerning the planet's future, humans return to their memories of the past in strange, new combinations (Groes 2014:3).

Human memory becomes simultaneously grounded and ungrounded by the geological (Crownshaw 2017a:5). For Chris, the Hexagon became a personal *lieu de mémoire* (Nora 1989) or an *environmental* site of memory (Uekötter 2011:1). Uekötter (2011:2) asks: "Do memories create opportunities for environmentalism, or are they more of a hindrance in the light of today's challenges?" For Chris, it seemed, seeing a photo which sparked a personal childhood memory of a green park, further sparked his willingness and efforts to engage in postgraduate research pertaining to environmental and social justice.

Furthermore, the past is often experienced as "simple, pure, ordered, easy, beautiful, or harmonious" and stands in stark opposition to the present which is constructed as "complicated, contaminated, anarchic, difficult, ugly, and confrontational" (Garrard 2016:164). Nostalgic

distancing "sanitises as it selects, making the past feel complete, stable, coherent, safe" (Garrard 2016:164). In short, nostalgia locates beauty and harmony in the past, posing it as unattainable in the present (Garrard 2016:164). A statement made by Colebrook (2017a:10) carries this point further: remembering is "never simply to retain and recall a past, but always to do so from the point of view of a present that anticipates a future".

This intermingling of timelines, past memories, and future visions also became evident in our interview. Chris explained that his environmental awareness "has [him] reflecting on how we've gotten to this point" and "how it will affect future generations". He added that he was looking at "what can be done in the present to ensure that it doesn't have a detrimental effect for our children and their children". At another stage in our interview, he referred to his potential future children again, saying that he would "obviously give… or hand [my degrees] over to my children, if I do have children one day, so that they can keep them" and that the papers will be "passed down from generation to generation".

On a theoretical level, many controversies surrounding population size, growth, and control arise at this point. One contentious issue in the Anthropocene is that, although humans often 'want to save the planet for our children', the idea of human population growth has since around the 1970s been posed as one of the biggest contributors to an augmentation in greenhouse gasses and climate change (Emmett & Nye 2017:100, Berkhout 2014:153). Not only have human populations grown dramatically, especially over the past century, but per capita wealth has also increased, which means a growing dependence on natural resources and environmental services (Crutzen 2002:23).[25] On the one hand, "we invest our political hopes in children" but, on the other, it "actually might be better not having any children at all" (Garrard 2016:141). Around this contentious issue, feminist environmental scholar Jennifer Hamilton (2017:187) reminds one of the devastating effects of "the volumes of food and pharmaceuticals delivered to us by fossil fuels".

Taking this view as a point of departure, I turn to the ways in which the environmental crisis accentuates, in painstaking forms, the inequalities between rich and poor human populations

[25] Extrapolating from historical population trends, scholars have indicated that in areas where the birth rate is 3.0 children per woman, such as rural India and much of Africa, the population was doubling every 24 years (Emmett & Nye 2017:100).

(Malone 2018:255).[26] Many developed countries where birth rates are declining, such as the United States of America and some European and Asian countries, are also those who contribute most to climate change, since they tend to consume more resources than other countries. Therefore, consumption patterns and technology choices are in many cases more harmful and unsustainable than population size: a single child from a middle-income household would have access to and make use of far more resources than children from poor households (Malone 2018:65). For example, in 2016 only 33 percent of urban populations in Sub-Saharan Africa has access to piped water in comparison to 96 per cent of urban areas in the United States of America and Europe (Van den Berg & Danilenko 2017:xi).

Further concerns can be raised regarding the imagined environmental benefits of a drastic decline in population size: if 'the way forward' is to have one child, or no children, this will have effects on many facets of social life. For example, what might happen when the average age augments so drastically – by way of technological and medical inputs dedicated to prolonging human lives – that there are fewer young humans to take care of these elders? In the case of countries in the global South, where birth rates generally remain high or are increasing, such as some in Africa and Asia, other challenges arise. Although these societies are often over-populated, they have a much smaller environmental impact due to their low resource use:

> Ironically, many slum dwellers use less energy and resources and generate less waste than their upscale neighbours, but the poor live in degraded areas and receive fewer resources and services, and therefore bear the burden generated by these higher-income city consumers (Malone 2018:65).[27]

Yet, as much as slums consume less, these spaces often concentrate crime, pollution, disease, disaster, and injustice, which will equally affect children (that is, the majority of those in the world at any given point) growing up in these conditions (Malone 2018:66). This ambiguous relation between population size, environmental impact, and the lived experience of adult and child humans, highlight the ways in which sustainability models fuelled by Western stories of

[26] Malone's book, *Children in the Anthropocene: Rethinking Sustainability and Child Friendliness in Cities* (2018), provides a thorough new materialist engagement with the ambivalent (conceptual and embodied) position of the child in the Anthropocene.

[27] For instance, in some areas of India such as Dharavi, a slum in Mumbai, the maximum density of slum settlement is around one million people per square mile, and these areas have minimum energy and material use due to the lack of services. People move around by foot, bicycle, rickshaw, or shared taxi; they share power if they have access to it at all and, whenever possible, they not only recycle materials for their own use but also recycle others' waste for resale. The Dharavi slum site, for example, has over 400 recycling units and 30 000 rag pickers who sort 6 000 tons of rubbish every day. Many commentators believe squatter cities that have emerged and will continue to emerge at a rapid pace in the next 30 years can teach us much about future urban living, particularly around low consumer patterns and circular economies (Malone 2018:65).

sustainability and progress fall short of explaining the complexities of messy entangled worlds of the least privileged child bodies according to Malone (2018:254).

This raises another contentious concern: population control. Contemporary population control policies globally remain intrinsically rooted in deeply imperialist, racist, and patriarchal ideas, despite being couched in the language of women's reproductive rights and choices (Wilson 2015:4). Such rights not only constitute the right to rear a child to robust adulthood in safety on the one side, or the choice of not having a child at all on the other, but also issues of "food, jobs, housing, education, the possibility of travel, community, peace, control of one's body and one's intimacies, health care, usable and woman-friendly contraception, the last word on whether or not a child will be born, joy" (Haraway 2016:5). Yet, the worldwide absence of such rights remains "stunning" (Haraway 2016:5). Feminists have therefore often resisted the languages and policies of population control, because such policies often favour the interests of biopolitical states more than the well-being of young and old humans (Haraway 2016:5).

The child, as an embodiment of innocence, hope, and a future, then has "become compromised and ambiguous in today's world": in short, metaphorically "uncomfortable" (Garrard 2016:142). In light of this, Haraway (2016:2) adopts the word 'Chthulucene' to envision the future of life on the planet. Chthulucene is a compound of two Greek roots, namely *khthôn*, where "chthonic ones are beings of the earth, both ancient and up-to-the-minute", and *kainos*, a term for the present or a 'now' that can be "full of inheritances, of remembering, and full of comings, of nurturing what might still be". Put together, *khthôn* and *kainos* name a "kind of timeplace for learning to stay with the trouble of living and dying in response-ability on a damaged planet" (Haraway 2016:2).

Humans', including children's, lives are entangled with the nonhuman world that embraces them, holds them, and works through them (Malone 2018:254). Instead of 'making babies', Haraway (2016:99) proposes 'making kin' with the nonhuman because "[l]iving-with and dying-with each other potently in the Chthulucene can be a fierce reply to the dictates of both Anthropos and Capital":

> No species, not even our own arrogant one pretending to be good individuals in so-called modern Western scripts, acts alone; assemblages of organic species and of abiotic actors make history, the evolutionary kind and the other kinds too (Haraway 2016:100).

Haraway (2016:100) presents the problem of overpopulation with this catchy slogan to explain how environmental problems resonate with feminist thought and activism. In need of kinship – interspecies bonds – humans have to focus on expanding our way of thinking about who our 'loved ones' could be. The first part of the slogan, 'making kin', can be seen as an alternative ethical path to being bounded with and accepting nonhuman species' uncanniness. With this contextialisation, the second part of the slogan is not about 'not making babies' as such, despite Haraway's (2016:103) fixation on lowering human numbers again to "two or three billion or so" over "a couple of hundred years from now". Rather, babies function as a synecdoche for the "proprietorial, middle class and closed Anglo-American or settler colonial western family, funded by waged work and maintained by unwaged housework in the present" (Hamilton 2019:472).

Haraway does not pose 'making babies' as primarily about conception, gestation and labour here, but rather about all the unwaged care labour involved in the capitalist model of human reproduction and domestication:

> These are the kinds of familial relations and housework practices that have flourished under extractive capitalism, that have supported select privileged people and functioned as the living standard to govern development goals and as a formation to which those not automatically granted access aspire to achieve. This kind of family is the formation into which we are all still being coercively marshalled whether we like it or not [...] If 'make kin not babies' is to combat this particular structure, it is not only about not making babies, but a radical revisioning of the kinds and divisions of labour practices that structure and support any small communities (Hamilton 2019:472-473)

In summary, theorists such Haraway (2016:99) and to some extent Malone (2018:255) premise childhood in the Anthropocene on the importance of making kin and on the 'situatedness' of being a child as co-mingling with 'other' kin in order to eventually change the ecosystem. More reserved theorists such as Hamilton (2017:186) find this idealistic approach less achievable. Even more so, then, Chris's attitude towards environment degradation in combination with his past experiences and his intention of having (human) children in the near future – as for many other humans – will probably remain a complex and controversial matter.

I further asked Chris if he saw any further connections between environmental awareness and memory. He reiterated on a broader scale what his own experience was, boiling it down as follows: "I think there's a potential link between environmental consciousness and how that impacts [someone's] memory over a long period of time". His response included two perspectives. He mentioned that, for him, in instances where a "person has seen how their environmental consciousness has resulted in change in a particular place or places in a positive

way, then I think when they reflect on their consciousness and how their consciousness has impacted and influenced a particular environment, then, just that memory for them, will be a positive one". Conversely, he added: "when a person has, because of their [environmental] consciousness, […] noticed how, um… things have degraded and have gotten worse. That for them, when they reflect on it, will be a negative memory, because they will have seen, over a period of time, how things have gotten worse".

It is clear that the Anthropocene confronts humans with new questions, attitudes, and sensibilities about meaning, contribution, and responsibility, which complicate thinking about time and memory (Groes 2016:140). In Chris's lived experience, the concepts of environmental awareness and sentimental objects had been approximated through an intermingling of diverse materialities connecting him to his past memories of specific spaces, his educational path and exposure, his increased awareness of environmental degradation in his immediate environment, and his vision for his future. He expressed sentimentality over these selected objects precisely *because* he was environmentally conscious.

- ***Upcycling comparison: Lilly – business – memory objects | Cynthia – artworks – matriarchal lineage***

Apart from Chris's case, as discussed above, the most obvious links between environmental consciousness and memory – expressed by the participants themselves – was around the notion of upcycling of waste materials into something with potential sentimental value. Lilly, a business owner, and Cynthia, an artist, easily linked their upcycling practices with memory, either their own or those of others. The term 'upcycling' originated in the 1990s and can be described as the reuse of discarded materials to create a product with an increased value (Bridgens, Powell, Farmer, Walsh, Reed, Royapoor, Gosling, Hall & Heidrich 2018:145). It is, however, not a new phenomenon: history is replete with examples where objects have been repurposed for extended use (Wilson 2016:395).

Theorists are increasingly engaging with the potential for upcycling to "reconnect people with materials and establish cultures and communities of making" (Bridgens *et al* 2018:145, see also Wilson 2016; Sung 2015; Kleesattel & Van Dormalen 2018). In the cases of Lilly and Cynthia, a range of economic, cultural, and geographical factors directly affected the availability of materials, the end goal, and the influences and skills that shaped the manipulation and re-purposing of the materials (see Bridgens *et al* 2018:146). Although brought about in two diverse

ways, both can be said to have been producing objects through the use of diverse actions, material tools, and physical labour that had affective power to produce sentimental emotions in themselves or others.

Comparing assemblages, of which at least two materialities overlap – upcycler and upcycling – two divergent sets of affective flows become prominent here:

> 1) Lilly – financial strain – necessity – creativity – waste – alternative value – wine region and wine bottles – Klapmuts[28] – upcycle – local tourism – international tourism – business – family – livelihood – restoration – community
> 2) Cynthia – art studies – work – concepts – family – matriarchal lineage – memory – upcycle – blankets – plastic – medium – frame – environmental impact – art world – broader society – home – gift – mother

Firstly, some background on Lilly's relationship with upcycling. In 2004, *Lilly Loompa*[29] started as a jewellery business and eventually morphed into an interior design business. Although Lilly considered *Lilly Loompa* as a "passion" and "side-line project", its most recent version, a "hip" homeware and décor upcycling business, grew out of necessity and anxiety. Lilly and her family "lost everything" and around 2014

> I was looking for an answer to our problem because we didn't have an income. And I've always been a resourceful person. I've always looked at what I have around me to meet the need that I have. That's always been my nature. […] And the realisation came, I still specifically remember the day, I lived in Westdene[30] […] And that day I was so desperate, I literally went on my knees as said, "God, just give me an idea". Because [my husband] and I have kids and we have to take care of them. And then he showed me a landfill heap there, on the other side of the lake. And he showed me that I have all these resources that are laying here, which are actually a problem. So, you can bring a solution. And that's where I first had the realisation.[31]

Moving back to the Western Cape from Gauteng in 2016, Lilly explained that she was adamant about continuing the business by using resources at her disposal. She asked herself: "What is, what is in abundance? And how can I manipulate that material, that medium, into what I

[28] Klapmuts is a town in South Africa's Western Cape province, approximately 50 kilometres north-east of Cape Town.
[29] I gave Lilly the option of referring to her business by a pseudonym and she explained that she found this unnecessary. With her consent, I thus use *Lilly Loompa*'s real name.
[30] Westdene is a suburb in Johannesburg, located west of the city centre.
[31] Lilly: "Ek het 'n antwoord gesoek vir ons probleem omdat ons nie inkomste gehad het nie. En ek was nog altyd 'n *resourceful* persoon. Ek het nog altyd gekyk na wat het ek om my vir die behoefte wat ek het. So, daai was nog altyd [in my] natuur. […] En die besef het gekom, ek onthou nog spesifiek die dag, ek het gewoon in, um, Westdene. […] En daai's die dag wat ek net so desperaat was, ek het net letterlik geval op my knieë en gesê: 'Here, gee net vir my 'n idee'. Want, ek en [my man] het kinders en ons moet sorg vir hulle. En toe wys hy vir my 'n rommelhoop so aan die anderkant van die dam. En toe wys hy vir my dat ek al hierdie *resources* het wat hier lê, en dis eintlik 'n probleem. So jy kan 'n oplossing bring. En ek dink dis waar ek eers die *realisation* gehad het."

need?”[32] Living in South Africa’s wine region, Lilly began developing products using discarded wine bottles supplied for free from wine farms such as Spier and Protea. The glass was subjected to a series of processes to be melted and cut as needed in order to produce tableware such as platters (Figure 7.16), salt and pepper pots (Figure 7.17), and ‘snack caddies’ (Figure 7.18).

Figure 7.16 - Figure 7.18 | **Products produced from melted, cut and reshaped glass wine bottles by Lilly for Lilly Loompa**
Left to right: Flattened wine bottles to form snack platters, wine bottle necks with bottle caps to form salt and pepper pots and cut open wine bottle ends to form snack ‘caddies’.
(*Lilly Loompa* website).

At the end of our conversation, Lilly explained how *Lilly Loompa* products could become sentimental for the client. She continued explaining that a client “said he’d send me a photo [of these angels I made from tiny tins]”: on his travel “he collects […] angels from all over the world wand then at the end of the year, they hang it on the [Christmas] tree”. She added, with a smile: “And then he actually sent [the photo] to me. I know he’s not going to contact me again, but now he’ll always think of me. My angel will be sentimental to him.”[33]

Upon asking Lilly what the most joyous part of environmental consciousness was for her, she mentioned that “when you buy my product, you are literally supporting my family”.[34] She added

[32] Lilly: “Wat is, wat is in oorvloed? En hoe kan ek daai materiaal, daai medium manipuleer in wat ek nodig het?”
[33] Lilly: “Want een van die ouens het vir my gesê hy gaan vir my ’n foto stuur en hy het. Hy’t vir my ’n foto gestuur van... want, ek het engeltjies gemaak uit blikkies uit. En hy’t vir my ’n foto gestuur en vir my gesê hulle versamel, met sy *travels*, koop hy engeltjies van oraloor die wêreld. En hy’t aan die einde van die jaar, dan hang hulle dit aan die boom. En toe stuur hy vir my *actually*, hy’t dit vir my ge-*email*. Maar ek weet, hy gaan nie weer met my kontak hê nie, maar hy gaan nou altyd aan my dink. So ek gaan nou vir hom *sentimental* wees, of my engeltjie gaan vir hom *sentimental* wees.”
[34] Lilly: “Wanneer jy iets koop, dan *support* jy letterlik my familie.”

that it "nurtures a consciousness" in clients, because "on the table it becomes a conversation piece", while it was actually destined for the landfill. "In that way", she concluded, "I can make a difference".[35]

Before delving into the materialities at play in the assemblage above, I turn to Cynthia, who described herself as someone who was "definitely" sentimental. Cynthia had been producing artworks based on "thinking around, like, family and memory and um, thinking around certain family members and their position in the family" for the past several years prior to the interview. Many women in Cynthia's "matriarchal family" knit.

For Cynthia, the materiality of wool and blankets "all symbolise [...] that kind of protection, comfort". Through this practice, the women "gesture love". Asking Cynthia if, and how, eco-consciousness related to her work as an artist, she explained that it was "tricky" and dependent on "what object I'm trying to realise":

Cynthia:	[I'm constantly asking myself] how much I can be, like, um, upcycling something as opposed to using new materials. So, it's kind of like a… I would say 50/50… yeah.
Researcher:	Do you find it more difficult to work with upcycled materials than new ones?
Cynthia:	No, not at all! I think it's more interesting. Definitely [smiles]. Yeah, and it also, like, just conceptually, makes the work stronger, because it's, like, something that has a history behind it. And it's not just, like, this new thing that is, like, given life through whatever you do with it. Yeah.

She explained that she was further trying to "shift from buying so much and thinking more around, like, upcycling… and using what's existing". During the interview she recounted how she made the artwork hanging in her mother's living room (where we conducted our interview) in her third year of studying fine arts (Figures 7.19 & 7.20). While telling its story, we both looked at its details:

> So, this one is kind of, like, one of those 50/50 things. So, actually, I bought the wool and the blank… no, the blanket I actually got from a friend. So, she had used it in an artwork, an installation, and then like, needed to get rid of it because she didn't have any place to store it. So, that I got from a friend, the blanket. The wool I bought. And then the fabric I have is just, like, offcut samples that I got from a fabric shop. And the, the frame itself, um… came from a gallery 'cause they had been showing at an art fair in South Africa. But she was travelling so to

[35] Lilly: "En dit kweek ook by [kliënte] 'n *consciousness*. Want kyk, die gewone ou in die publiek voel: watter verskil kan ek maak in die *waste problem*? So, ek wil 'n *solution* gee en sê, ja, as jy by my, as jy die produkte by ons koop, dan maak jy 'n verskil. *It's an easier way for you to make a difference*. Want op die tafel raak dit 'n *conversation piece*. Want mense gaan vra, wat is dit? *Yes*. Dit kom *actually* van 'n rommelhoop af. So, in daai *way* kan ek 'n verskil maak."

make it easier to package the artworks they just rolled them off. So, then the, uh, the, the frame came from her. Yeah, so I guess this is actually quite upcycled, if I think about it. And then, the, these [threads] are like plastic that's like, also upcycled. Yeah. So, it is something, like, that I am trying to be more conscious about.

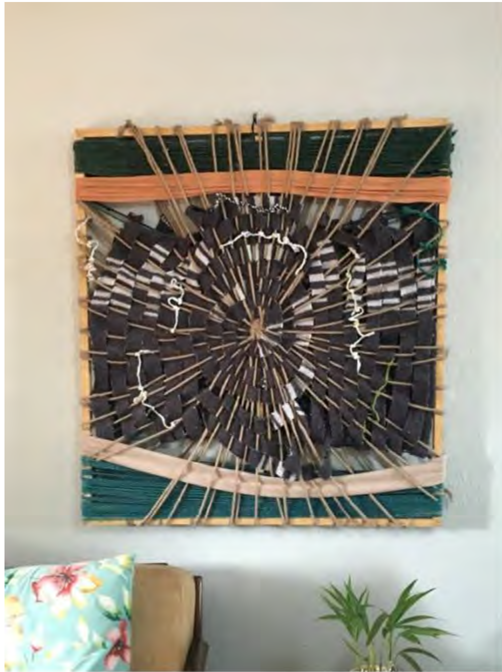

Figure 7.19 & Figure 7.20 | **An artwork by Cynthia which denotes her sentimental relation with the women in her family**
Left:
An artwork by Cynthia using a combination of upcycled materials
Below:
A close-up of the repurposed materials, including pieces of blankets, a reused frame, and braided plastic bags.
Photographs by the author.

What both assemblages above capture – in many ways circling back to the assemblage of Nicholas's relation with object as discussed first – is waste's instability and how seemingly wasted objects can be reanimated and "brought back to life" (Hawkins 2006:86). Because materiality passes from one state to another, a final, fixed state is not inherent in things, but can rather be seen as the effect of classification and context. Lilly's and Cynthia's intimate engagement with materials that had lost their consumer allure in their contemporary state, triggered such recognitions, since they noticed waste "in ways that disrupt the boundaries between subject and object, human and nonhuman, useful and useless, dead and alive" (Hawkins 2006:86).

Comparing the upcycling assemblages of Lilly and Cynthia to the other assemblages discussed in this chapter, it can be said that these two assemblages had been the most deterritorialised.

Deterritorialisation does not take place without reterritorialisation (Deleuze & Guattari 1994:101), which supposes a new territory that recombines elements and enters into new relations (Parr 2010:73). A territory has two notable effects: a reorganisation of functions and a regrouping of forces (Deleuze & Guattari 1987:353). This means that a reterritorialised assemblage necessarily changes pace: new functions are created (for example, when art is produced) or old functions are transformed (for example, when 'waste' material is repurposed as an upcycled product). Importantly, such functions are organised in this way precisely because they are (re)territorialised, not the other way around (Deleuze & Guattari 1987:316,353). In other words, because Lilly or Cynthia's relation to waste has been (re)territorialised, they use upcycled materials to fulfil a specific function in that new territory: the territory determines the function of the materialities that an assemblage is composed of; the function does not determine the territory.

As mentioned, upcycling activities are affected by complex relations between particular social, economic, and political contexts. Although the inclination to upcycle is driven by many factors – and often an extensive combination of factors – two extremes are necessary to meet basic human needs: for example, using waste materials to construct shelters or, as in Lilly's case, producing goods to be sold for financial income and upcycling as an art or craft so as to make objects of beauty. While the motivations of art and survival are distinct, this does not suggest that "reuse driven by necessity cannot be carried out with great skill and aesthetic quality" (Bridgens *et al* 2018:146).

The relations between these participants, their motivations and consequent actions, mind-sets and habits become "sites of ambiguity" that foreground the "varying and unstable relationships between individuals and objects" (Hallam & Hockey 2001:19). As Hawkins (2006:121) argues, for a more just ethics of waste to emerge, a first step is to "notice waste, to let it capture our attention". For Lilly, the rush of feelings brought about by the realisation that waste had value affected her changed relation to it. Increasingly engaging with it, therefore, changes the way objects circulate "into and out of our lives and re-establish the boundaries of the self" (Hawkins 2006:25).

Apart from the ways in which Lilly and Cynthia described their engagement with waste materials, the potential sentimental components of their productions also became apparent. Lilly explained that she produced objects to be bought by clients, predominantly tourists. Although it could not

be definitively determined what became of Lilly's products, one might guess that these (functional) objects would be kept "as long as it kept its magic, as long as it had associational value, or if it had a function" (Gordon 1986:144). In any case, Lilly's creations entered novel assemblages with other humans, other objects, and other spaces with the passing of time. Lilly is driven by the idea that people "like to be reminded of special moments and events, and a souvenir serves as such a reminder" (Gordon 1986:135). As an object, Lilly's products made tangible what was otherwise only an intangible state (for a tourist, memories of travelling in South Africa) while they made possible certain actions and habits (serving snacks in them, displaying them on special occasions, and so on) because of their functionality.[36]

In another way, Cynthia's artworks related to memory, specifically that of the women in her family. For Cynthia, the tradition of women who knit produced a pleasure, pride, and reassurance that come, in accordance with the work of design scholar Susan Yelavich (2014:70), who avers that when "we recognise a glimmer of continuity with those who came before us". Arguably, one of the "most continuous links to the past lies within the textile" (Yelavich 2014:70).[37] Textiles cannot be separated from "the values and bodily experiences that have accrued to textiles themselves", which is further carried forward in the artist's entanglement with its materiality (Yelavich 2014:68). Similar to memory itself, textiles offer the artist a malleability and adaptability. The work's multi-material surface knots together multiple levels of meaning and personal memories, and discourses embedded in time and space, which evoke a sense of sentimentality in Cynthia, her mother, family members and, possibly, a larger public audience.

Waste mediates relations to human bodies, prompts various habits and disciplines, and orders relations between the self and the world. This implicates waste in the embodied action of ethics. Through the nurturing of novel and creative relationships with objects, Lilly and Cynthia were moved by, among others, the motivation to reduce wastefulness brought about by consumption: by slowing material flows and engaging with waste, materials and making, communities can be enabled to share resources and skills. This practice, entangled in assemblages with many other capacities, can provide economic benefits and livelihoods to individuals and local businesses (Bridgens *et al* 2018:146).

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[36] In another way, then, the travel restrictions imposed by COVID-19 have also deterritorialised Lilly's business, which also caters for an international market.
[37] Textiles are roughly 9 000 years old and predate the histories of agriculture and the production of ceramics (Yelavich 2014:70).

Taken together, the selection of New Materialist Analyses above show that humans are intimately and somatically connected with the material world and objects, be these sentimental, functional, or neither; or be they upcycled and valuable, or on the verge of becoming valueless; new or old; near or far; visible or virtual. The new materialist approach applied throughout this chapter revealed that relations with such objects are constantly mediated by memories, sentimentality, emotions, spaces, humans, and material and affective flows that enliven certain capacities and suppress others, bringing about often neglected perspectives on the rhizomatic possibilities of the world.

7.4 CONCLUSION

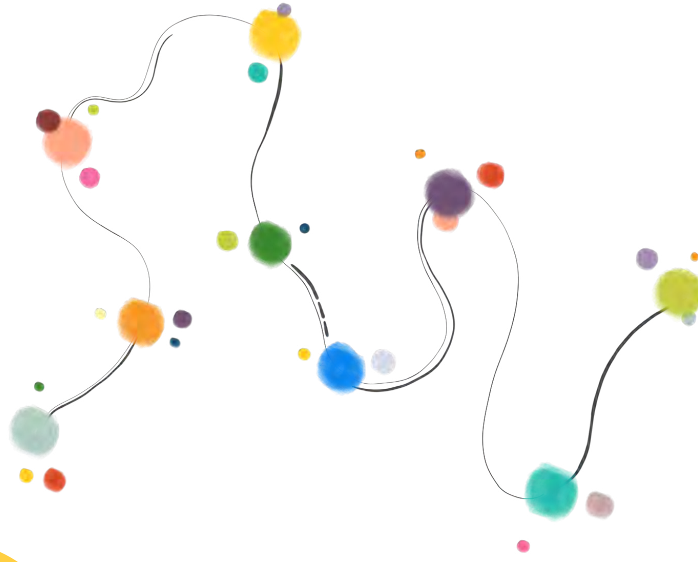
This chapter engaged with assemblages of humans, memory objects, memories, environmental consciousness, and pro-environmental practices and ideas through the use of the conducted interviews. I commenced with an overview of the dynamics within assemblages, which are always material and expressive. I also elaborate on how assemblages are composed on a continuum that fluctuates between territorialisation and deterritorialisation. This interplay became prominent in the body of the chapter.

Subsequently, I discussed whether participants felt that their relationship with their memorabilia was affected by their growing awareness of environmental matters. Diverse answers to this question, as presented above, revealed that most participants had not previously given this (potentially altered) relationship thought, since many separated these two notions. It appeared as if these participants experienced their environmental consciousness and sentimental objects as separate assemblages that rarely, if ever, engaged or overlapped. In other cases, participants felt that environmental consciousness positively impacted their relationship with their memory objects, although most participants had never given this aspect much thought. Generally, feelings of pleasure, pride, and contentment were associated with this relationship.

This brought the subsequent section into focus, which explored assemblages between humans, environmental consciousness, and memory objects through New Materialist Analysis. By emphasising the deterritorialisations and potential reterritorialisations that occurred when one component is plugged into another assemblage, I also discussed prominent tropes emerging in the interviews that provided potential links between environmental consciousness and memory. Although some tropes were more readily associated with ideas surrounding memory objects, and

others with beliefs, feelings, and practices surrounding environmental consciousness, the chapter explored them in relation to both.

These tropes included, but were not limited to, the ambivalence of value that reveals something about human/object relations (Nicholas), material and environmental consequences of digital memories (Benjamin), links between embodied environmental and memory experiences (Sammy), sentimentality related to environmental justice and the position of future offspring (Chris) and, lastly, the potential positive role of upcycling in both the environmental and memory studies discourse (Lilly and Cynthia). The discussed assemblages, which foregrounded deterritorialisation, offered a glimpse into the impact of these shifts occurring in the Anthropocene for future understandings and practices of memory. The subsequent chapter serves as an analysis and summary of the discussions in Chapters 6 and 7 – with specific reference to the prominent tropes – and as a reflection on the potentials and challenges of new materialist instruments and methods.



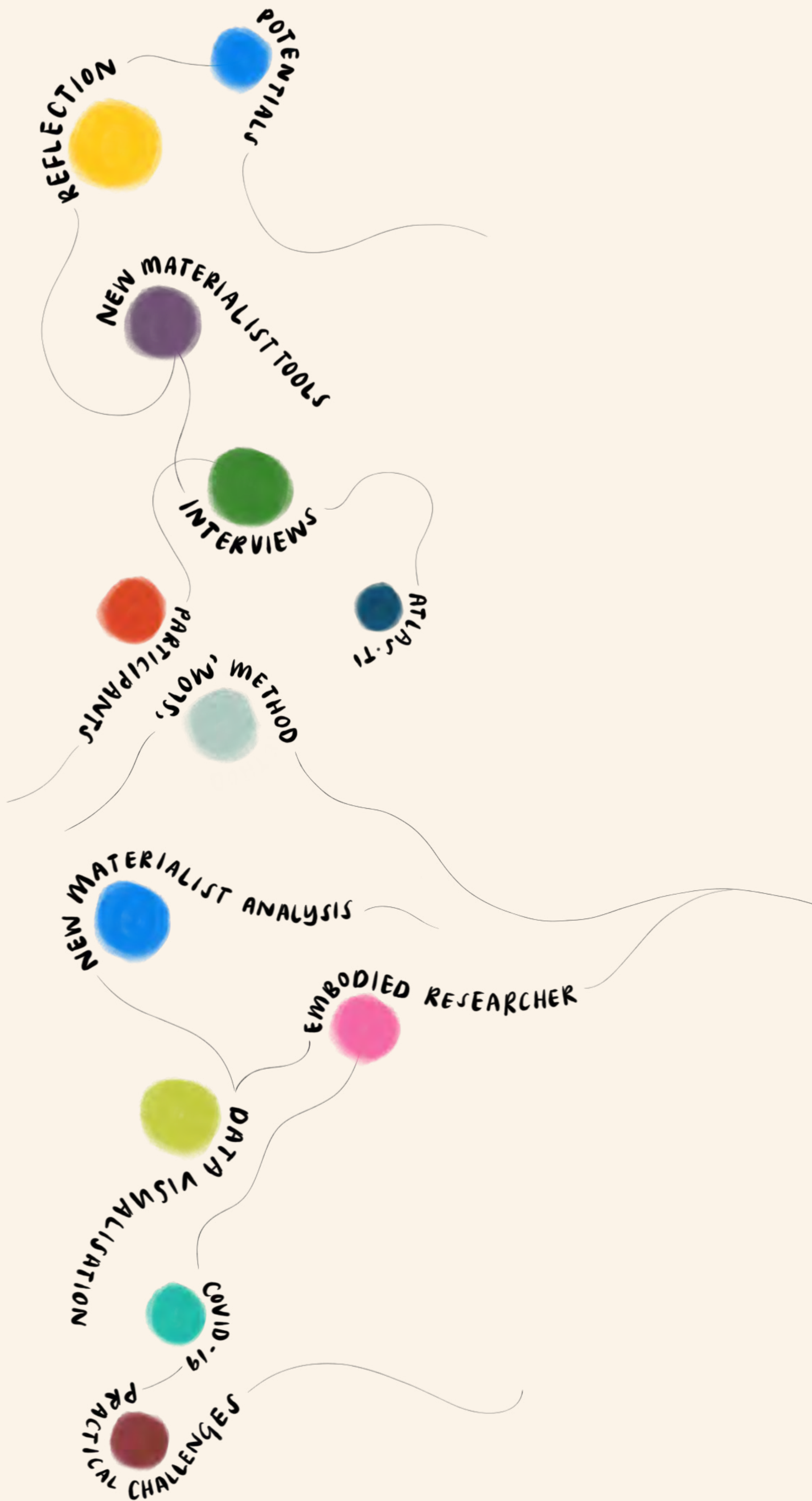
Chapter 8

reflecting on a new materialist approach

Memories do not hold still – on the contrary, they seem to be constituted first of all through movement.
- Astrid Erll (2011:11)

We know nothing about a body until we know what it can do, in other words, what its affects are, how they can or cannot enter into composition with other affects, with the affects of another body, either to destroy that body or to be destroyed by it, either to exchange actions and passions with it or to join with it in composing a more powerful body.
- Gilles Deleuze and Félix Guattari (1987:256)

Figure 8.1 | key concept visualisation



CHAPTER 8: REFLECTING ON TROPES AND A NEW MATERIALIST METHODOLOGY

8.1 INTRODUCTION

This study's new materialist approach is based on the combination of a thorough literature review and the application of tools such as qualitative interviews with participants who self-identified as environmentally conscious as well as New Materialist Analysis and data visualisations. In Chapters 4 and 5, I plotted the theoretical challenges and liberations of a new materialist approach for qualitative data enquiry by referring to relevant examples of materialities within this study's research assemblage. This laid the groundwork for the practical application of New Materialist Analysis to selected and diverse assemblages of human and nonhuman materialities.

As found in Chapter 6, this included assemblages of South African individuals, eco-friendly practices and habits, and beliefs surrounding environmental consciousness in addition to South African individuals' memories and memory objects. In Chapter 7, I turned to the practical implications of analysing deterritorialisation, or how such assemblages were affected when new materialities were plugged into them. I looked at how the introduction of environmental consciousness changed an existing assemblage between a participant and her/his memory objects.

In the present chapter, I reflect on the new materialist tools as laid out and applied in the preceding four chapters (Figure 8.1 on the previous page introduces the most prominent points). This chapter has two objectives. Firstly, I present the prominent tropes that most accurately describe how human participants *saw themselves* as knotted together with memory, affect, physical objects, and environmental practices in new assemblages. This sketches a brief background of what the research participants' interpretation of the Anthropocene 'looks like'. Secondly, using these tropes as points of departure, I reflect on the new materialist approach by alluding to the challenges that I encountered, such as the use of certain types of language, as well as the possibilities, such as a simultaneous engagement with micro- and macropolitics.

I look back on the four stages of the current study's research process, namely its 1) design phase and the tensions and potentials around 2) gathering, 3) analysing, and 4) reporting data. Reflecting on these stages is useful since it provides a glimpse of the researcher's embodied

relation to the various components of the affective research assemblage. In other words, by reflecting on the role of the researcher and the material and affective qualities of the research assemblage, I tease out how the process of doing research is staged and creatively produced in terms of our creative and playful interaction with it.

Following Deleuze and Guattari in *A Thousand Plateaus*, the overarching theme that binds together these reflections can broadly be described as embracing the interplay between stability and transience present in assemblages. Thinking differently about this continuum from stasis to change *specifically* in relation to the materiality of all objects, both miniscule and colossal, and everything in between, could become a beneficial reterritorialisation for the twenty-first century precisely because it places humans in an assemblage where their capacities to affect and be affected come to the fore. In short, the realisation of "how entangled, implicated, or complicit we are" has the potential to evoke a sense of responsibility for how things change "with-in their entangledness" (Thiele 2017:46). The chapter concludes with a brief summary of its content.

8.2 TROPES

8.2.1 Introduction

The participants in this study form part of complex assemblages affected by events, objects, actions, beliefs, and habits. Starting with conducted interviews, I provide an overview of the most prominent ways in which participants spoke about environmental consciousness and their memorabilia. Below, I discuss prominent tropes that became apparent in discussions with these individuals. It should be noted that these are anthropocentric oral narratives of human understandings of the world around them. These tropes can be deemed to signal a range of *human* vocabularies, mind-sets, and practices that individuals share (albeit on a small scale). In introducing each, I deliberately favour human accounts of their worlds instead of the assemblages in which these humans were caught up. This is to juxtapose their accounts with a non-anthropocentric discussion of these tropes, which will follow immediately upon it.

While some tropes can be more readily associated with ideas surrounding memory objects, and others with beliefs, feelings, and practices related to environmental consciousness, I now explore them in relation to both. The five main tropes discussed below, having been introduced in the course of the preceding two chapters are 1) humans' (generally) persistent dichotomous thinking regarding the world around them (including about objects, nature, and 'the material'); 2) the relation between pleasure and a sense of 'responsible' action; 3) attentiveness to the value of

objects of memory and objects of waste; 4) an acceptance of transience; and 5) the prominence of family lineage in discourses of memory and environmental consciousness.

For example, whereas some participants distinctly associated memorabilia with terms such as 'death' (of a loved one or a pet, for example) and 'change' (a time passed or a broken object, for example), the same trope – transience – emerged when discussing environmental matters. However, in relation to environmental consciousness, the trope of transience was buried under (often unacknowledged) beliefs and myths about environmental matters, for example pertaining to the death of pristine nature or change occurring naturally in processes of degradation such as through composting.

As hoped, these tropes further reveal that rhizomatic reterritorialisations can be established between environmental consciousness and memory objects through topics relating to both discourses, albeit in different ways: drawing understandings of and engagement with environmental awareness and objects of memory into the same frame holds potentials for reterritorialising human engagement with concepts related to binaries, habits, value, lineage/linearity, and transience.

8.2.2 Dichotomous thinking

Analysing the interviews showed a binary engagement with ideas in most participants' thinking about their world. This is not surprising, since dualistic thinking has been perpetuated throughout western philosophy and continues to saturate human thought.[1] Dichotomies assume a binary logic in that something "either is or is not" (Bryant 2011:246). It further poses one component as operating as the active subject (such as human) and the other passive object (such as nonhuman). In Deleuzoguattarian terms, the arborescent – in *lieu* of the rhizomic – is based on the "principle of dichotomy" that unnecessarily "grid[s]" the possibilities provided by the rhizome as image of thought (Deleuze & Guattari 1987:6). Although many more examples can be provided, I elaborate specifically on the myths of, or seeming divides between, 1) subject/object, 2) culture/nature, and 3) materiality/immateriality.

[1] Literary theorist and philosopher Roland Barthes' *Mythologies* (1972 [1957]) is a seminal work on the creation of modern myths through semiotic systems. Semiotics, the study of signs, is concerned with everything that can be taken as a sign. A sign, in Barthes' semiotics, consists of a signifier and a signified: there is no necessary relationship between a particular signifier and signified, because its connection is socially constructed and maintained through various institutions (Barthes 1972:111-113). The interaction of the signifier, signified, and the sign, leads to the creation of myth: socially constructed truths that simplify inherent contradictions using binary opposites and stereotypes. Barthian myths, then, are "ideologies of false consciousness" and refer to "an idea or story that has been created to explain some facet of life or reality" (Reyburn 2013:67).

In the first two cases, most of the study participants spoke about nature and objects as things that are completely separate from humans. Furthermore, some participants expressed a nostalgic longing for a cyclic and gentle 'nature' untouched by humans. For example, some explained feeling more 'connected' when they were 'close to nature', contrasting such experiences with their lives in cities. Linking in with this were participants' descriptions of waste as cruel human by-products posing threats to nature. Discussions of composting, however, did to some extent deviate from this perspective. Turning to supposedly immaterial aspects of social life, such as travelling as an experience or 'storing memories' online, very few participants alluded to the very concrete environmental implications of air travel or cloud computing. One might be better positioned to think critically about issues in the Anthropocene by attending to the casualties – such as unjust human/nonhuman relations – caused by dualistic thinking. I discuss the three mentioned examples separately below.

- ***Subject/object***

During our interview Lilly's described herself as a "steward of the earth". This expression, commonly used to instil responsibility towards a specific cause, evokes the idea of a (superior human) position as a supervisor or ruler appointed to safeguard or manage the order of things on planet Earth. Yet, being human (or a 'posthuman cyborg' as per Haraway or Barad) in the Anthropocene calls for fostering a type of transversal thinking that questions human exceptionalism, while remaining accountable for the human role in the differential positioning of the human among other creatures (Barad 2007:136). This perspective implies a sense of the uncanny, because it requires critical engagement with the uncomfortable. It requires "untangl[ing] our familiar world of hierarchical and binary constructions and to consider the strange, intensive and entangled world of affects we share with animals and things" (Carstens 2016:256).

To most accurately describe the shifts needed to think differently about the subject/object binary, I turn to the "instability of materiality" (Boscagli 2014:14). Permanence continuously "melts into a liquid circulation of matter":

> Stuff is the satellitary system of objects that continually accompanies and never leaves us; these are the prosthetic things that fill our pockets and purses, closets and trunks with which we furnish the self and the spaces we inhabit. Stuff is the expendable and necessary appendix that tells us that we exist and function, and yet weighs us down. It designates the useless and "used up" on its way to being thrown out, as we sense on contemplating the contents of a drawer of bric-à-brac. Stuff is unstable, recyclable, made of elements put in place by different

> networks of power and meaning, that encounter one another by chance and cohere only temporarily by affinity (Boscagli 2014:5).

That is, by acknowledging their affectivity, the stuff we live with may serve to remind us of an uncontrollable proliferation of objects existing in the world (Boscagli 2014:15). What is even more interesting – as was shown in Sammy's case in the previous chapter – is that we have a *grasp* of this stuff. We understand it and live with it in ways that our forebears probably did not: think of the availability of new technological objects, the variety of objects, and their sheer volume. Humans understand what being in a relationship with objects *feels* like. As such, this is a potentially positive thing, since it supposes the affective flows in the assemblages that contain humans and objects.

The problem of not acknowledging the affective flow between stuff and human bodies presents itself in the following conundrum: due to dualistic perspectives that have been part of western thought for so long, western humans' experience of this relationship has always been foregrounded and highly tainted with anthropocentrism. We've become so used to hearing "object" in relation to "subject" that it takes time to acclimatise to a view in which there are *only* objects, one of which is ourselves (Morton 2011:165). I am not supposing that human objects and nonhuman objects are the same thing, because they *are not*, but this is not the point: the western human disregards the object's *effect* on the human. One material object (the 'subject') disregards the affect brought about by the other material object (the 'object'). Allowing this to seep in by becoming aware of objects' affective power, better positions western humans to address this anthropocentric domination. One option is to think about the future *with and as* objects.

As demonstrated by this study, material objects are "enrolled in the performance of remembrance" (Jones 2007:49). How objects act to promote remembrance or forgetting depends upon materials' performative capacities: are they, for example, "highly coloured or decorated, are they dull or worn, are they easily fragmented, broken, or burnt, or do they resist destruction and decay?" (Jones 2007:49). The material properties and qualities of objects – small or big, stable or malleable, far or near – are how and why they are used to promote and perform remembrance (Jones 2007:49). The significant point to be gained from this perspective on the relationship between people and things is the tempo and size of the relationship, the way in which people and things 'resonate' relative to each other.

In the same way that objects play a role in how remembrance is practised, envisioning of the future might occur in a similar way: with objects. To clarify this point, it is insightful to note, for example, how Jack was engaging his sentimental objects in a functional way (using his father's jackets and shoes instead of storing them away), how Lolo spent time and energy to meticulously sort recyclable waste objects, or how Lilly upcycled 'useless' glass bottles to produce consumer goods. Engaging with objects in these ways – albeit on a small, seemingly insignificant scale – counter dominant social structures of what the relationship between humans and inanimate objects *ought* to look like. In short, the objects we are surrounded by inform how we perform an envisioning of the future. *The objects we think with, shape how we think*.

- ***Culture/nature***

Among the study participants I also noted a tendency to think of themselves, and humans in general, as separate from 'nature'. Gabo, for example, constantly compared her ('polluted') experience of the city to her (tranquil, 'natural') experience of the countryside, and similarly, Hibiscus expressed her nostalgic longing for "clean rivers" that she deemed increasingly hard to find where she lived. As per other theorists' research, this correlates with views held by the broader public (see for example Hull, Robertson & Kendra 2001). The dichotomy is furthered in that the notion of 'nature' evokes a nostalgic longing for cyclicality, gentleness, and balance. This perception is similar to how participants such as Jasmin and Chris often reflected on their past – a time that could not be retrieved in its 'authentic' form – with a hint of nostalgia. This presents a major challenge in the Anthropocene because it paradoxically reinforces the myth that humans and 'nature' should be kept separate in order for the latter to flourish, yet equally reinforces a longing for its presence.

The concept of 'nature' is a Eurocentric construct that has deep roots in Enlightenment philosophy and Romanticism. Although we might like to think that we have lost what once made us human, and we might tend to mourn a past prior to a fragile, drowned, or lost world, such a past has never existed (Alaimo 2010:16, Green 2013:1). Since the onset of Romanticism, 'nature' was used to support and undermine the capitalist theory of value. By pointing out what is 'intrinsically human' while excluding the human, Romanticism inspired kindness and compassion towards 'nature', but simultaneously justified competition and cruelty (Morton 2007:19). Morton (2007:5) warns that putting 'nature' on a pedestal and admiring it from afar is a "paradoxical act of sadistic admiration": it simply "does for the environment what patriarchy does for the figure of Woman".

The rise of environmental movements and protesting environmentalists in the 1960s radically aggravated this predicament. Initially, the discourse targeted industry, since industrial pollution produced by factories as well as their by-products were seen as main causes of ecological destruction. These movements' political effects included the development of an increased regulatory framework for industry, which became evident in the rise of antipollution and other environmental laws in most capitalist democracies; the creation of specific bureaucracies such as environmental protection agencies; and a range of other legislative initiatives and reforms that acted to safeguard 'nature' (Hawkins 2006:100-101). Although these were positive changes, this emergent concern for "the environment" framed 'nature' as passive and vulnerable to gross exploitation by rampaging capital. Nature, when seen as a "single, independent and lasting" object, *does not exist* (Morton 2007:20). This delusion was simply established by ideological fixations that compelled western societies to assume certain attitudes towards and understandings of it (Houze 2016:9).

'Nature' is a myth that uses socially constructed truths requiring simplified inherent contradictions, binary opposites and stereotypes (Barthes 1972:111-113). This myth, an "ideolog[y] of false consciousness", was established by ideological fixations that compelled western societies to assume certain attitudes towards and understandings of it (Reyburn 2013:67, Houze 2016:9). Because ideology relies on the attitudes humans assume towards it, the only way to render it inoperative, or by questioning the 'self-evidence' of its existence, is by dissolving mythical understandings of things such as 'nature'. To adequately answer pressing questions in the Anthropocene, societies need "explicit examples of the social constructions of nature, environmental quality and desired future conditions" to not resort to nostalgic recollections of the past and to be able to better understand and engage in discussion (Hull, Robertson & Kendra 2001:338).

- ***Material/immaterial***

The discourses surrounding the 'immateriality' of certain activities – such as those associated with online life and travel emissions – are comparable with how constructed views of 'nature' as something separate from humans are often perpetuated. Although many participants, such as Hellen, Sammy, Mary, and Lolo value travel experiences that typically involve (air) travel mentioned, few participants alluded to the material base of apparently immaterial experiences. Similarly, participants who touched on online storage facilities, including Mary, Earl, and

Benjamin, highlighted their positive effects without mentioning possible negative environmental implications.

As has been indicated, although public discourses frame digital initiatives as seemingly intangible through the use of terms such as 'cloud' that misleadingly connotes something impalpable and fluffy, they remain materially grounded and interact with the physical environment. This obscured relationship reveals ethically relevant issues that require close consideration. In fact, the starting point should be the reality that the digital world is "built on a profound groundedness in materiality, of human bodies providing material labour by stuffing broadband cables into the ground, or extracting metals from the ground to produce computers and mobile phones" (Groes 2016:132).

Using language that deliberately conceals the material realities of data storage induces false assumptions about the continuity of offline and online life, as has been indicated. Such assumptions, produced by misleading words, not only influence people's understanding of the data universe and economy, but also *shape* their attitudes towards it (Lucivero 2020:1019). Despite narratives told by popular discourses, the 'data revolution' is a very tangible threat because of its literally heavy environmental footprint brought about by massive data centres and farms with a high consumption of non-renewable energy, such as coal and resources such as water that require maintenance and accessibility; and the rapid production of (e-)waste (Lucivero 2020:1010). The Global E-waste Monitor, for example, reports that South Africa generated 321 000 tonnes of e-waste in 2016, positioning this waste stream as the fast growing in the country (Ichikowitz & Hattingh 2020:44).

Another often-unacknowledged red flag as to the environmental effects of technology is that electronic devices (little-mentioned in the interviews, for instance around storing photographs online) contain, among other materials, gold that needs to be extracted from mines using manual labour and batteries with chemicals that will not break down in landfill (Groes 2016:133). In close relation to this transformation of mineralogy of the earth (such as gold, silver, salt, and copper) one finds the imbrication of human and inhuman materials in relations of extraction: typically, black and marginalised human bodies conduct the role of extracting such materials, exposing them to harsh conditions and reinforcing forms of environmental racism that has been perpetuated throughout history (Yusoff 2018:17). In response, Yusoff (2018:17) argues that

there is a need to "examine the epistemological framings and categorisations that produce the material and discursive world building through geology in both its historical and present forms".

Such deep-rooted problems co-mingle with the increasing use of online (cloud) services and expectations of continuous connectivity. This raises the demand for data and service availability, "which in turn requires redundancy of data that, in order to be easily accessible, need to be stored in servers in multiple sites and centres" (Lucivero 2020:1016). With this in mind, some forecasts are that data centres will expand spatially, raising broader questions about the desirability of the data revolution in the first place (see, for example, Carlini 2018). The digital age is deeply material, connecting ideas that flow via human minds together via intricate assemblages of bodies, labour, (electronic) objects, and the world. As became clear in the interview discussions of the present study with Mary, Earl, and Benjamin, for instance, these assemblages also affect human memory, online memory storage practices, and mythical beliefs about the eco-friendliness of such practices.

8.2.3 Responsibility, pleasure, and action

There seemed to be a significant correlation between pleasure and action, in relation to living in an environmentally-conscious way and keeping and/or discarding memory objects. Alongside this, there was a general awareness of responsible action among participants (albeit interpreted in a range of ways): responsible consumption, responsible engagement with objects that 'carry' emotion, and responsible waste management. This sense of responsibility – in relation to environmental consciousness and memory objects – was most prominent when accompanied with pleasurable behaviour and a sense of care: as has been indicated, participants tended to engage in actions and keep up habits that made them feel good, proud, happy, and caring.

For example, River felt happy when she could support a local business; Harry and Lolo felt that they were being socially and environmentally responsible by 'paying forward' some objects that they used to find sentimental; Jack experienced contentment when he used some of his sentimental objects, such as his father's shoes or jackets (instead of storing them away); and Susanna felt proud about her use of a menstrual cup. Moreover, this relationship between action and care appeared to be cyclic: more pleasure and care led to more action, which led to more pleasure and care, engendering more action, and so on.

Humans have come to live with an enormous amount of stuff (Boscagli 2014). The sheer density and diversity of objects people accumulate have produced and complicated very distinct personal and domestic habits (Hawkins 2006:15). Increasingly, scenarios in which material stuff and human subjects make contact in ways that are intensely intimate, somatic, and unpredictable, will arise. In this sense, stuff is and will increasingly become a materiality out of bounds which refuses to be contained by the western philosophic, scientific, and semiotic order of things. In other words, the false subject/objects dichotomy – as perpetuated and upheld by modern myths – is growingly challenged by the ways in which stuff affectively move humans (take, for example, Sammy's anxious need to 'get rid of' excess stuff).

Deleuze and Guattari's (1987:213) insistence on the multiplicity of dimensions, lines, and directions signals how movements of becoming crack the normative work of macropolitics. This happens on the plane of individual actions, instigated through habits. Habits are the ways in which a body is organised and how it moves, which evoke a corporeal memory embedded in social and cultural uses. These bodily dispositions are implicated in the formation of an ethical sensibility (Hawkins 2006:14). Like Hawkins, from who I take my cue in teasing out habits, my aim here is not to moralise practices or to insist that we exchange our 'bad' habits for 'good' ones. Bringing morality into play is not a viable solution, since it simply "infuses habits with the language of compulsion and demands that we call up our conscience and free will and control ourselves". As Hawkins (2006:13,15) aptly notes: "habits don't work like that":

> Habits have a materialising power on both persons and things. They bind us to the world at the same time as they blind us to it. And this is the problem and the possibility of habits: when they break down, when something goes wrong in their routine operation, we are launched into a new relation with the world.

As I have discovered during participants' accounts, new habits were often recounted and remembered in ways that foreground their engagements with objects that were old and new, recyclable, nonrecyclable, gooey, ephemeral, torn, smelly, compostable, scratched, damaged, and so forth. The subterranean, affective flows that connect identity, belief, role performance (and larger political movements as new systems may emerge) must not be underestimated (Connolly 2013:411). Because they emphasise and value matter, everyday practices in the home make it possible to see how pro-environmental habits are "much more than a set of policies programmed into bodies": this involves a distinct performance (Hawkins 2006:108). *Performing* a new identity emerges through an assemblage of behavioural acts and different material and technical relations. Material habits, practiced with and through the body, equip humans with a more detailed understanding of the nonhuman materialities they are entangled with, because

these practices extend *beyond* humans and implicate various affective, technical, architectural, geographical, and corporeal arrangements (Hawkins 2006:108).

Merely dismissing changes in personal practices as 'tokenism' or 'moral righteousness' takes "no account of how bodies and feelings are implicated in thinking, often below the threshold of conscious decision making" (Hawkins 2006:7). Such moral imperatives perpetuate the idea that politics are restricted to macro-assemblages such as the state or capitalism, and that real social transformation is possible only via wholesale revolutionary change (Hawkins 2006:6). This approach makes it too easy to lapse into creating moralistic blueprints for changes in consciousness and too difficult to see the multifaceted relations between the personal and the political, since it simply opposes these two spheres.

Deleuze (1988:125) draws a distinction between morality and ethics. He uses the former to describe any set of 'constraining' rules or a moral code that consists in judging actions and intentions by relating them to transcendent or universal values. Contrarily, he uses the term 'ethics' to describe any set of 'facilitative' rules that evaluates "what we do according to the immanent mode of existence that it implies". Smith (2012:176) describes the difference between ethics and morality as such:

> The fundamental question of ethics is not "What must I do?" (which is the question of morality) but rather "What can I do, what am I capable of doing (which is the proper question of an ethics without morality). Given my degree of power, what are my capabilities and capacities? How can I come into active possession of my power? How can I go to the limit of what I "can do"?.

For Deleuze (1988:27), ethics revolve around embodied practices and micropolitics of the self. Ethics are therefore grounded in actions and bodies rather than transcendent moral codes. Deleuze builds his immanent approach to the question of ethics on the philosophy of Spinoza (and Nietzsche): both philosophers argued that there are other things one cannot do unless one attains active affections, or in other words, unless one is moved by affect and have the capacity to act and increase one's power (Smith 2012:175-176). This ongoing activity "foregrounds the perpetual instability and ambiguity of norms, morality, and identity" (Hawkins 2006:15).[2]

[2] Following Hawkins (2006:18), I take my lead from poststructuralist political theorists like Deleuze, Foucault, Connolly, and Bennett who all, albeit in different ways, investigate the political world as a dynamic field of practices with the potential to contest dominant codes (rather than viewing it as a repressive hierarchy of social domination).

My curiosity about waste is fuelled by a desire to understand how it might be possible to change ecologically destructive practices *without* recourse to guilt, moralism, or despair. For example, the way in which waste is framed in mainstream narratives such as documentaries evoke all these emotions in relation to waste in me too. And even though such feelings prompt me to change my behaviour, they also gravely immobilise me in certain ways (Tangney 2001:127). As Hawkins (2006:ix-x) notes, sometimes these narratives "generate resentment, a sense of irritation that I have to rinse bottles and cans that I used to just chuck out. At other times these feelings can produce such an overwhelming sense of mourning for the state of the planet that it is difficult to find the energy and inspiration to sustain an ethical practice, let alone imagine better ones". Humans oscillate between a massive variety of emotions that drive or impair environmental consciousness.

Yet, as this study has found, resentment, guilt, and mourning are not the only emotions at play in environmental politics. As I have shown, the study participants usually engaged in actions that brought about a sense of pride, pleasure, care, or purpose. They liked feeling that what they did *mattered*. For pro-environmental behaviour to increase pleasure and care, it is important to convince people that their behaviour is *meaningful*, which in turn stimulates this act (Venhoeven, Bolderdijk & Steg 2013:1381). Responsibility and bodily responses are inextricably linked; modifications in reason alone will not change the character of social life (Hawkins 2006:10). By enjoying habits, humans could potentially derive pleasure and meaning from the careful management of loss, disposal, and transience, instead of simply surrendering to the rhetoric of guilt or irritability. In short, it is much more likely for the participants to engage in 'responsible' action – from donating books previously considered 'too sentimental to let go of' to a charity to maintaining a compost heap – if a sense of contentment flows from this habit.

8.2.4 Fluctuating value

I noticed that participants interpreted and applied the notion of value in many different ways. Value judgment in relation to memory objects and environmental consciousness became specifically apparent when discussing transitional phases in participants' lives. Participants usually critically engaged with their memorabilia during transitional life phases, such as cleaning up their (or a family member's) home, moving, losing weight, or having children. Participants' value judgments of the waste they produced were re-evaluated when shifting towards more eco-friendly habits, such as putting recyclables out for waste pickers, attending to a worm farm composter, upcycling old fabrics to create something new, or reusing toilet rolls to make pencil

holders. In short, many objects that previously carried much sentimental, functional, or economic value could become meaningless, while others could become more precious. Depending on where objects are incorporated and reincorporated into new systems of exchange and use, they are constantly commodified – by human users – as useless or valuable.

The notion of fluctuating value brings into focus humans' relationship with liminal objects, including waste. Although waste is generally viewed as a cruel human by-product requiring urgent attention to 'get it away from us', this dissociation has various devastating effects. Yet, what we do *not* associate with is just as important as what we associate with. For a less destructive ethics of waste to emerge, Hawkins (2006:134) claims, the "arts of transience" is crucial.[3] By engaging more closely with waste through new habits, the boundary between self and waste becomes ambiguous, allowing wasted things to become more familiar, to imprint us with their phenomenological specificity:

> the cardboard box that's surprisingly tough to crush, the sharp edge of the empty can, the dress that is being given to charity that still feels and smells new. In the physical work of recycling, waste things become incorporated into new movements and habits as the body becomes open to waste (Hawkins 2006:115).

The challenge here is how to cultivate thinking about waste not as phobic objects, but as things we are caught up with. These things are "materialised or dematerialised through actions, [they] work on us and help us constitute a self" (Hawkins 2006:14). For example, Lilly's and Cynthia's meticulous engagement with upcycled materials designated for the landfill, are examples of how such thinking had been cultivated. Jack's fascination with composting – organic materials' natural process of degradation – is another example of 'waste' as affective materiality. Concerning memory objects, the value that participants such as Mary and Sammy attached to objects that they found to be very valuable earlier in their lives, later on faded almost completely. Hawkins (2006:12) suggests that focusing on "how waste figures in our relations with our body and the world means taking seriously dispositions and sensibilities around waste", which makes it possible to see how other relations and habits might surface. Acts such as recycling, composting, or refusing plastic bags are glimpses of such potential relations in that they demand of us to "handle our empty bottles or newspapers differently" (Hawkins 2006:14):

> They have now become residual resources and we have become 'environmentally aware'. The ritual of rinsing and sorting has produced a new network of obligations and identities that show that the material specificities of waste are

[3] Hawkins (2006:123) draws on Adam Phillips' concept of the arts of transience as laid out in his book entitled *Darwin's Worms* (1999). Phillips discusses the possibilities of pursuing the connections between waste and loss *without* recourse to despair or moralism. My aim here is similar.

> never fixed, and neither is the ethical constituency that feels implicated in it. Waste and bodies and habits are all open to immense variation, and in the emergence of new waste habits, an experiment with another social imaginary, whether it's explicitly identified or not, lurks in the background.

Beyond the shifts in valuing waste, it is necessary briefly to mention how the ambivalent idea of authenticity ties in with the notion of value. Often in the interviews, authenticity in relation to memory objects and environmental consciousness surfaced so as to refer to something that was seemingly 'better' in certain conditions or forms rather than others. Examples include that a 'local' experience was more authentic than a 'touristic' experience (for example, Sammy and Hellen); 'nature' was more authentic without humans (River and Hibiscus), and 'natural' materials were more authentic than synthetic materials (wooden furniture, plant-based body creams, or a cotton dress were deemed to be 'better' than plastic bags or polyester leggings in Mo's, Mary's, and Susanna's case).

Ironically, trying to define authenticity only highlighted false dichotomies by posing one experience or object as the opposite to and better than something else. This is problematic, since this approach simply reinforces constructed and harmful myths about what is 'good' and what is 'bad' as opposed to acknowledging how materialities can be assembled more justly: only when the capacity to be affected by objects' fluctuating value is enlivened in and acknowledged by the human can more just human/nonhuman relations emerge.

8.2.5 Transience

Across the board, the notion of transience seemed extremely central to discussions of memory objects and environmental consciousness. Although no participant suggested transience to be an explicit link between memory and environmental awareness (Nicholas and Harry, however, briefly suggested 'preservation'), its presence became prominent in different ways. Some shared memory objects which evoked associations with times past, the deceased, and prominent life changes. They often stated their awareness of the object's fragile process of ageing. In relation to eco-consciousness, the associations were less straightforward, but nonetheless traceable. Many expressed a feeling of nostalgia when speaking about how the environment was being altered by humans. To some degree, some acknowledged that the changes in habits and beliefs brought about by environmental consciousness marked the 'death' of old ones.

Participants explicitly used words such as 'death', 'transience', and 'change'. The objects themselves, in their own fragile degradation, marked transience and shifts in existing structures of an individual's life. Such objects, Hallam and Hockey (2001:19) hold, are often infused with a "bittersweet quality evoking that which they cannot replace and providing touchstones for inchoate feelings of grief". In this study's context, it became clear that participants found coping with the loss of something or someone to be easier when wearing the personal possessions of deceased relatives such as their earring, or when cherishing their photographs, letters, or ashes (Hallam & Hockey 2001:19). They added that the relations between people and memory objects change over time, because, as Hallam and Hockey (2001:4) state, "perceptions of memorialising practices and their emotional resonance are often acutely sensitive […] to [broader societal] changes".[4] As perceptions of the past are reworked in the context of the present and in anticipation of the future, individual memory practices and experiences shift (Hallam & Hockey 2001:3).

In short, as Hawkins (2006:123, my emphasis) claims, "things change". This awareness of transience can initiate deeply felt desires to remember or forget (Hallam & Hockey 2001:20). In a sense, a human's complex entanglement with the material world is captured in the traces (scratches, broken surfaces, wornness, and so on) that wasted things carry. It is further experienced in how bodies decline, decay, or are preserved over time (Hallam & Hockey 2001:15). Time, history, and memory are produced by societies with relation to the human life span (Jones 2007:52). Therefore, how time is constructed in terms the material environment and bodily experiences fundamentally alters and structures human existence.

Cultivation of a "careful and generous attention to loss" might position one better for the increasingly pressing questions posed in the Anthropocene (Hawkins 2006:134). Regarding the present study, the concept of transience can be seen as linking closely to deterritorialisation in that it is not simply "change for change's sake", but rather an "attentiveness to the transformative potential in the world" (Dewsbury 2011:152).

[4] As one such example, Hallam and Hockey (2001:14) recount a common nineteenth-century western tendency to wear jewellery made from enduring parts of the deceased, such as hair. In the twentieth century, such tendencies increasingly acquired an unsavoury connotation. Still, there exists a porous boundary between the deceased and material objects that represent them (such as tombstones, ashes, and clothes), reinforcing such objects' mnemonic capacity.

8.2.6 Family lineage

Many participants enjoyed a definitive connotation of family lineage with memory objects (in particular, but not limited to, generational heirlooms) and, in some cases, also with environmental consciousness. In many cases there seemed to be a clear relationship between a sentimental object that once belonged to a family member which was then used by the participant: wearing her sister's rings (Lolo), sitting on furniture his father made (Harry), using her grandmother's grass mat (Hibiscus), or sleeping on a pillow her mother made (Sammy). In many, but fewer, cases there was also a clear link between environmental consciousness and upbringing: maintaining a compost heap like his mother used to (Rainman), reusing glass jars like her grandmother used to do (Susanna) or internalising a sense of frugality like his parents used to have (Jack).

As has been indicated, the transmission of family possessions, knowledge, and rituals throughout generations is widely recognised as a crucial aspect of the reproduction of social systems, because such practices express kin groups' boundaries (Folkman Curasi, Price & Arnould 2004:611). As Weiner (1992:11) notes, the "reproduction of kinship is legitimated in each generation through the transmission of inalienable possessions (which embody family histories more than other possessions), be they land rights, material objects, or mythic knowledge". In many cases, family history "starts geographically with witness testimony" by "gathering as many facts, memories and memorabilia" from family members (De Groot 2009:67).

Baudrillard (1996:83) notes that, "since blood, birth and titles of nobility have lost their ideological force, the task of signifying transcendence has fallen to material signs", including heirlooms such as furniture, objects, jewellery, and artworks. Inheritors often imply that family heirlooms serve as testaments to important life events, as indexical symbols of relationships with deceased kinfolk, as "material anchors" for self-identity, and as "vehicles for creating, shaping, and sustaining memories" (Folkman Curasi, Price & Arnould 2004:610, see also for example Grayson & Shulman 2000; Belk 1990; Finch & Mason 2000). They are "contaminated" with previous owners' affective qualities (Folkman Curasi, Price, Arnould 2004:610,612). These processes reveal inner workings of social practices performed in human life rituals and how objects become the representation of how social identities are reconstituted through time (Weiner 1992:11,13).

Turning attention towards the future, one contentious issue is having children, in light of the explosion of the world population. Further ambiguities include that, while western societies are creating reproductive technologies based on the notion that "we all have a right to procreate", having children in eastern societies is a "politically, socially and culturally fraught problem" (Groes 2016:142). The idea of the child also functions as a form of memory: as the embodiment of innocence, hope, and a future, children have "become compromised and ambiguous in today's world", in short, metaphorically "uncomfortable" (Garrard 2016:142). In political terms, one often hears that humans want to 'save the planet for our children'. Yet, when it comes to climate change, the question of having children supposes an uncomfortable aspect of human population growth and the human future. Instead of 'making babies', Haraway (2016:2,99) proposes 'making kin' with the nonhuman because "[l]iving-with and dying-with each other potently in the Chthulucene can be a fierce reply to the dictates of both Anthropos and Capital":

> No species, not even our own arrogant one pretending to be good individuals in so-called modern Western scripts, acts alone; assemblages of organic species and of abiotic actors make history, the evolutionary kind and the other kinds too" (Haraway 2016:100).

With this statement, Haraway clearly outlines her political approach to the question of human reproduction. She argues that the "great acceleration in human numbers" must be approached in "antiracist, anticolonial, anticapitalist, proqueer feminist" terms (Haraway 2016:6). For Hamilton (2017:186), however, this assertion "flags […] the incommensurability between [Haraway's] two primary political projects: her on-going allegiance to feminism, with its commitment to a woman's right to control her fertility (including having babies if she wants them), and her parallel investment in a multispecies future in which human offspring have no more value than the offspring of any other critter". Because the proposition of a "hypothetical world with no [human] babies" might too easily "slide into a form of paternalistic colonialism or eugenics" (Hamilton 2017:187), scholars and researchers should remain wary of posing kin-relations as *the* sole way forward.

Read together, these tropes – that are indicative of participants' current perspectives in and of their lives in the twenty-first century – offer a glimpse of the type of complexities and subsequently, thought tools, needed for conducting research in the Anthropocene. I now turn to a critical review of such new materialist tools and methods as employed throughout this study.

8.3 CRITICAL REFLECTION ON NEW MATERIALIST TOOLS

As mentioned in Chapter 4, I chose to engage with the methods that Law (2004:10) describes which, according to him, allows researchers the possibility of working "as happily, creatively and generously as possible", because I was curious about what this might *feel* like. By means of a 'slow' or 'vulnerable' method, I was hoping to learn, in some ways at least, how it would become possible to "live in a way that is less dependent on the automatic" (Law 2004:11). Keeping Deleuze and Guattari's (1987:150) "immanent [rule] to experimentation" – namely, "injections of caution" – in mind, I experimented with care. In this section, I reflect on what it 'felt' like to approach the research process in this way. In this process, my own memories of the experience form part of assemblages that consist of human and nonhuman actors exerting force in dynamic interaction (Kennedy 2017b:455) (Figure 8.2 as seen on the following page).

Deleuze and Guattari (1987:150) suggest that the main technique for the deterritorialisation of the body (by becoming a Body without Organs) is the act of resisting the normal function of each organ: instead of "seeing with your eyes, breathing with your lungs, swallowing with your mouth," the aim will be to "walk on your head, sing with your sinuses, see through your skin, breathe with your belly" (Deleuze & Guattari 1987:151). According to Thornton (2018:217, my emphasis), as has been indicated, this suggestion might not be quite as impossible as it first sounds because

> the aim of disorganising the body is not simply to use the wrong organs for each task, but to *experiment* with the possibilities offered by the body. The idea is not to stop breathing through your mouth and start breathing through your belly, but to experiment with the different possibilities of breathing.

This means that the aim of making oneself a Body without Organs is not to escape the body by 'getting outside' of it, but rather to detach an organ from its common function by putting it into variation with the body's other organs. After providing instructions for the process of experimentation that is required to make oneself a Body without Organs, Deleuze and Guattari (1987:161) explain that, if these instructions are followed, you will have "constructed your own little machine, ready when needed to be plugged into other collective machines". What is interesting about this comment, Thornton (2018:223) notes, is that it is "forward-looking":

> Mapping the lines of flight that surround you, and exploring the deterritorialisations that pass through you, may not bring about ethical outcomes in and of themselves, but this process provides you with an understanding of

your causes, so that you will be able to proceed by selecting those connections that will increase your capacity to act.

Figure 8.2 | **the human body: feeling the research experience**

Collage from magazine clippings with digital overlay. Produced by the author.

Although I draw on my own experiences of the research process, my explorations remain grounded in an understanding of the entanglement of humans, nonhumans, places, and tools. Describing my own experience as a researcher does not mean that I subscribe to the notion of an anthropocentric subject at the centre of anything. An individual human experience, ideas, and interactions are alterable, fallible, and incomplete, which makes this self-reflection contingent and malleable to the workings of the assemblage. From this I do not draw conclusions or final states: at the end of the day 'conclusions' are a "dualism of before and after", whereas life itself is, as per Bergson (1998 [1907]), an unstoppable creative evolution (Van der Tuin 2018:277).

Deleuze (1980:16) notes that he and Guattari are interested in "the circumstances" that surround any given assemblage. In what follows, I aim to discuss the circumstances under which this research assemblage came into being and was rhizomatically expanded by providing a critical reflection on the use and usefulness of new materialist methods and tools. I do this by first discussing my experience as one materiality within the research assemblage. I then turn to the prominent tools that I used for collecting, analysing, and reporting data which include interviews (and the use of Atlas.ti), New Materialist Analysis, and data visualisations. Through this combination and in critical engagement with the research assemblage, I look back at the ways in which I aimed to displace certain academic conventions to present my research findings differently.

This study forms part of the growing body of experimental research projects that aim to expand existing methods in order to analyse and evoke the affective and performative dimensions of academic writing. New materialist approaches evoke a range of questions concerning research methodology in the humanities and the social sciences. In extant literature I commonly found that theorists stated that they were applying a 'new materialist methodology' to the events they were studying, but rarely laid out the practical steps for conducting such research (such as in selected chapters in Coleman & Ringrose 2013; Baker & McGuirk 2017; Feely 2019; Sun 2020). In arranging my own research assemblage, I therefore took my cue from Fox and Alldred (2017), who not only presented, but also thoroughly teased out the practicalities of their materialist methodology called "materialist analysis of research-assemblage micropolitics". (Throughout this thesis, as indicated, I referred to this method as New Materialist Analysis.)

Following Fox and Alldred (2017:169), the four imbricating stages of this study's new materialist research process are, firstly, initial research design (how the study was methodologically

envisioned); secondly, data collection (how and what kind of data were collected); thirdly, data analysis (how and in what ways data were organised); and, finally, data reporting (how the research is, textually or visually, presented in this thesis). Different stages suppose different thinking and practical tools and can be engineered in specific ways that can evoke different (familiar or unexpected) affects. These stages and their affects are reflected on and referred to rhizomatically over the course of this section.

With a view to Lorimer's (2013:62-63) suggestion on what constitutes a useful new materialist methodology, I remained committed to, firstly, interrogating modernist divisions that determine which forms have agency through drawing attention to affective flows in assemblages; secondly, critically and consistently rethinking what forms of experience count by attending to questions of embodiment, performance, and affect; and, finally, examining emerging politics and ethics that arise in this process by attending to the ways human/nonhuman connections can be made to matter.

Throughout this thesis, I worked with the concept of the Deleuzoguattarian assemblage, which can be seen as a strand of new materialist thought. As I pointed out in Chapter 4, Deleuze's work has typically been viewed as 'high' and abstract theory with little relevance to 'doing research' (Coleman & Ringrose 2013:1). Consequently, the 'practical' dimensions of Deleuze's philosophy and approach to the empirical has been largely neglected. Regarding the theorisations and practical application of the assemblage, Deleuze and Guattari never formalised the concept in a way that "amounts to a fully-fledged theory", which resulted in its obscured and fragmented understanding (DeLanda 2006:3).

As indicated in Chapter 2, Deleuze and Guattari (1987:6) developed the concept of the rhizome in order to inaugurate a new 'vegetal' model of thought that could substantially alter and enrich 'dogmatic', arborescent models of thought that plague history. I use the concept of the rhizome to discuss how this research assemblage evolved since January 2018 (although in many ways its insemination can be traced further back in time). To do so, a quick recapitulation of this concept is useful.

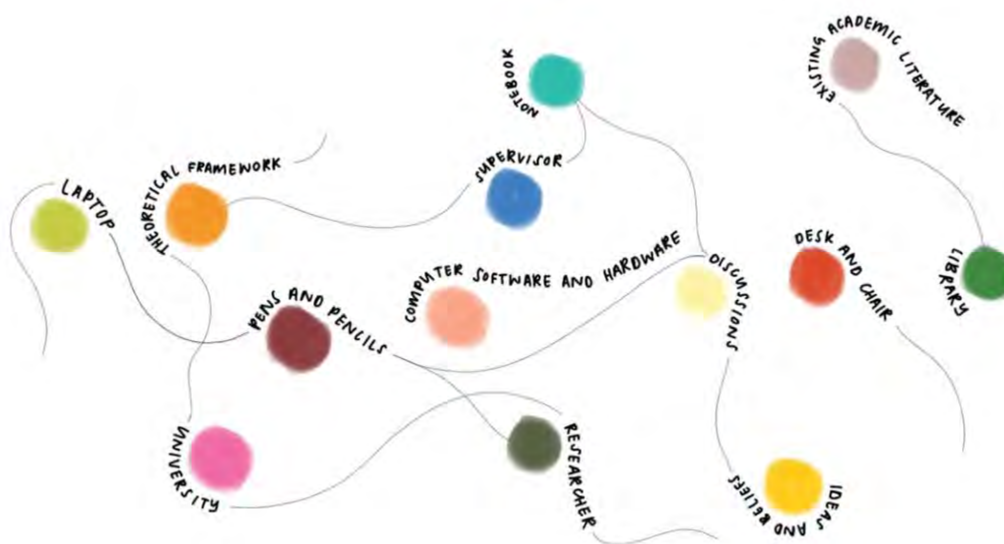
According to Deleuze and Guattari (1987:21), the rhizome is made "only of lines", unlike structures defined by "a set of points and positions, with binary relations between the points and biunivocal relationships between the positions". The rhizome's lines of segmentarity stratify,

territorialise, organise, signify, attribute, and so on, whereas its lines of deterritorialisation are those "down which it constantly flees" (Deleuze & Guattari 1987:9). There is a rupture in the rhizome whenever segmentary lines explode into a line of flight. The line of flight remains part of the rhizome and always tie back to other lines:

> That is why one can never posit a dualism or a dichotomy, even in the rudimentary form of the good and the bad. You may make a rupture, draw a line of flight, yet there is still a danger that you will reencounter organisations that restratify everything, formations that restore power to a signifier, attributions that reconstitute a subject – anything you like, from Oedipal resurgences to fascist concretions (Deleuze & Guattari 1987:9).

Deleuze and Guattari (1987:11) suggest that, in writing, one should "form a rhizome, increase your territory by deterritorialisation, extend the line of flight to the point where it becomes an abstract machine covering the entire plane of consistency". Over the past four years, my research has been territorialised and deterritorialised several times, oscillating between stasis and change through materialities being plugged in or removed from it. In its design stage, at the beginning of 2018, this study's research assemblage (which was not called that until some time later that year), included, for example:

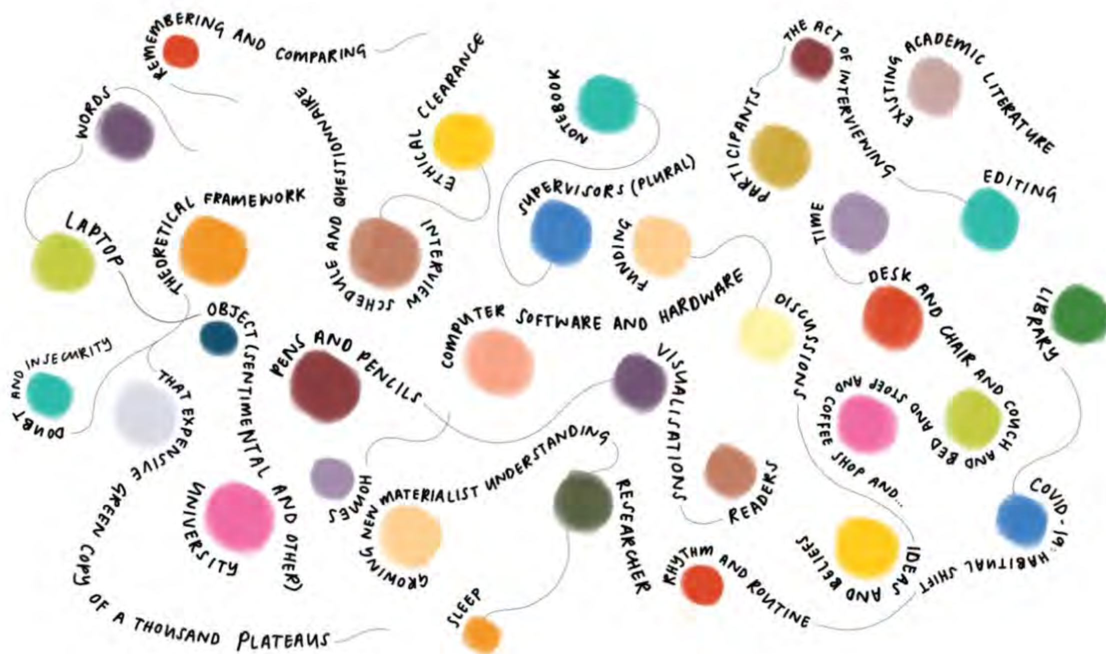
> Researcher – existing academic literature – theoretical framework – discussions – ideas and beliefs – supervisor – university – library – laptop – computer software and hardware – notebook – pens and pencils – desk and chair



Between then and the completion of this study in its reporting stage, the research assemblage has rhizomatically grown to include (among a myriad of other materialities):

> Researcher – existing academic literature – theoretical framework – discussions – ideas and beliefs – supervisors (plural) – university – library – laptop – computer software and hardware – notebook – pens and pencils – desk and chair (and couch and bed and *stoep* and coffee shop and …) – time – sleep – rhythm and

routine – growing new materialist understanding – that expensive green copy of *A Thousand Plateaus* – ethical clearance – doubt and insecurity – questionnaire and interview schedule – funding – participants – habitual shifts owing to COVID-19 regulations – objects (sentimental and other) – homes – recording device – the act of interviewing – remembering and comparing – words – visualisations – readers



How did the different components of the research assemblage, including for example my experiences and beliefs as researcher, the stories of the research participants over the course of the time, and available tools for collecting and analysing data affect the new materialist research process? As Coleman and Ringrose (2013:126) explain, the interactions between the studied events, the instruments and the researcher depend upon the "intentional affective interactions defined by the machines used, in other words, the techniques and methodological strategies adopted". Put differently, this entails the affective entwinement of the event assemblage (what I was studying) and the study assemblage (the tools and methods I used to study it) that together make up the research assemblage.

Since January 2018, then, this research assemblage has evolved to include growingly complex assemblages of interviews, administrative tasks, words, and self-doubts. With the passing of time, I asked myself increasingly pressing questions about my place and role as researcher: this new materialist study's evolution and findings were inevitably contoured by my human perspective, assumptions, ideas, beliefs, habits, and experiences. As one of the new materialisms' main concerns, this anthropocentrism deserves attention.

In Chapter 5, I mentioned that one of this study's aims is to broaden method by acknowledging matter's affectivity without shying away from my humanness. As Knittel and Driscoll (2017:382) note, new materialist approaches have "little to do with transcending or leaving 'the human' behind" or with "rejecting humanism as such and replacing it with something else". Rather, such approaches provide an opportunity for critical engagements with the central blind spots, limitations, and unacknowledged exclusions often associated with anthropocentrism. A new materialist step in the 'right' direction would simply be to recognise that agency is distributed, and affective flows make certain capacities possible.

According to Rigney (2017:476), this does not render the issue of human experience superfluous, but perhaps more urgent. In fact, in many ways, the new materialisms foreground "just what it means to exist as a material individual with biological needs" inhabiting a world as an object among objects (Coole & Frost 2010:28). According to Hemmings (2005:549), affect allows prioritisation of the "texture" of the event one is studying and can thus be seen as a way of "deepening our vision". For instance, the human body becomes an object that can be affected and moved to actualise certain capacities: the turn to matter thus supposes attending to the flows that affect my human body. Affect, a "moment of unformed and unstructured potential", is crucial in determining the relationship between bodies, environments, and subjective human experiences of the world (Massumi 1995:85).

Affect is always mediated and transmitted through an automatic sensory flow of uncontained energies that move across thresholds. It arises in the midst of inbetween-ness: in the capacities to act and be acted upon (Seighworth & Gregg 2010:1). Lagerkvist (2017:173) explains that the human body "acts as an aspect of the self we live through, more than merely a container we live in". In this process of moving through one's lifeworld, bodily sensations change in reaction to affective lived experiences. To think about the "messes of reality", researcher have to "teach [them]selves to think, to practise, to relate, and to know in new ways" (Law 2004:2). Simply by witnessing my own experience of performing methods, I came closer to a new materialist approach.

As Lauwrens (2014:379) notes, the "meanings we derive from and the associations we immediately make in our experience resonate with past memories and the working of the imagination housed in and mediated by the body". These facets of the corporeal condition together make up an experience producing affective flows, thereby bringing about varied

textures of the assemblage. It means that, seeing myself as an object among other objects that enable or inhibit certain capacities, I am open to be affected in ways that would usually be omitted from the research process. Being attentive to affect means being committed to "speculation, curiosity, and the concrete" by provoking attention to the "forces that come into view" as habit, shock, resonance or impact: something "throws itself together in a moment as an event and a sensation; a something both animated and inhabitable" (Stewart 2007:1).

A key component of the data collection phases of this study's research assemblage was the use of interviews. The assemblages in which the participants were entangled (before my arrival, during our interview and after our interview) were found to be endless and organised in diverse ways (see Dewsbury 2011:150). On the day of each interview, the participant and I entered into a researcher-participant assemblage with physical matter that included ourselves, the voice recorder, their home space (or another space), the coffee they offered me and the objects they shared with me, entangled with semiotic social practices, such as greeting, voicing expectations, and keeping track of time as form of proper (or expected) conduct.

During the interviews, we first discussed what could be described as two 'distinct' components of social life, namely each participant's engagement with environmental consciousness on the one hand and sentimental objects on the other. The participants had relatively stable and, in the majority of cases, predominantly separate understandings of these two notions. We then turned to how, and if, environmental consciousness affected the assemblages between participants and their memory objects. Here, the interview questions were aimed at establishing how the distinct assemblages might have been (or could be, after the discussion) deterritorialised when thought of in relation to one another. As discussed in Chapter 7, introducing this section elicited variegated bodily responses, including (nervous or excited) laughter, (long) silences, (puzzled, surprised, or uncertain) facial expressions, and so on. By plugging environmental consciousness into the assemblage, it became evident that participants experienced the relationship with their memory objects as changed, unchanged, or lingering somewhere in between. This was communicated through the reaction of their (and my) whole bodies.

Throughout each interview, I tried to be sensible to the materialities that constituted that specific assemblage. For example, I tried to remain focused on the texture of the participant's words, silences, stuttering, and laughter. Taking the new materialisms seriously means refusing to theorise voice as a stable or essential 'thing', by shifting towards a conceptualisation of 'voicing'

as an embodied, sociomaterial, sensual, and relational process (Chadwick 2020:16). Voicing becomes a transindividual process that happens between porous bodies, locations, and discursive histories.[5] By attending to the in-betweenness of 'things', the permeable boundaries between materialities are foregrounded (Tuana 2008:193-194). Voices become "sites in which the radical permeability between bodies, ideologies, selves, sociocultural relations, machines and biologies are enacted" (Chadwick 2020:16). In this sense, voice is neither body nor language, neither speech nor silence, but rather the affect between them.

I also tried not to think too often about whether the recording device was, in fact, on, or whether one would be able to actually hear the participant in replaying it; I tried to imagine what habits the space in which I found myself afforded and I tried to note how a participant moved around it to show me a specific object. I tried to be aware of the impact of objects, noises, and 'distractions' (usually in the form of pets, neighbours, kettles, family members, lawn mowers, passing cars, vibrating cell phones) on the participant's body and to note how participants reacted to specific questions by repositioning themselves in their chair or pausing to think, and how long his/her response took. I also tried to track my own bodily reactions through sensations of laughter, feelings such as shame or excitement, the sun on my skin (or not), the tastes on my tongue, and so on.

In summary, I tried to remain attentive to what Stewart (2007:2) calls "ordinary affects" which give "circuits and flows the forms of a life": ordinary effects, she says,

> 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. Rooted not in fixed conditions of possibility but in the actual lines of potential that a *something* coming together calls to mind and sets in motion, they can be seen as both the pressure points of events or banalities suffered and the trajectories that forces might take if they were to go unchecked.

Indeed, there "can be no pretence at neutrality or objectivity" in an interview environment "*pulsating with influences*" (Abrams 2010:54-55, my emphasis). As an embodied human, trying to remember to do all these things was not always an easy task. Just as focusing my eyes on an illuminated computer screen for hours during other moments in this research assemblage was a strenuous task, so was prolonged thinking about how humans – including myself – were

[5] In theorising 'voicing', Chadwick (2020:16) turns to Tuana's (2008:188) concept of 'viscous porosity' as a way of thinking about the relational processes of becoming in which subjects, events, and phenomena are not stable essences but 'constituted out of relationality'. This is similar to the approach followed in assemblage theory.

entangled with many materialities in assemblages. Shifting between the roles of researcher, stranger, listener, analyst, witness, and 'psychologist' (as I was called by three participants), was found to carry the potential of being "emotionally demanding" (Chadwick 2020:5).

This was especially demanding in instances where unexpected materialities were plugged into the research assemblage. In retrospect, I can recall some (rather shameful) instances where frustrating events (which researchers conventionally do not consider as having an effect on the research outcomes) inhibited me form giving my full attention to the researcher-participant assemblage. For example, before my interview with Chris (which had been postponed a few times before already) my car broke down in an unfortunate location, and I arrived late. Overcome by my own irritation and shame, I nearly missed key affective cues in our interview, such as his engagement with the space we found ourselves in.[6]

Yet, just as shifting research roles can be a demanding task, so it can be fulfilling, pleasurable, and joyous. Through the process of tracking my own and the participants' bodily reactions towards one another, towards the questions posed, towards their sentimental objects, and so on, I equally came to appreciate that it is harder to categorise people by simplifying their habits and stories into 'themes' or 'tropes' by reducing them to 'discourses'. I found extreme satisfaction in the textured in-between moments, the affectivity of the participants' sentences and smiles, the conversations that cut across 'macro' level topics such as capitalism and patriarchy and 'micro' personal experiences.

For example, I vividly remember moving around Mary's house as she told me the stories of various pieces of furniture – a cast iron bed in which her toddler sleeps, two wooden chairs in the living room, a piano, a sideboard next to the front door – that had been passed on to her by her mother and her grandmother. Fragments of this assemblage trickled into this thesis, but time and word constraints inhibited a thorough engagement with these. It is then probably not strange that the sheer number of affective responses and flows that I was *not* able to discuss here will remain a sticky thought in my mind for some time to come.

Examining assemblages that participants (and myself) were entangled with, instead of examining the participant as an 'autonomous' human, granted me the opportunity to gain a distinct new

[6] As discussed in Chapter 7, Chris expressed a fond relation with the University of Cape Town, South Africa. This intimacy was already communicated as we walked to the space where we conducted our interview but, because I was overly annoyed by my own situation, I nearly missed the *way* he spoke about and looked at the campus around him.

materialist perspective of the matters at hand. After conducting the interviews – which for most of the study happened in tandem with the phases of design, analysis, and report – the participants' voices quieted down (but did not go silent), and my own fleshy attempt at 'voicing' my findings grew louder through reading and categorising, jotting down notes, transcribing the interview recordings, designing the data visualisations, and so on.

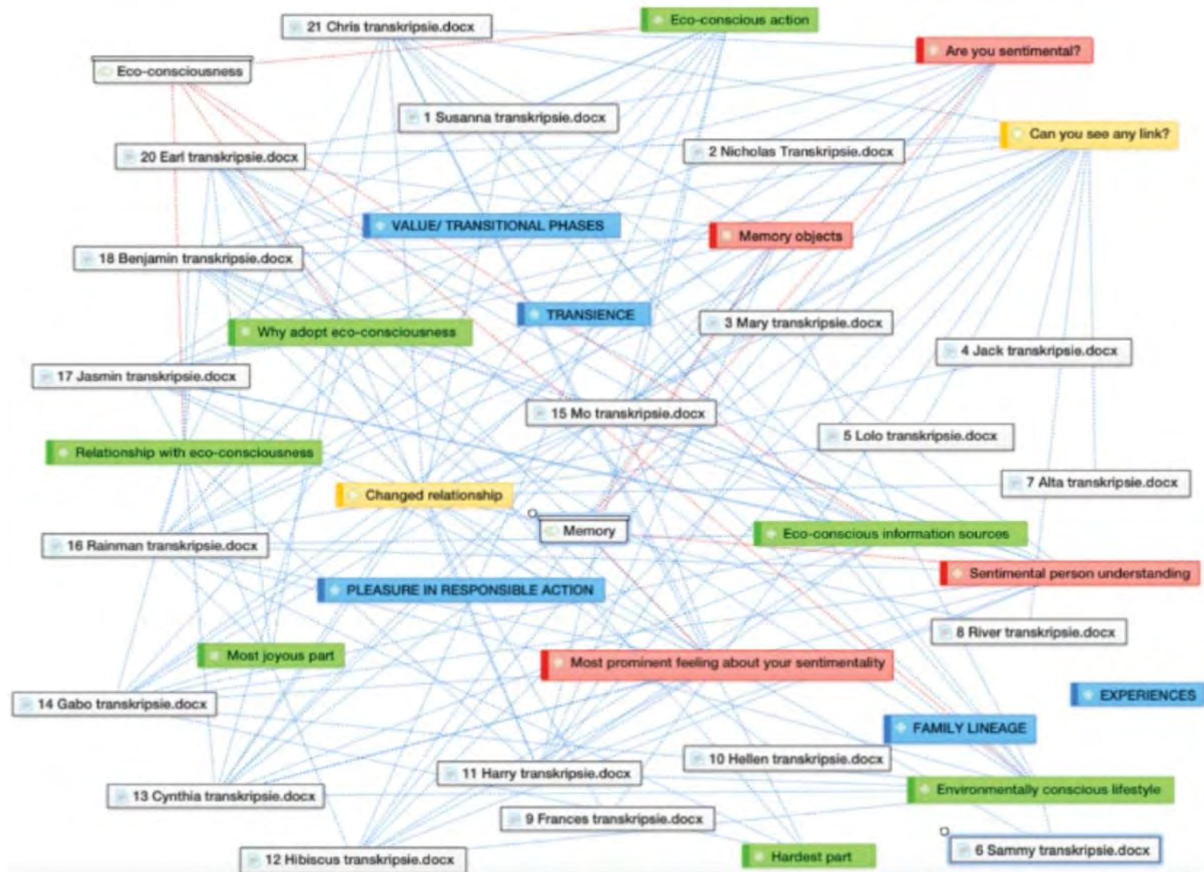
To sketch a picture of how the study's analysis phase unfolded, I briefly refer to the qualitative data analysis program, Atlas.ti, which was used to analyse selected datasets, namely the 36 academic documents reviewed in Chapter 3 and the 21 interview transcriptions discussed in Chapters 5 and 6.[7] During a deliciously fulfilling conversation over breakfast with a friend early in 2021, I learnt about Atlas.ti. Although I only discovered its potentials quite late in this study, plugging this tool into the research assemblage proved useful for pointing out the similarities, rankings, and frequency patterns of codes in the two sets of documents noted above. Atlas.ti supports multiple formats including Microsoft Word and PDF documents, so that not having to transform the format of the primary documents saved precious time.

Further, network views (Figure 8.3) were particularly useful for visualising and (re)producing my own data visualisations. Network views also allowed me to visualise relationships between codes in terms of simpler chunks of information, thus facilitating understanding and interpretation. Upon adding the literature reviewed in Chapter 3 to Atlas.ti and *seeing* the novel links regarding concepts such as 'extinction' and 'mourning', which I was not able to tease out two years earlier (when I was involved in writing Chapter 3), I returned to rework the chapter. This again points to the research assemblage's rhizomatic nature and the new materialist approach more broadly.

[7] In her research process, Chadwick (2020) re-listened to audio recordings (instead of solely using the transcribed text). I resonated with her experience of being "drawn back into research encounters in a visceral, emotional and embodied way" owing to the listenings sometimes being challenging, or simply, time consuming (Chadwick 2020:5). Listening (although other contextual, visual, tactile, sensual elements of the research encounter might be lost or forgotten) can become a form of "embodied analysis in which we use our emotions, bodies and affective histories to dwell with/on the paradoxes, movements, entanglements and trickery of voices" (MacLure 2009, Chadwick 2020:6).

Figure 8.3 | **atlas.ti 'network' views**

A 'network' view of the 21 interview transcriptions (white blocks) as connected in terms of aspects of environmental consciousness (green blocks), memory (red blocks), the intersection between these two notions (yellow blocks), and the emerging tropes present in multiple interviews (blue blocks). Having the opportunity to draw lines in order to visually situate notions and participants in relation to each other has the potential to provide the researcher with novel ways of analysing and reporting research.
Screenshot by the author.



With a view to further analysing the interviews, I now turn to New Materialist Analysis. To my knowledge, this is the first study (at least the first South African study) to use this method for analysing assemblages. As mentioned in Chapter 5, what led me to use New Materialist Analysis as a tool was Fox and Alldred's (2017:28) thorough consideration of the practicalities of undertaking new materialist research. Making this choice was not based on a linear search-find-apply-report approach, but rather a prolonged consideration of possible approaches.

I remember an unexpectedly cold day late in 2019 when I feverishly wrote a theoretical overview of material semiotics – the tool of analysis I was intending to use at that stage. I remember, with

equal clarity, an evening around a year later when I looked at my computer screen, deleted those words, and replaced them with words telling the story of New Materialist Analysis. Again, the rhizomatic research assemblage branched out in many directions, flowed, changed, and shaped my engagements with time and with texts by implicating my body – thinking, typing, reviewing, sitting, discussing, considering – in shifting ways throughout the process.

Fox and Alldred (2017:23-27) developed New Materialist Analysis on the basis of six propositions: 1) focusing upon matter; 2) exploring what matter does through affect (not what it is); 3) not privileging human agency; 4) seeing thoughts, memories, desires, and emotions as embodying material effects; 5) seeing that material forces act locally; and, lastly, because they are sociologists, 6) expanding sociology's methods as part of the shift towards matter. In Chapters 6 and 7, I used this tool to analyse the interviews.

New Materialist Analysis allowed me to zoom in and out of any given assemblage so as to focus simultaneously on the workings of micropolitics, while acknowledging the impact of macropolitics, which provided a dynamic understanding of each studied event. In focusing not only on the affective flows, but also deliberately on memories, desires, habits, and emotions, the use of this tool allowed me to gain a greater understanding of participants' entanglement in the material world around them. The collaborative and interdisciplinary spirit of New Materialist Analysis allowed me the opportunity to come to new insights and to expand existing vocabularies to begin to grasp (all current restrictions taken into account) the nonhuman unburdened by human conceptualisations in the Anthropocene.

Although there is much more that can be done in order to gain more detailed insights into the workings of assemblages, New Materialist Analysis provides a perspective that has the potential to bring future researchers, working on just about any topic, closer to nonhuman and posthuman approaches and a material understanding of the world. Such developing instruments may allow unexpected affective flows within the research assemblage.

Turning to a reflection of the process of producing data visualisations, it is firstly important to note that my goal with this output was to play with my capacities to engage with data differently and, further, to inform a more nuanced understanding and potential responses in the viewer/reader in order to highlight this thesis' new materialist underpinning (see Kennedy & Hill 2017:774, Dávila 2016:3, Crawford in Off Book 2011). By entering into rhizomatic assemblages

with data, I concentrated on representing my affective experience through an aesthetic lens. I was struck by the embodied difficulties of making sense of 'the desire of the picture' which can easily be confused with 'the desires of the artist'. What pictures want, *à la* Mitchell (1996:82), is "not the same as the message they communicate or the effect they produce; it's not even the same as what they say they want".

Through the use of various media alongside the textual, including visualisations and photographs, I had the pleasure of engaging in an intimate and slow way with data collected in this research process. As noted in Chapter 5, when conducting new materialist research, multimedia approaches are especially useful in producing lines of flight that could not be drawn through text alone (Fox & Alldred 2017:173). Beyond such a pleasurable research experience, presenting information in this way alters the affective flows of the final research output and draws the studied event and reader/ viewer into a colourful and textured assemblage (Fox & Alldred 2017:174).

Through my own visualisations, I aimed to not only to think through and represent academic research technologically, but also to bring about affective responses in viewers who engage with this thesis. By foregrounding data's subjectivity, that is, my human understanding with its inherent biases and errors, the process of drawing data assisted me in revealing something profoundly *human* in the collecting, processing, analysing, and display of data (Brittz 2018:201). The multimedia and -method approach followed in this research assemblage encouraged me to reflect on the ways in which research is assembled, because it facilitated a critical engagement with the goal of eroding boundaries between matter/meaning and micro/macro.

As regards reporting, the phases of planning, writing, and editing this text can also be seen as forming part of the research assemblage, as it entails the plugging in of further materialities: computer software and hardware, papers used for notes, humans (myself as researcher, supervisors, and other academics with expertise, editors with skillsets, friends with ideas), timelines and deadlines, lengthy discussions, email threads, track changes, and other technological tools. In writing this thesis, I experienced what it means when MacLure (2017:50) states that it remains extremely difficult to shed "the anthropocentrism that is built into our world-views and our language habits". Yet, I do not find it particularly useful to try to repudiate my humanness: I prefer paying close attention to the capacities of my human body enlivened by the affectivity of words, methods, and other materialities. Sometimes the "romanticised

humanis[t] language that bestows upon matter the capacities that we so pride ourselves on having" might be exactly what is needed to bring about affective, deterritorialised perspectives (MacLure 2017:54).

This section reflected on a new materialist methodology with specific reference to some components and phases of the research assemblage, such as interviewing, typing, feeling, analysing, engaging, thinking, and reconsidering. These aspects all shape the unpredictable assemblage in that some shoot out to form rhizomes and reterritorialise a space, whereas others briefly impact the assemblage through a fleet deterritorialisation.

8.4 CONCLUSION

As demonstrated throughout the current thesis, the Anthropocene necessitates drastic reconceptualisations of the role of human and nonhuman agencies within existing structures, systems, and inputs. Humans, as the dominant influence on climate since industrialism, are now understood to be, in their combined impact, a climatological, planetary force that operates "just as nonhumans would, independent of human will, belief, or desires" (Grusin 2015:vii). Such reconceptualisations require not only a rigorous re-examination of key philosophical and empirical questions about human agency, but also discussions on expectations and normative positions concerning the future.

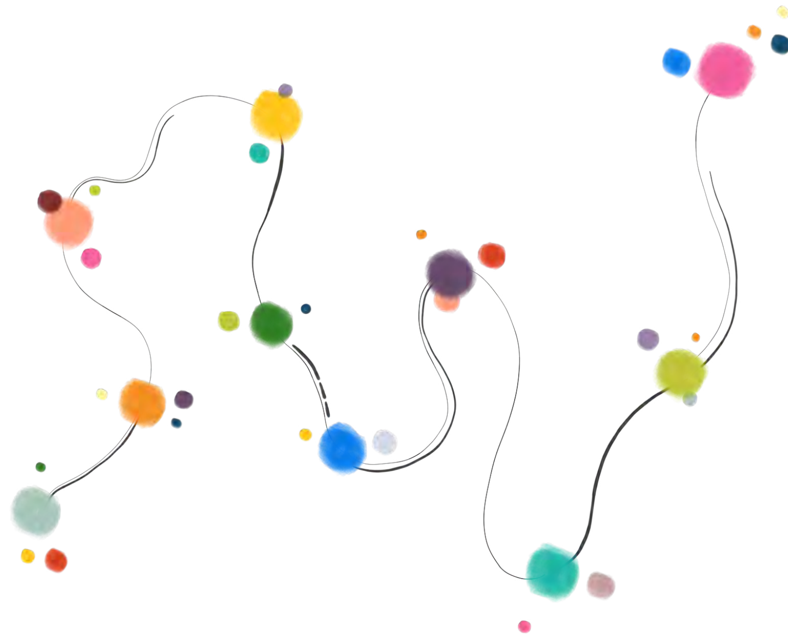
This chapter set out by summarising the tropes that became apparent during the interviews. While the participants associated some tropes readily with memory objects, and others with environmental consciousness, I explored five main tropes in relation to memory and eco-consciousness. The tropes included humans' persistent dualistic and hierarchical thinking regarding the world around them (including about objects, nature, and 'the material'); the relation between pleasure and a sense of 'responsible' action; attentiveness to the value of objects of memory and objects of waste; an acceptance of transience; and the prominence of family lineage in discourses of memory and environmental consciousness. Humans could integrate more holistically with the unstable objects that make up their world through an awareness of affective flows brought about by daily experiences and habits, and by questioning dichotomous thought patterns and terms that shape and favour anthropocentric worldviews.

It is evident that, in the process of envisioning and deciding on the futures we want to come to life, it is essential to take note and recognise the diversity of current (often alarming) perceptions

and understandings of the Anthropocene. In an epoch where it is highly probable that more and more unruly matter will not fit snuggly into either category, it is high time to drastically reconsider anthropocentrism. The Anthropocene is evoking new major trends, underlying dynamics, and political systems – ranging from the macro to the micro in uncanny ways. We need to equip ourselves to understand such trends and impacts, underlying drivers, and societal dynamics and, in particular, their related interactions, trade-offs, and synergies across temporal and spatial scales.

In the subsequent section, I provided a reflective account of what it 'felt' like to approach the research process in a new materialist manner. Objects, a category of which humans form part, make contact in ways that are intensely intimate and somatic, and gaining awareness of these has the potential to affect human bodies in unprecedented ways. Engaging with the notion of affect and the human body as an object that can affect and be affected, I was able to place my own embodiment under a microscope without rejecting the usefulness of doing so. While acknowledging my own humanness and my inevitable human experience, I reflected on what assemblage-thinking and the research assemblage as tool might add to research in the humanities. By focusing on the assemblage's circumstances, I teased out the circumstantial and methodological factors of this study during its early design stages to the collecting, analysing, and presenting of data. I referred rhizomatically to navigating the interview process, applying New Materialist Analysis to the research problem, the various stages of writing and rewriting, and drawing data visualisations. The experimental tone of this research project situates it within a growing body of academic work focused on rethinking, scrutinising, and expanding existing research methods.

Humans and nonhuman agents have been entangled in shifting assemblages for as long as we humans have existed. Ahead of these assemblages, assemblages *without* human agents existed, and it is highly probable that this might again be the case in the future. Meanwhile, humans and nonhumans will continue to move in and out of assemblages made up of the vast quantities, shapes, and colours of objects. One thing is irrevocably clear when looking back over a past that has unfolded rhizomatically: what looks inevitable in hindsight, was far from obvious at the time. The same is likely true for the future of humans' and nonhumans' entanglement in assemblages in the Anthropocene.



9 Chapter

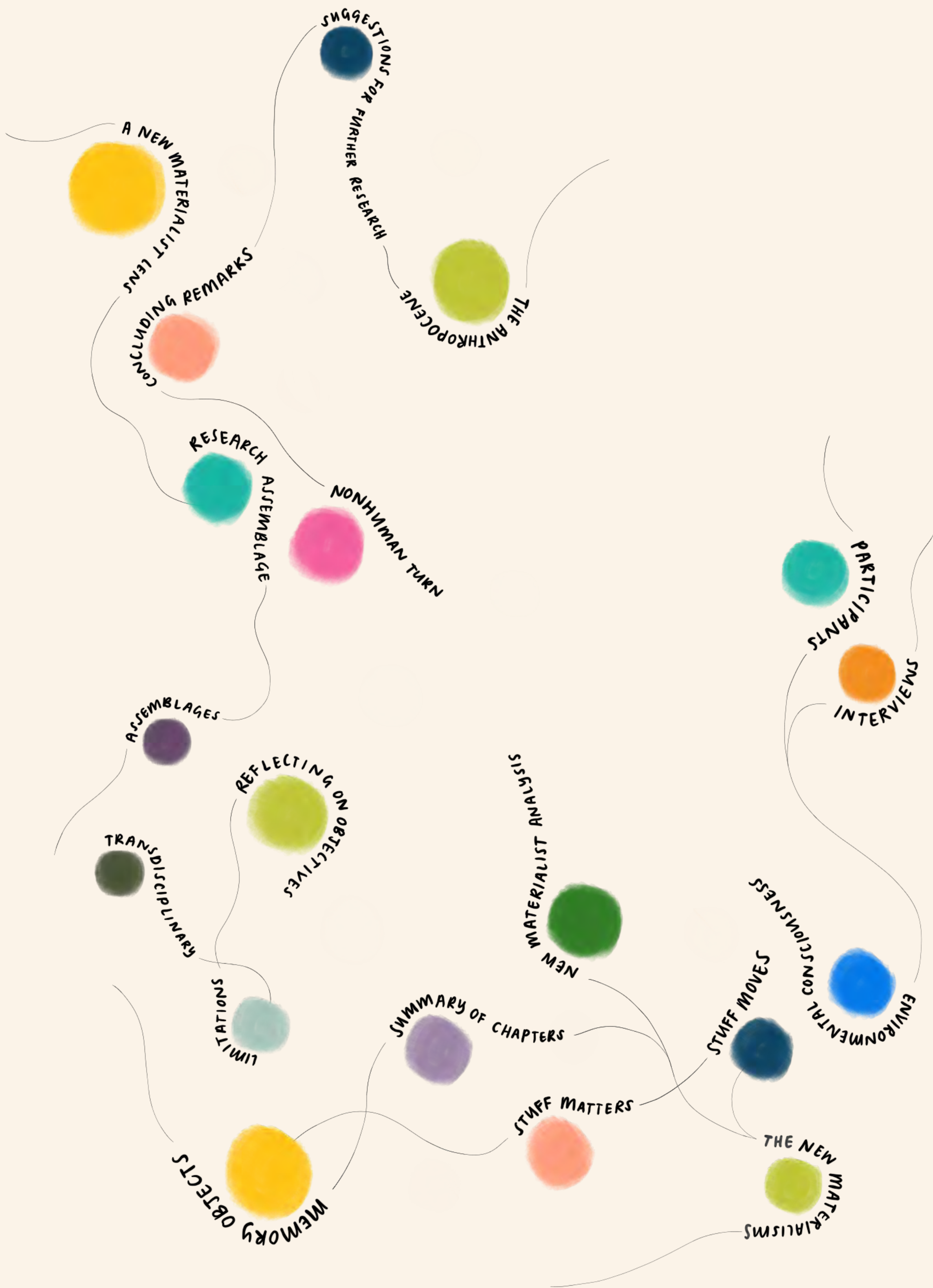
conclusion

There are so many good stories yet to tell, so many netbags yet to string, and not just by human beings.
- Donna Haraway (2016:49)

Every new beginning comes from some other beginning's end.
- *Semisonic*, "Closing Time" (1998)

The moment of looking at the present is the time it becomes the past. This is why rememberers must always travel.
- Mwangi Hutter (2018:sp)

Figure 9.1 | key concept visualisation



CHAPTER 9: CONCLUSION

9.1 INTRODUCTION

As indicated, this study originated from my simultaneous fascination with objects and environmental matters. Over the past four years, I have dedicated time to explore the potential of the new materialisms through the diverse concepts of environmental consciousness and sentimental objects because I was, and still thoroughly am, intrigued by how objects, especially those that evoke strong affective memories, are treated in the Anthropocene. Increasing numbers of humans worldwide are gaining environmental consciousness for various reasons. Somewhere between the status quo and making radical changes in habits and practices in order to sustain life on planet Earth, stuff – *à la* Boscagli – ends up being scrutinised for its value, material, impact, and future. Although the relation between memory objects and the environment struck me as ambiguous, I explored how the thinking patterns associated with the one concept might enhance and add to thinking patterns in the other (Figure 9.1).

In the thesis, 'memory objects' as a central term was used to denote any objects that are collected and stored by a specific person as a keepsake, usually as a form of commemoration of a person or past event. These objects are not necessarily 'functional', but rather valued for their sentimental attachment and the emotions they evoke. Another central term was 'environmental consciousness', which entails a person's general awareness of environmental factors when making choices. I made use of concepts – including terms like 'assemblage', 'nonhuman', 'entanglement', and 'affect' – employed by new materialist thinkers.

This study's new materialist approach was further based on the combination of a literature review and the practical application of tools using qualitative interviews with participants who self-identify as environmentally conscious, New Materialist Analysis, and data visualisations. I identified five objectives for the study, achieving the first three through a literature review and the final two through a practical multi-methodological approach, including conducting qualitative interviews and drawing data. This combination of theory and practice allowed me to explore the rhizomatic perspectives, theoretically and methodologically, of how humans' relationship with their memorabilia could potentially change when they start thinking critically about environmental issues.

Interviews, as core components of this study's new materialist research assemblage, were used as tool to establish how participants entangled with environmental consciousness and sentimental objects. Each participant's understanding of *and* engagement with environmental consciousness and memorabilia was discussed during each interview. These discussions were used to unpack five questions relating to 1) the different components of the research assemblage; 2) each participant's perception of environmental consciousness; 3) each participant's perception of sentimentality and sentimental objects; 4) each participant's eco-consciousness in relation to their 'connection' with their memory objects; and 5) the tropes that emerged in the interview discussions.

By means of these questions, I set out to understand the extent to which participants felt that their consciousness of environmental degradation and the consequent actions taken were altering their 'connection' with their sentimental memorabilia. I furthermore set out to establish ways in which they were addressing this relationship, whether it had been altered or not. Through this approach, this thesis gives a perspective on how a mind-shift might influence the way people interact with their memorabilia. Emerging tropes were gathered and cross-fertilised between discussions on memory objects alone, environmental consciousness alone, and the relationship between the two. By delving into the role of eco-consciousness in humans' relationship with their sentimental memorabilia, I therefore had the opportunity to identify and explore such tropes using participants' shared narratives.

9.2 SUMMARY OF CHAPTERS

Chapter 1: Introduction laid out the background and objectives of the study by briefly sketching the contexts within which visual culture studies, the new materialisms, memory objects, and the Anthropocene have emerged in various discursive spaces. I further introduced the study's new materialist theoretical and methodological framework which was thoroughly engaged with throughout the remainder of the thesis. The introduction set the tone for this study by making clear its inter- and transdisciplinarity in combination with its new materialist framework.

In this chapter I also defined five objectives for the study. The first (unpacked in Chapter 2) was to trace the history of and the turn towards new materialist approaches in the fields of visual culture studies, memory studies, and the environmental humanities. The second (dealt with in detail in Chapter 3) was to establish how academic literature portrays the relationship between the Anthropocene and memory studies (and memory objects as part of this field). Thirdly,

throughout the course of Chapters 4 and 5, I aimed to plot the theoretical and practical challenges and liberations of a new materialist approach for qualitative data enquiry. Regarding the fourth objective, my aim in Chapter 6 was to foreground assemblages composed of diverse human and nonhuman materialities (such as South African individuals, eco-friendly practices and habits, beliefs surrounding environmental consciousness, memories, and memory objects). Finally, my fifth objective (treated in Chapter 7) was to discuss how such assemblages were affected when new materialities were plugged into existing assemblages: in other words, how introducing environmental consciousness changed an existing assemblage between a participant and her/his memory objects.

In *Chapter 2: Four Theoretical Sets*, I proposed four suitable theoretical backdrops used in this thesis, namely the new materialisms, visual culture studies, memory studies, and the Anthropocene, as informed by the environmental humanities and environmentalism discourses. By focusing on where these four sets imbricate (such as in a Venn diagram), this chapter foregrounded the interdisciplinarity of this study. I traced each field's historical development by referring to prominent shifts and key theorists. I subsequently investigated how new materialist thought, through terms such as 'assemblage', 'affect', 'posthuman', and 'entanglement', is increasingly introduced into those fields, explaining the use of these terms throughout this study.

In the first theoretical set, I discussed the new materialisms' dedication to the undoing of longstanding dichotomies, so as to provide nuanced perspectives on the rhizomatic functioning of society. This served as introduction to Deleuze and Guattari's assemblage theory, which remained pertinent throughout the study. I traced how the collaborators aimed to undo the concept of the 'discontinuity' (between the tangible and the intelligible) of the 'thing' central in western thought with their assemblage theory.

For the second theoretical set, I turned to visual culture studies, where I traced the prominent shifts that have occurred within this field since its early stages in the 1990s. These changes include shifting theoretical engagements with artworks and visual culture beyond Eurocentric ocularcentrism, towards multisensorial experiences, eventually leading to increased theoretical discussions on affect. Affects, embodied experiences of intensity, are crucial when it comes to determining the relationship between bodies, objects, and environment. Paying attention to the ways in which energy flows between humans and memory objects clarifies the kinds of affective nuances that come to the fore in the interaction between materialities.

The concept of affect forms part of new materialist vocabularies, because of its focus on the relational components of assemblages between human bodies and all other social, material, and abstract entities, and therefore shifts away from conceptions of objects and bodies as occupying distinct and delimited space (Deleuze & Guattari 1987:240-241). Furthermore, I also discussed how affect and the new materialisms tie together, where Deleuze and Guattari's rhizome as an image of thought comes into play. Within the context of this thesis, Deleuzoguattarian rhizomatic thought – a creative and active process of producing an alternative image of thought that accounts for the interconnectedness of all things – in shifting assemblages, was also discussed.

Affect is an unfolding relationality and allows us to see humans as *in* and *of* the world (Hawkins 2006:121). When the materiality of the objects and how this touches the most visceral registers of being are is noticed, it excites, unsettles, or surprises. One is reminded of the body's intensities and multiplicities. These affects can feel like a qualitative overspill or excess that escapes the knowable, manageable subject (Hawkins 2006:121). Recognising the affective dimensions of the objects we consider plays up all those epistemologies that start with the "knowing subject ready to act on the world, ready to 'do the right thing'". This is because affective bodies are ephemeral bodies "in transition" (Hawkins 2006:121).

For the third theoretical set, I provided a historic overview of memory studies' prominent phases since its onset in the early twentieth century. This was followed by a discussion of some current challenges and possible future directions. It was shown that, in recent years theorists of memory studies, like many theorists across the humanities, are increasingly turning to concepts, such as 'posthuman' and methods such as the dismantling of dualisms (between cultural and individual memory, between science and the humanities, between thinking and feeling, etcetera), all of which is closely associated with the new materialisms. To simultaneously reframe unjust, forgotten, and repressed pasts and to envision more just futures for the human and the nonhuman alike, theorists agree that memory studies must move beyond its 'conventional limits' of anthropocentrism and objects of study.

I finally turned to the fourth theoretical set, namely the Anthropocene. Here, I unpacked the historical aspects of dominant environmental discourses such as the environmental humanities, environmental history, and environmentalism. I further situated South African environmentalism within this discussion by considering the entwinement of social, political, economic, and

environmental issues of the country's past. By incorporating some of the most fundamental questions evoked in the Anthropocene, I further looked at a key debate within the Anthropocene, namely the question of the relations between human and nonhuman objects as raised by these discourses. These strange entanglements of humans and nonhumans in assemblages formed a central part of this study. It was also shown that, apart from philosophical and theoretical instruments that define the new realities posed by the Anthropocene, practical approaches are being developed. I pointed to the increasing use of terms in the environmental humanities that supposes ties with the new materialisms, such as 'entanglement' and 'naturecultures', as well as new materialist goals such as undoing dichotomies and attending to injustices.

From these theoretical sets it became clear that memory studies in the twenty-first century is a vital interdisciplinary field (Erll 2011:4) and, similarly, Anthropocene studies increasingly stretches across disciplinary lines. The fourth, most recent phase in memory studies is marked by an increasing awareness of the Anthropocene's role in the field. While some theorists claim that the role of memory in the humanities will diminish, others hold that memory cannot *not* be studied. This means that a "more holistic understanding seems to be emerging in which environmental issues are anchored in wider debates about the future shape of our society" (Müller 1997:118). The last two sets in Chapter 2 each laid the ground for two particular aspects of this study, namely sentimental objects as part of memory studies, and environmental consciousness as accompanying the environmental humanities.

The final sections of Chapter 2 thus paved the way for *Chapter 3: Memory in the Anthropocene / The Anthropocene in Memory*. The focus of this chapter was to discuss specific relations between these two sets through examining the meeting point of memory and the Anthropocene. Specific references were made to the existing, relatively recent scholarly literature, or a fourth phase in memory studies marked by a growing engagement with the Anthropocene (Craps 2017a:3). The 36 texts discussed in this chapter include special editions of journals, journal articles, books, chapters in books, and a roundtable discussion. Although this intersection remains under-researched, the increasing rise of academic journals, publications, and conferences treating it suggests growing awareness of the links between memory and Anthropocene that has become more present over the last few years. This shows the increasing pull towards collaboration between different fields in the twenty-first century.

In this chapter, I briefly discussed the lack of literature centred on ways in which to contemplate *objects* of memory within the Anthropocene. The most deliberate reference to memory objects is made by Craps (2017a:2, my emphasis) when he asks how, if at all, an awareness of living in the Anthropocene affects "the *objects of memory*, the scales of remembrance, and [memory studies'] humanist underpinnings". The current study has taken Craps's question as one of its departure points, but zoomed in on sentimental objects of memory. The chapter further laid out the various threads that surfaced in the reading of the literature. Attempting to track all the themes written about this relationship would amount to a task beyond the scope of this study, and I therefore restricted the discussion to three key themes, or threads: 1) an engagement with a 'derangement' of spatiotemporal scales; 2) the inequalities between firstly, rich/poor, white/black, global North/ global South and, secondly, humans/nonhumans; and 3) a consideration of the questions and tools surrounding remembrance, life, and extinction in the Anthropocene. These themes were discussed in detail in the chapter.

It is apparent that memory studies will need to critically engage with emerging multiscalarities, including a renewed relation with time and space. Memory studies also needs to actively start thinking 'ecologically', rather than merely socially, which involves a break with the persistent humanism thus far preventing the field from "adequately addressing the vast spatiotemporal magnitudes of the Anthropocene" (Craps 2017a:3). The additional threads (which are equally significant, but less frequently explored in the literature) included teasing out the use and abuse of (ambivalent) terms such as 'planetary memory', 'extinction', 'trauma', 'future's pasts', 'preliminary mourning', and 'environmental holocaust'. Generally, these concepts were treated as imbricated with and as terms that should be read as enriching the first two threads of scale and inequality.

In *Chapter 4: New Materialist Social Enquiry*, I turned to the theoretical and methodological challenges and potentials that a new materialist approach supposes for conventional social enquiry. With reference to work by theorists such as Law (2004) and Coleman and Ringrose (2013), I examined unfolding new materialist theories and methods. Without nullifying the usefulness of conventional research methods, I aimed to show how these methods often do not acknowledge the 'messiness', in-betweenness, and textures of ordinary affects. In contrast with this, new materialist approaches aim to critically engage with the "limitations, blind spots, and unacknowledged exclusions" central to anthropocentrism, without leaving the human behind

(Knittel & Driscoll 2017:382). As researchers with an inevitable humanness, performing methods may (at least in part) be involved in the creation of new worlds (Coleman & Ringrose 2013).

With this as a backdrop, I discussed my new materialist tool of choice, namely the notion of the assemblage. Here, I teased out the vast perspectives on the 'general logic of the assemblage' as theorists have drawn on Deleuze and Guattari's *A Thousand Plateaus* since its publication more than 40 years ago. Following diverse scholars such as DeLanda (2006, 2016), Adkins (2015), and Buchanan (2020), I treated assemblage theory throughout this thesis as an *incomplete project* that invites researchers to develop it further. In short, I foregrounded the tetravalence of the assemblage, which highlights the assemblage's *ratio* of tendencies between the material and the expressive towards territorialised stability and deterritorialised change (Deleuze & Guattari 1987:88-89).

This led into *Chapter 5: Arranging the Research Assemblage*, which was designed to be read as the second part of Chapter 4. With a substantial reference to Fox and Alldred (2017), I explored the process of conducting research as an assemblage by situating my own study as a new materialist research assemblage that comprises human and nonhuman materialities such as a researcher, the data, the tools used, and the contexts in which the research took place. Approaching the research process as an assemblage with its own affect economy, the research became a territorialisation which affectively shaped the knowledge it produced. Should a component within an assemblage be detached from it and plugged into a different assemblage, its interactions and affective power would be different.

Subsequently, I focused my attention on three tools for the collection, analysis, and presentation of data that form part of my research assemblage, namely interviews, Fox and Alldred's (2017) New Material Analysis, and data visualisations. Foregrounding these three tools allowed me to discuss the implications of many other components in the research assemblage, such as the researcher's role, the use of language, and material objects. While fully acknowledging my impact as a researcher, I teased out the ways in which this combination (despite the ambivalences surrounding these tools) is useful for my research assemblage. I highlighted that, in approaching this project as a research assemblage, I became aware that I might face certain constraints, pleasures, and responsibilities as a researcher in the twenty-first century.

With this as a theoretical backdrop, I turned in *Chapter 6: Territorialised Assemblages* to the practical implications of new materialist research processes by introducing this study's 21 research participants who self-identified as environmentally conscious. This chapter centred on the territoriality of assemblages and was designed to be read alongside Chapter 7, the latter as focused on deterritorialisations that occur when additional materialities are plugged into an assemblage.

By highlighting and discarding certain aspects of the interviews during the analysis phase, I reflected on some of the main issues and potentials posed by new materialist approaches for conducting research in the humanities and social sciences.

Throughout the chapter I engaged closely with selected assemblages in order to foreground the territorialisations that take shape through macropolitical discourses and micropolitical actions and habits. The emphasis on assemblages, rather than individual materialities, was illustrated through a series of New Materialist Analyses of event assemblages between 1) participants and selected environmentally friendly actions; and 2) their relationships with selected memory objects. I referred to narratives shared in the interviews alongside literature on assemblages and new materialist tools.

Firstly, I delved into participants' understanding of environmental consciousness and stipulated visually the kinds of actions they associate with this notion, most notably the five Rs – refuse, reduce, reuse, recycle, and rot – of waste reduction (Johnson 2013:15). I further referred to frequently mentioned platforms that inform participants' understanding of environmental matters and participants' engagements with consumption and 'waste'. This led to five New Materialist Analyses of prominent practices, beliefs, and feelings that participants connoted to 'environmentally conscious living'.

Secondly, I turned to memory by referring to the participants' understanding of and relation with the term 'sentimental person'. The study found that, while some participants considered themselves to be extremely sentimental, others did not (often because of a negative connotation with the term). Participants' 'grade' of sentimentality was plotted on a continuum. I further included photographs of the participants' most precious sentimental objects in order to provide a holistic and visually rich analysis of the interview discussions. I then conducted five New Materialist Analyses of assemblages between humans and selected memory objects. Depending

on the connotation and personal function of an object, participants engaged with their memorabilia in different ways. Often, it is a combination of engagements (using it, storing it, or displaying it) that constitute their relationships with objects.

As mentioned, whereas Chapter 6 focused on territorialised assemblages of firstly, participants and environmental consciousness and, secondly, participants and memorabilia, *Chapter 7: Deterritorialised Assemblages* foregrounded the shifts that occur when these materialities were introduced within the same assemblage. This experimental chapter's aim was, firstly, to give perspectives on how, and if, participants *perceive* deterritorialisations and, secondly, to foreground the potentials of changed perspectives, habits, and behaviours in order to "discover the knots of *becoming* tangled in the fabric of being" (Adkins 2015:141, my emphasis).

In this chapter, I analysed how participants feel about their memorabilia in relation to their environmental consciousness, and how their relationship with sentimental items potentially changed *after* becoming more environmentally conscious. In other words, I teased out the diverse relationships between the participants and their memory objects as perceived through an environmentally conscious lens or, how separate territories of eco-consciousness and memory are deterritorialised (with momentary or more longstanding effects) when these materialities are plugged into the same assemblage. Of the 21 participants, eight felt that their relationship with their memorabilia was indeed altered, three felt that it was somewhat altered, two felt that it was perhaps altered, one did not think that it was altered, and six felt that it was unaltered. One was very unsure. This highlighted that participants had diverse opinions on the state of their relationship with their memory objects after having become more environmentally conscious.

Broadly, this process of plugging eco-consciousness into memory captured the de- and reterritorialising capacities that diverse materialities bring about. These shifts were discussed in depth in the form of five emerging tropes where discourses of memory objects and eco-consciousness imbricate. For example, when Nicholas thought about his environmental consciousness and memory objects in relation to each other, he saw no obvious links or shifts. He momentarily contemplated this relation, but it did not necessarily bring about a change in habit concerning what sentimental objects he kept and how he stored them. Conversely, a major shift in habits – or de- and reterritorialisation – was seen in the case of Benjamin and Sammy. For example, both drastically altered their relationship with memory objects to realign with what they believed to be environmentally conscious action (such as storing photos digitally or

favouring experiences instead of objects). Similarly, for example in the cases of Lilly and Cynthia, the use of upcycled materials to produce consumer goods and artworks highlighted the continuous and habitual engagement of their bodies. Through the process of upcycling to produce objects with (potential) sentimental value, these assemblages composed of the participants, their sentimental objects, memory, and environmental consciousness had been reterritorialised to form a new territory.

Chapter 8: Reflecting on a New Materialist Approach served, firstly, as an analysis and summarised amalgamation of the prominent tropes discussed in Chapters 6 and 7 and, secondly, as a reflection on the potentials and challenges of new materialist instruments and methods. I provided a detailed discussion of the tropes, connotations, and myths that were prevalent in the interviews by describing how human participants *saw themselves* as knotted together in new assemblages. Here, I referred to the literature on the Anthropocene, memory studies, memory objects, and the new materialisms, as discussed in Chapters 2 and 3, enriching the discussion with literature on the complexities of dichotomous thinking, pleasure, responsibility, value, transience, and family lineage.

The five tropes that I discussed were 1) humans' persistent dichotomous thinking regarding the world around them (including about objects, nature, and 'the material'); 2) the relation between pleasure and a sense of 'responsible' action; 3) attentiveness to the value of objects of memory and objects of waste; 4) an acceptance of transience; and 5) the prominence of family lineage in discourses of memory and environmental consciousness. Each trope was deliberately introduced from the perspective of the human instead of the assemblages in which these humans are caught up, in order to juxtapose these accounts with the non-anthropocentric elaboration that followed.

I was able to analyse the ways in which memory objects and waste – each in their own ways – challenged binaries, disregarded categorisation, and affirmed their place in the current research assemblage. In Deleuzoguattarian terms, these tropes are examples of how assemblages are territorialised and how they could be reterritorialised. By exploring the tropes that related to environmental consciousness and memory objects, I foregrounded the ways in which a new materialist approach to two distinct concepts leads to de- and reterritorialised ideas and novel relations. In other words, by utilising the unlikely intersection of environmental awareness and memory as a vehicle to explore the new materialisms' potentials, I was able to reflect critically on what living in a complex and multifaceted twenty-first century means.

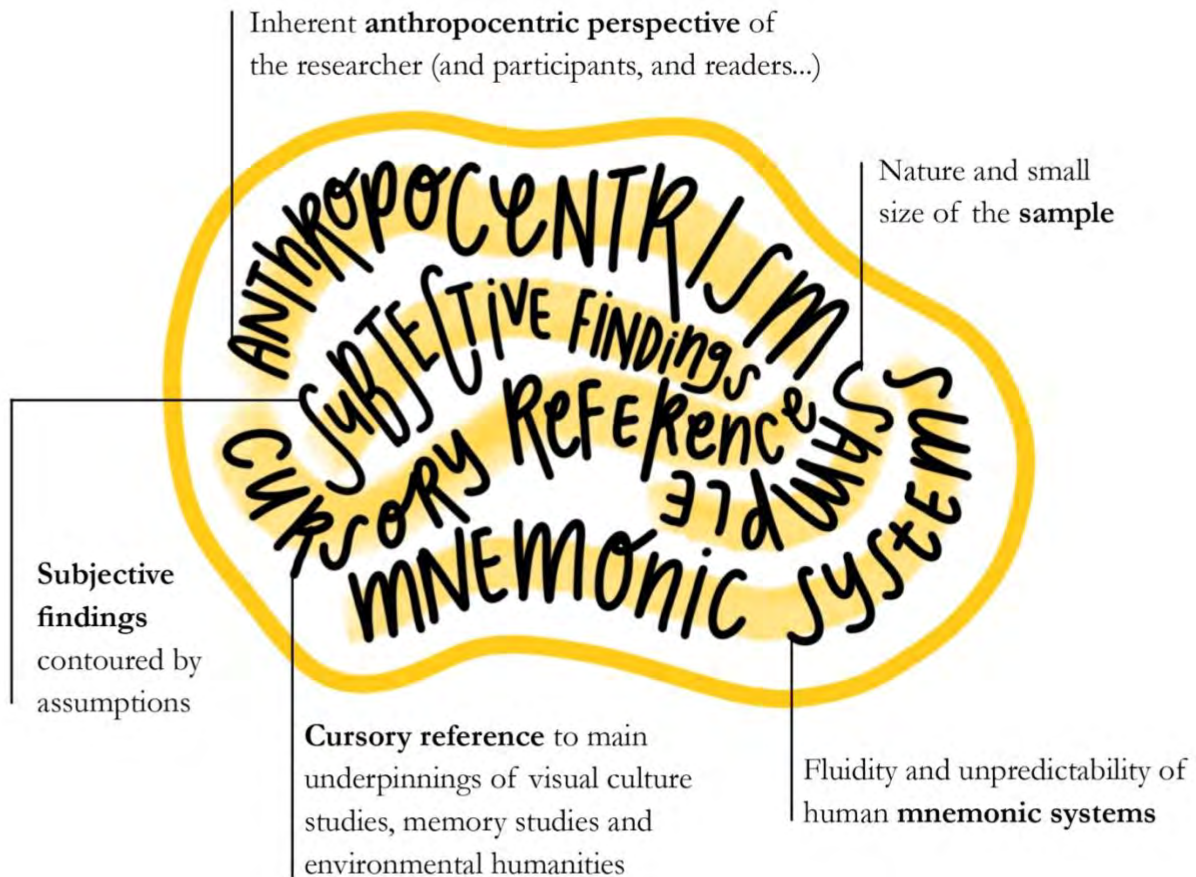
Lastly, I turned to a critical reflection of the imbricating stages of assembling the new materialist research assemblage, including initiation and design, data gathering, data analysis, and data reporting. Reflecting on these phases and the materialities they entailed was useful for providing a glimpse of what my embodied relation – as researcher – to the affective research assemblage 'felt' like. Thinking about the human body as an object that can affect and be affected by other objects gave me the opportunity to situate my own embodiment within the assemblage without rejecting the usefulness of doing so.

In order to do so, I rhizomatically reflected on the processes of interviewing, of applying New Materialist Analysis, and of drawing data visualisations, as introduced in Chapter 5. Similar to how it was not my intention to neatly stitch together memory objects and environmental consciousness to 'read' participants as autonomous units, I also allowed the affective research assemblage to open up a space where I could negotiate, analyse, and tease out the relation between humans, nonhumans, tools, spaces, thoughts, and practices.

9.3 LIMITATIONS OF THE STUDY

As one might expect from any (also new materialist) study, several limitations surfaced throughout the research process. Here I highlight the most pressing examples, but acknowledge that many more could be identified (Figure 9.2). Pointing out these limitations could facilitate future new materialist and/or transdisciplinary researchers in dealing more effectively and affectively with certain points of departure or routes in order to finally reach even more insightful and rich conclusions.

Figure 9.2 | **limitations of the study**



As teased out on an in-depth basis, the most prominent limit concerns the inherent anthropocentric perspective of the researcher. This question remains, despite this study's new materialist approach, uncomfortably niggly. Subjective findings, such as those of the current study, are inevitably contoured by assumptions – of the researcher, the participants, the reader – about people, time, places, and ideas. In the current study I have, to name a few examples, unpacked how theorists' unpacking of issues of multiscalarity in the Anthropocene is shaped by anthropocentric frameworks of time and space (Colebrook 2016:150), how my role as new materialist researcher is shaped by my human perspective (Law 2004:2), the ways in which dichotomies ideologically evoke certain human attitudes towards 'nature' or nonhumans (Houze 2016:9), and the ways in which misleading terms such as 'cloud computing' influence human's engagement with technological devices and online storage (Lucivero 2020:1019). I have offered this point ample thought throughout the study and therefore will not dwell on it, but nonetheless deem it to be deserving of attention one final time in this thesis. The idea of future researchers untangling this further is an exciting prospect awaiting the humanities.

A further limitation of this study concerns the cursory nature of my reference to the historical development and main underpinnings of visual culture studies, memory studies, and environmental humanities, notably in Chapter 2. This dovetails with this study's interdisciplinary approach which, in some respects, was experienced as a hindrance rather than a liberation: while I remain fully aware that these fields have rich factors that can be explored in much greater depth, it was simply impossible to pay substantial attention to each discourse in this already extensive study.

Regarding the qualitative interviews, a limitation of this research concerns the nature and size of the sample. Many researchers have expressed similar concerns (Richins 1994, Folkman Curasi, Price & Arnould 2004). The interview data resulting from purposive sampling do not afford the same kind of generalisability that probability sampling does. By employing an alternative sampling technique and criteria, future research could investigate alternative outcomes and data arrangements. The current sample includes participants of different races and genders which facilitate a comparison between the ways in which environmental consciousness might vary in definition and applications across different ethnic and social strata, yet this indeed remains a rich area for future research, especially when the participation of humans of different classes and those not situated in cities is considered. Although this does not affect the validity of the research, the scale of the sample size and the relationship between an individual's features (such as social class, race, gender, and age) and sentimental objects could be further investigated on a larger scale.

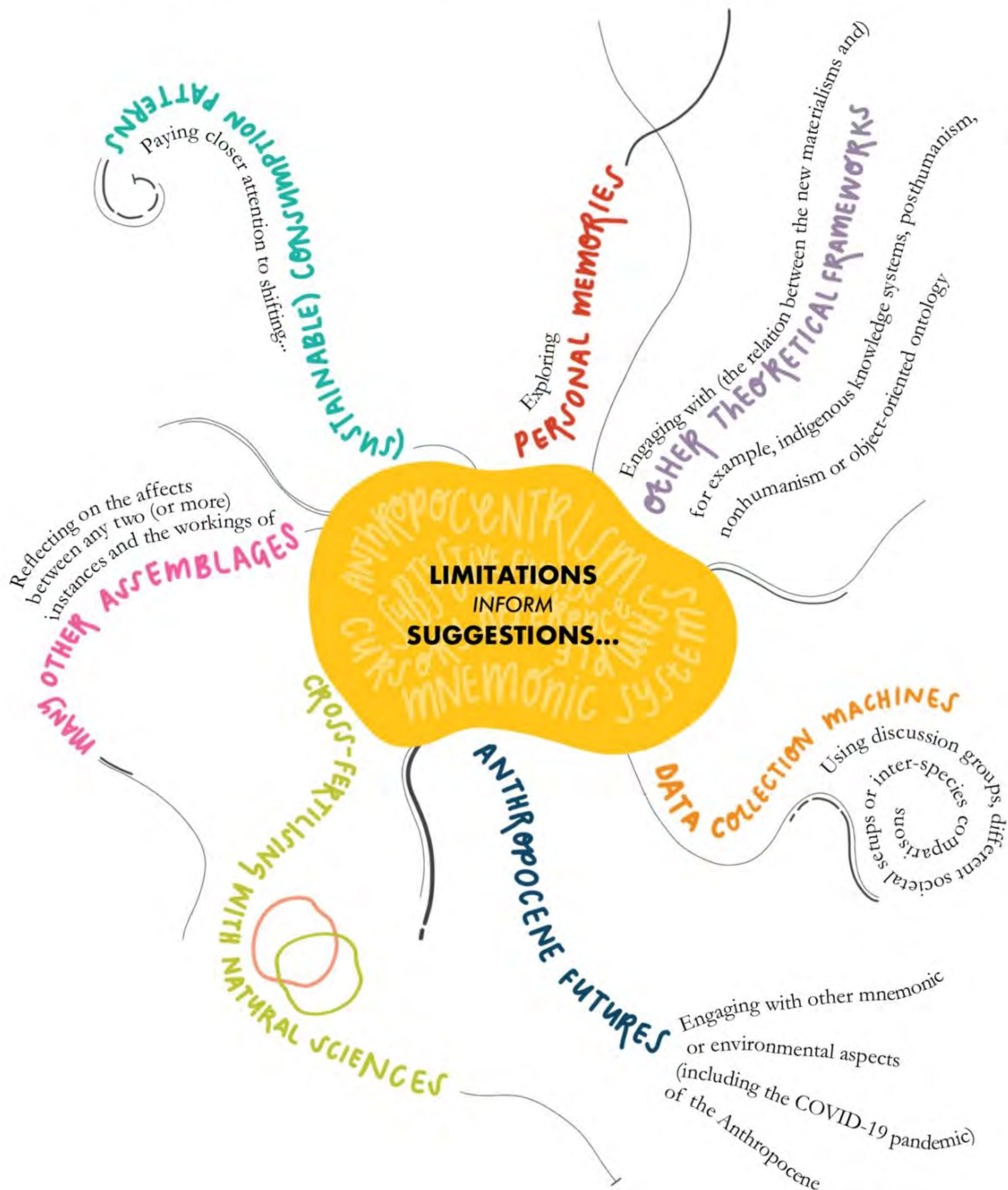
Studying aspects related to memory could yield a number of different outcomes simply because of the fluidity of life, the capacities of human mnemonic systems, and the rhizomatic interdependence of things. For example, some participants have communicated, only some time after our discussion, that they had forgotten to mention this or that sentimental object during our interview. This is not necessarily a problem, as this kind of engagement can simply be seen as part of the unpredictability of any assemblage, but it nonetheless might in some instances have been helpful to anticipate or accommodate such memory factors.

9.4 SUGGESTIONS FOR FURTHER RESEARCH

Throughout the research process, I have gathered examples of lacunas in extant literature and in my own research, which are yet to be explored further in future studies. I unpack suggestions of topics that deserve greater attention and could be approached in a variety of (new materialist, but

also other) ways, incorporating a myriad of psychological, sociological, anthropological, and other perspectives, in Figure 9.3 and the subsequent paragraphs.

Figure 9.3 | **suggestions for further research**



The new materialisms have been critiqued by scholars who object to the colonial arrogance of announcing oneself as 'new' without due respect to other traditions, such as feminist theorisations of the body and indigenous ontologies. As sociologist Alison Jones and educational

scholar Te Kawehau Hoskins (2016:79) remark, indigenous ontologies "never had a nature-culture dualism, never truly differentiated nature and culture". These, like the largely unexplored relation between the new materialisms and indigenous knowledge systems, are important issues that deserve further attention. Apart from the new materialisms, other theoretical frameworks such as indigenous knowledge systems, posthumanism, nonhumanism, or object-oriented ontology, could be engaged to reach additionally nuanced conclusions.

Further to this, a more thorough engagement with new materialist scholarship on aspects such as the immaterial, which was left undiscussed in the current thesis, could prove useful. Similarly, to further explore such frameworks as methodological tools, data collection machines beyond interviews could be used to reach different answers. For example, discussion groups, different societal setups, or inter-species comparisons could yield interesting findings.

Although much of the Anthropocene research agenda has been focusing on analysing past and present states, the importance of exploring the futures is increasingly recognised (Berkhout 2014:155), as many perversive intersections of growing global dimensions will continue to appear (Connolly 2013:410). Probably the most recent manifestation of this is a virus crossing from the nonhuman into the human estate with the concomitant added pressures of circulating 'fake news' on vast media platforms, political disagreements concerning the effectivity of vaccines, unexpected changes in social behaviour, expenses and retrenchments, discrimination, and uncertainty. I expect the COVID-19 pandemic that has drastically altered social, political, and economic workings since late 2019 is sparking (or will soon spark) new materialist engagement with novel thought-provoking assemblages. For example, an aspect of the pandemic which relates closely to this study is the spotlighting of micropolitical action: COVID-19 entangles with individual memory and becomes intimate and tangible: 'remember to wear *your* mask', 'remember to wash *your* hands', 'remember to drink *your* vitamins'. Many mnemonic and/or environmental aspects could, and I suspect will, be explored in future research.

Currently, the existing research about the future of the Anthropocene is largely dictated by the natural sciences. Many theorists in the humanities and social sciences call for increased collaboration and transparency between the natural and social sciences – from literature to biology, from chemistry to architecture and design – to develop a theoretical apparatus capable of defining new realities, situations, and concepts (Berkhout 2014:156, Lucci 2018:1). Thinking, what Mirzoeff (2014:215) calls 'anthropocenically' – that is, redirecting our attention to the

planetary that stretches far beyond anthropocentric divides – will mean "letting go of […] the myth of the solitary intellectual", because the "modern research university has grafted the capitalist division of labour onto the medieval vision of the individual scholar in his cell".

In short, philosophical thought has the duty of "hybridising itself and cooperating with a multiplicity of disciplinary fields in order to approach perspectives, methodological insights and narrative horizons which originally it did not belong to" (Lucci 2018:2). Or, in Green's (2020:13) words:

> Finding a language in which to think and speak about 'nature', 'green', and 'environment' outside of the already written and the already said, is like riding a bicycle through the bush instead of taking the road. A road would be easier – but tarred ways only take you to what has already been mapped.

In this (un)learning process, social scientists have the responsibility to "cast new words, new conceptual expressions and new narratives capable to describe the complex and urgent challenges that we face entering the Anthropocene" (Lucci 2018:2). The perspectives teased out by the humanities and social sciences will play a prominent role when it comes to translating insights emerging from Anthropocene research into knowledge that "resonates with the lived futures of real people" (Berkhout 2014:154). The language of these translations is yet to be developed by future researchers.

A further field that is yet to receive more detailed attention in academic literature is (the ambivalences of) sustainable consumption and shifting consumption patterns in the twenty-first century. As sociologists Torgeir Ericson, Bjørn Kjønstad, and Anders Barstad (2014:74) point out, more research could be conducted on the relation between sustainability and responsibility. In a similar vein, 'unwanted objects', often castigated as 'waste', furthermore have an interesting place in environmentalist discourse and is a potential research field. Specifically in South Africa, little research on environmental sustainability has been conducted locally, although it is "an issue of great concern" (Rousseau & Venter 2001:1). Careful reading of the relevant extant literature has shown that this aspect, which will take into account the country's unique cultural complexities and contextual circumstances, deserves further attention.

Concerning memory Fox and Alldred (2019:32) point out that, while the memorialisation of the past through objects, events, and spaces remains of largely sociological import, theorists need to begin to design studies that can explore the impact of *personal* memory upon social production, continuity, and change. This is a considerable area of potential research, as "personal memories

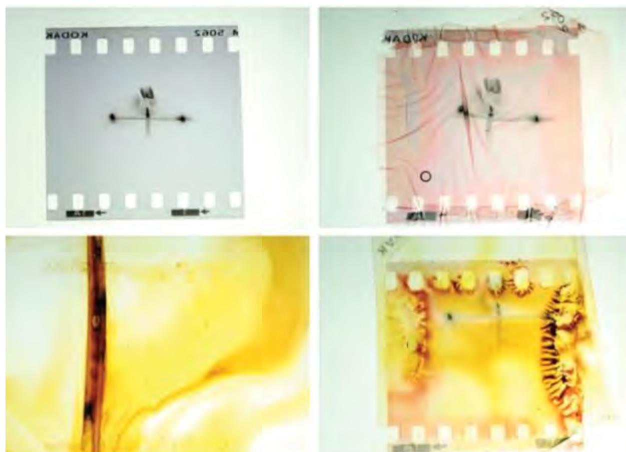
encompass cognitive reactions to events, emotional responses and corporeal sensations such as pleasure or disgust, as well as habitual memory that range from the most unconscious processes such as walking and eating, to reading and recalling simple multiplication tables, to everyday embodied tasks such as driving a car or mastering specialist tools or musical instruments" (Fox & Alldred 2019:32).

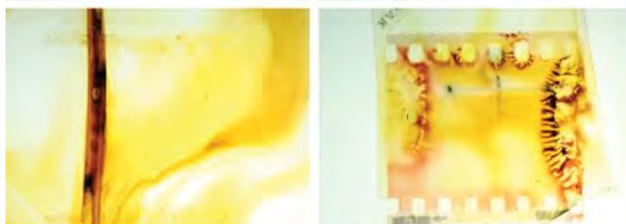
In resonance with a suggestion made by consumer science researchers Carolyn Folkman Curasi, Linda Price, and Eric Arnould (2004:609) concerning inalienable possessions, it will be worth exploring sentimental objects beyond a social context, by incorporating specific economic and other pressures that may bring about an understanding of memorabilia's resistance to market forces. Although the current study and some theorists (for example Rasmussen 2013 and Wilson 2016) have touched on aspects of this topic, further research is needed.

To conclude, this study's exploration of how two seemingly unconnected notions intersect through de- and reterritorialisation is but one example of the potentials of new materialist social enquiry. The study object reveals itself therefore as fertile ground for reflection on the tensions and unfolding affects between *any* two (or more) instances, and further research could explore the inner workings of a number of other assemblages. Further research can be conducted in a range of fields, especially by cross-fertilising the social sciences and the natural sciences. Two fruitful examples of such cross-fertilisations come to mind: interdisciplinary art scholar Grayson Cooke's and environmental chemist Amanda Reichelt-Brushett's (2015) 'art-science' "after | image" project that examines the ambiguities of archival preservation, and the "Heartbeat of the Earth" interactive online artworks series by the Google Arts and Culture Lab that respond to and interpret scientific climate data.

The "after | image" project features time-lapse macrophotography of photographic negatives (from Cooke's personal archive) being chemically and physically destroyed with a series of strong acids, ionic solutions, and oxidising agents (Cooke & Reichelt-Brushett 2015:9) (Figure 9.4). The collaborators use a laboratory context and the scientific method to produce a heightened sense of memory's fragility and the stakes of archival preservation. The project is cleverly designed around a double move of producing the passing away of the archive through a chemical process and by recording and philosophically reflecting on its induced degradation (Cooke & Reichelt-Brushett 2015:23). Projects such as "after | image" serve as an example of an experimental research attempt that successfully pollinates the ideas and tools of different fields of study.

The Google Arts and Culture Lab's "Heartbeat of the Earth" consists of eight artworks created by artists[1] in collaboration with the United Nations Framework Convention on Climate Change (UNFCCC). Using a combination of key findings from the United Nations' landmark 2018 Intergovernmental Panel on Climate Change (IPCC) report and data from scientific institutions such as the National Oceanic and Atmospheric Administration (NOAA) and the World Meteorological Organisation, the artists address a series of topics related to climate change, including declining biodiversity, air pollution, food consumption, melting glaciers, and rising sea levels (Experiments with Google [sa]) (for example, Figure 9.5 features an artistic interpretation of research on microplastics in the air). By using a rich combination of artistic skillsets in combination with scientific data, the series captures haunting facets of environmental problems that would otherwise remain obscured for the layperson. In short, incorporating various fields of study and using additive instruments in new combinations could lead to insightful questions and discoveries. In the years ahead, all these topics and more will surely find their researchers.





Left:

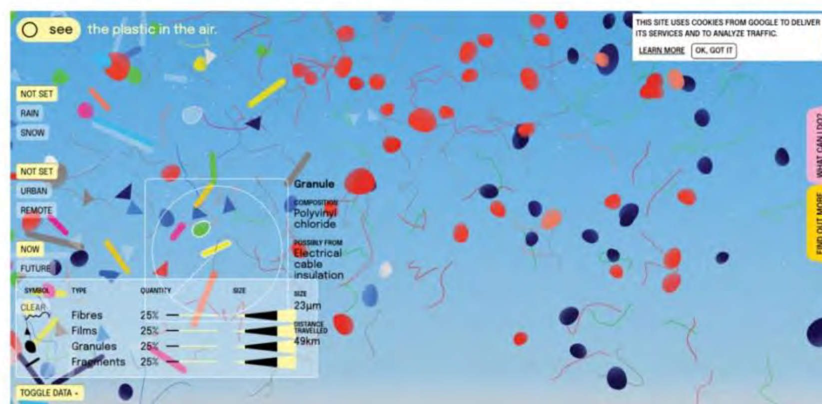
Figure 9.4 | **A photographic negative being destroyed by sulphuric acid**

(Cooke & Reichelt-Brushett 2015:22)

Below:

Figure 9.5 | **Microplastics in the air, invisible to the human eye, as based on scientific findings and visualised by artist Giorgia Lupi for the "Heartbeat of the Earth" series**

(Experiments with Google [sa])



[1] The artists include Giorgia Lupi (mentioned in Chapter 5 as one of the collaborators of the *Dear Data* postcard project), Fabian Oefner, Cristina Tarquini, Laurie Frick, Pekka Niittyvirta, Timo Aho, Sey Min, and Felicity Hammond. The collection can be viewed online at https://experiments.withgoogle.com/collection/heartbeat-earth.

9.5 CONCLUDING REMARKS

Assemblages develop in unpredictable ways around actions and events in a kind of chaotic network of habitual and non-habitual connections, and fluctuate and reassemble in different ways (Deleuze & Guattari 1987:88). By means of the present experimental research project, I explored the rhizomatic interactions of memorialisation and environmentalism by looking at the unique relations between human memory, sentimental objects, environmental consciousness, and planet Earth's state in a twenty-first century South African context.

Through a new materialist lens, the project explored how 21 environmentally conscious research participants treated their objects of memory in the Anthropocene. The precise theoretical and methodological stance have been adopted to allow exploration of multidimensional and transdisciplinary methods of studying and practicing remembrances in the 'age of humans'. This exploration highlighted, as demonstrated, not only the potential assemblages between anything and everything, but also the potentials of assemblage thinking, an increasingly useful framework for discussing the challenges posed by the Anthropocene.

Throughout the research process, which itself was approached as an assemblage, this study has unearthed the value of exploring the unique interactions between two seemingly separate discourses. From within the field of visual culture studies, the relationships between these notions were uncovered through a new materialist lens. Through the interview process, the study has engaged, in the words of Toomey *et al* (2015:1-2), "directly with the production and use of knowledge outside of the academy" which highlighted my study's transdisciplinary nature.

Despite the risk of romanticising research, materialist critiques can be thought of as 'adventures' that demand care and recklessness. They involve, on the one hand, "dogged and respectful attention to the object of analysis" and, on the other, a "loss of ontological security as a result of refusing to allow oneself to be carried to a place of safety by dogmatic thinking or the comforts of methodology" (MacLure 2015:107). The in-between space can be a depthless and directionless (non)place where subjects and objects no longer behave themselves or take up the places allotted to them by the rules of institutional discourses, theories, or methods. Be prepared for objects that decline their historically confined role as the subject's eternal sidekicks. My hope is that unruly, intruding stuff will more and more radically recast fundamental questions of human and material agency.

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APPENDICES

APPENDIX A: SEMI-STRUCTURED INTERVIEW SCHEDULE

Research topic: Belonging(s) in the twenty-first century: reconciling memorabilia and the Anthropocene

Researcher: Olivia Loots

Date: Time: Location: Participant's self-selected pseudonym (by which he/she will be referred to in the research):

Interview introduction

- Establishing rapport by introducing myself, thanking the participant for his/ her time, asking permission for tape recording and note-taking, clarifying that the participant has read and agreed to the information on the informed consent form
- Briefly explaining the purpose of the study, my intent with the interview data, the measures I've taken to protect confidentiality, assure the participant by providing relevant information to motivate him/ her to answer the questions
- Informing the participant that the interview should take around 45 - 60 minutes and asking whether they are available to answer questions for this time.
- Asking if the participant has any questions and assure them that he/ she is allowed to ask questions at any stage.

(Transition: "I would like for us to start by…"/ "Since you mentioned…, I think we can start with…")

Interview body

General questions on environmental consciousness:

- What do you understand under the term, 'environmentally conscious lifestyle'? (If the participant is unsure, I give a general definition or alternative terms here. If the participants has a good understanding of the term, I continue with the next question.)
- Do you think *you* are currently exploring/ living such a lifestyle?
- How do you think you are exploring/ living such a lifestyle?
- How did you decide that you wanted to actively pursue an environmentally conscious lifestyle?
- Have you ever tried to find more information on living an environmentally conscious lifestyle? Why or why not?
- If you did find information, was it useful?
- What is your relationship with the term 'environmentally conscious lifestyle' – do you feel proud, empowered, happy, frustrated, etc?
- What is the hardest part of an environmentally conscious lifestyle for you?
- What is the most joyous part of an environmentally conscious lifestyle for you

General questions on memory and (sentimental) memorabilia

- What does being a 'sentimental person' mean to you? (If the participant is unsure, I give a general definition here. If the participants has a good understanding of the term, I continue with the next question.)
- Do you consider yourself a 'sentimental person'?
- Do you understand the term 'memorabilia'? How would you describe it? (If the participant is unsure, I give a general definition here. If the participants has a good understanding of the term, I continue with the next question.)
- What does 'sentimental memorabilia' mean to you?
- Do you think of yourself as someone with many possessions that can be considered 'sentimental memorabilia'?
- Do you have a most precious sentimental possession?
- Why is this your most precious sentimental possession? (If the participant is unsure, I elaborate on options. Depending on what the participant has shared earlier, these options could include, for example :"It belonged to my grandmother/ father/ sister, etc", "I bought it during a happy/ sad/ interesting time in my life", "I remember what it felt like when I first saw it", etc)
- What is the most prominent feeling you have when you think of your sentimental memorabilia?

Questions on environmental consciousness and sentimental memorabilia

- From what I gathered during our interview, you try to live an environmentally conscious lifestyle. You also possess some/ a lot of sentimental memorabilia (and possible follow with "because you consider yourself a sentimental person OR even though you don't consider yourself such a sentimental person"). Do you think that choosing an eco-conscious lifestyle is changing/has changed your 'connection' with/ feeling towards your sentimental memorabilia? What do you think changed/ How do you think this 'connection' changed?
- Is this change bothering you?/ Did this change bother you? (If no, I ask the participant to elaborate on the reasons why. If yes, I ask the participant how they are addressing it.)
- Where or how did you learn to address the relationship between your environmental awareness and you sentimental memorabilia in … way (a way explained by the participant during the interview)?
- What other (practical, mental and/ or theoretical) methods that you have heard of or seen somewhere would you still like to try/ implement in your life to address this relationship?
- What advice would you give to someone who is interested in sustainable living, but who is also a 'sentimental person'?

Possible probing questions to include where applicable in the body of the interview (not exhaustive, just a point of departure):

Specification:

- Can you give me an example of …?
- Can you please elaborate on …?/ Can you please tell me more about …?
- When/ how exactly did … happen?/ When/ how exactly did you decide to …?

Emotional bond:

- How did you feel when … happened?
- You mentioned… Can you please elaborate on what do you remember about …?
- How did you react to…?/ How do you think you would you react to …?

Mindset:

- What gave you the idea to do …/ Where did you get the idea to …?
- Why do you think that is the case?
- What do you think people can do about …?
- You mentioned … What is your opinion on …?

(Transition: "It has been really interesting speaking to you/ You have been very helpful. We are reaching the end of our discussion, can we/I briefly summarise what we discussed today?")

Interview conclusion

- Summarising what has been discussed, clarifying the participant's perspective.
- Asking whether the participant would like to add any additional information that might be helpful or if the participant has any questions.
- Asking whether I may contact the participant again should I have more questions.
- Maintaining rapport by thanking the participant for their time and willingness to contribute to the study and assuring the participant that the information they provided is useful and interesting.

APPENDIX B: PARTICIPANT INFORMED CONSENT LETTER

REQUEST TO PARTICIPATE IN RESEARCH PROJECT

Dear potential participant

I am currently (2018 - 2021) a PhD student in Visual Studies, at the University of Pretoria. In fulfilment for the requirements of this degree, I am required to conduct a research project.

Research topic: Belonging(s) in the twenty-first century: reconciling memorabilia and the Anthropocene

Aim of the study: I am looking at how people's relationship with their sentimental memorabilia changes when they actively start living an environmentally conscious lifestyle. I furthermore also look at the ways in which people then deal with the (potentially) altered relationship.

If you are older than 18 and choose to participate in this study, you be kindly asked to take part in a semi-structured face-to-face interview with me in Johannesburg, Pretoria or Cape Town during the months of October, November or December 2020, at a mutually agreed time and venue that suit both of us. For your protection, I will ensure that the necessary COVID-19 precautions are in place before the commencement of the interview. Your interview will not exceed 60 minutes. Your participation will permit me an understanding from your perspective on what you understand as environmentally conscious living, sentimental possessions and how these two notions relate to one another.

Your consent to participate in this study would be appreciated. Upon consent, I will contact you directly to provide details of what to expect through the process.

What are your risks and benefits? Your participation in this project is voluntary and you will not receive any incentives to participate or penalties for not participating. You may withdraw from the project at any time without providing any explanation or suffering any negative consequences. At no stage during the study will you be exposed to any harmful situations. Your interview will be audio-record, I will take notes and possibly take photographs of your sentimental possessions and should it be necessary, in relation to you (for example, your hands holding an object or a pair of shoes on your feet). You may refuse a certain photograph being taken without any consequences. As the researcher I will know your identity, but in any report on the results of this research your identity will remain anonymous. This will be done by choosing a pseudonym for yourself before the start of the interview and being referred to as such in the research, which will protect your identity or the identity of people you speak about. Disguised extracts from your interview may be quoted in my doctoral thesis, conference papers, published scientific articles, books, selected chapters in books, lay articles, blog posts or social media platforms. As some of the information shared in the interview might be personal you may refuse to answer any delicate questions without any consequences. Data will be stored in hard copy and electronically at the Department of Visual Arts, University of Pretoria for 15 years for archival, teaching, as part of public performance or further research purposes. You will have the right to access your data at any moment. Be assured that I will comply with UP's plagiarism policies when writing up my research results.

You have the opportunity to ask questions about the proposed study before signing the consent form. If you require any further information, please do not hesitate contact me:

Researcher: Olivia Loots
Contact details: 072 048 2634 or olivialoots123@gmail.com

If you would be willing to participate in this project, please reply to this email to provide consent. Thank you very much for your time and consideration in making the decision to be a participant for this study. I hope that you will find it enriching to share your own perspectives and experiences of your information and support needs.

I look forward to sharing my findings of the study once the project is completed.

Kind regards
Olivia Loots (researcher)

Doctor Bibi Burger (supervisor)
Professor Lize Kriel (co-supervisor)

Reply slip: Informed Consent

Name of participant:____________________________________

Research topic: Belonging(s) in the twenty-first century: reconciling memorabilia and the Anthropocene

Researcher: Olivia Loots (072 0482634 or o@lootse.co.za)
Supervisor: Lize Kriel (lize.kriel@up.ac.za)
Co-supervisor: Bibi Burger (bibi.burger@up.ac.za)

I, ____, (full names and surname) hereby:

- Confirm that I am older that 18 years of age;
- Provide consent and voluntarily agree to participate in a face-to-face interview with the researcher;
- Agree that I have the right to withdraw from this study should I wish to do so for any reason whatsoever without providing any explanation and without any negative consequences;
- Agree to share personal information, but am aware that I may refuse to answer any delicate questions without any consequences;
- Understand that I will not be exposed to any harmful situations;
- Agree to my interview being audio-record and notes being taken;
- Agree that the researcher my take photographs of my sentimental possessions and, should it be necessary, in relation to me;
- Understand that the content of the data and information will be handled with confidentiality and I agree to choosing a pseudonym for myself to ensure this;
- Agree that disguised extracts from my interview may be quoted in the researcher's PhD thesis, conference papers, published scientific articles, books, selected chapters in books, lay articles, blog posts or social media platforms;
- Understand that the hard copy and electronic data will be stored for a period of 15 years in a safe place at the Department of Visual Arts, University of Pretoria for 15 years for archival, teaching, as part of public performance and future research purposes.

____________________________ ____________________________
Signature of research participant Date

<u>APPENDIX C: ORIGINAL AFRIKAANS TRANSCRIPTIONS OF QUOTATIONS IN FIGURES 6.3, 6.8, 6.9 AND 7.2</u>

Figure 6.3: What do you understand under the term 'environmentally conscious lifestyle'?

<u>River:</u> Ek dink nie ek het enigsins 'n idee gehad van hoe wyd *sustainability* is nie. Of wat dit beteken nie. Soos, vir my sal dit altyd wees, dink as jy net elke dag *conscious* is [en] dink oor wat jy doen. Soos, ek sal dink voor ek iets koop. […] So, dis wat dit vir my is. Ek dink, [die manier hoe] jy lewe elke dag. Wat doen jy? Waar kan jy iets minder gebruik of waar kan jy die plastiek probeer uitskakel of iets soos dit.

<u>Mary:</u> Oukei, so dit sal vir my verwys na die feit dat mens meer bewus raak van die gevolge wat jou aksies het op die… um, ja, op die aarde. En spesifiek die volhoubaarheid van die manier wat jy lewe. En dit wat jy agterlos, jou aksies het 'n gevolg vir generasies wat nog na jou kom. […] So, dis nogal voortdurend vir my 'n leerproses. Soos, mens nuwe aspekte daarvan leer. En dan aanpassings maak en die keuses wat jy in jou lewe maak vir die pad vorentoe.

<u>Jack:</u> Wel, ek sou sê, vir my gaan dit daaroor dat jy bewustelik leef ten opsigte van jou impak wat jy het op die omgewing. Ten minste dit wat jy glo is goed en sleg vir die omgewing. Byvoorbeeld, deur om aan 'n herwinningsprogram deel te neem, is nie noodwendig altyd goed nie, want mense herwin nie op 'n groot skaal verantwoordelik nie, maar jy leef omgewingsbewus deur deel te neem aan hierdie projek en te herwin. So, dis kontekssensitief.

<u>Nicholas:</u> Wel, die breër definisie daarvan vir my is om so te leef dat jy, wel, *obviously* bewus is van die omgewing, maar ook dat dit behels baie meer as net bewustheid: dit impliseer eintlik ook aksie. Daar's 'n verskil vir my om bewus te wees van iets, maar dan ook om te reageer op daardie bewustheid. […] En ek dink dit sluit dade soos, byvoorbeeld, herwinning en om lugbesoedeling te bekamp, in. En dan ook om self daarvan bewus te wees dat jy 'n impak het op die omgewing waarin jy besig is om te funksioneer.

<u>Susanna:</u> Sjoe, dis nogal omvattend, breed. Ek dink dit gaan vir my oor om so min as moontlik 'n *footprint* te maak. So, ek weet dit is nou super *cliché*, maar […] ek dink dis net 'n meer volhoubare lewenstyl wat so min as moontlik die aarde beskadig.

<u>Earl:</u> Jog, ek is nou bang dat ek nou 'n baie oppervlakkige antwoord gaan gee, maar, ek dink dis… *environmentally conscious lifestyle*… […] So, dis vir my 'n doelbewuste besluit wat mense neem om seker te maak dat hoe hulle hulle lewe lei, is omgewingsvriendelik. So, dit affekteer nie die omgewing, of natuur, op 'n negatiewe manier nie. [Dit] verwys na keuses wat hulle maak.

<u>Lilly:</u> Ek is 'n *steward* van die aarde. […] Dit krap aan my wanneer iemand laat 'n lig brand, of 'n kraan loop. Dis daai *consciousness*.

<u>Hellen:</u> Vir my is dit om 'n bewustheid te hê van hoe jy lewe in jou buitewêreld. Verstaan? So, ek het lank terug begin. Maar, dis soos 'n proses, dis klein veranderinkies wat so met tyd 'n verskil maak: om nie geld te mors nie, om nie *resources* te mors nie. Om alles te kombineer in jou eie lewe.

Alta: So, die probleem van die omgewing is 'n groot sistemiese probleem wat van baie ander dinge afhanklik is. So, ek weet dat ons eie bydrae baie beperk is. Maar vir my gaan dit oor om minder te verbruik, om minder te mors. En oor, ek dink, bewustheid. Om te probeer sien waar dit wat ek koop, vandaan kom en waarheen dit gaan […] Om net 'n soort bewustheid te probeer hê.

Figure 6.8: What do you understand under the term 'sentimental person'?

Earl: *Oh*! [Proes. Pouse]. Ek dink as ek dink aan 'n sentimentele persoon dink, […] sal ek waarskynlik aan 'n ouer mens met... Ek sien eintlik iemand soos my ouma nou. Ouma met hierdie moerse foto-album van almal en sy't daai, daai koekieblik en daar's 'n klomp onnodige goedjies in daai blik. Ja, so wat sy bêre en sy haal dit altyd uit, "ag, kyk hier". Dis soos onnodige kak van jarre terug wat iewers in jou huis gebêre is wat jy gaan oor praat as iemand kom kuier.

Alta: So, ek sou sê, sentimenteel is dat jy 'n soort… um, *attachment* het aan goed wat vir jou iets verteenwoordig. En dat jy dit wat vir jou belangrik is, *attach* jy dan aan ander dinge.

Mary: Ek moet sê, dis nie 'n woord wat vir my 'n baie positiewe konnotasie het nie. Ek het vir een of ander rede 'n bietjie van 'n... as iemand iemand anders beskryf as sentimenteel dan is dit nie noodwendig iets wat ek *admire* nie. […] Dit laat my maar dink aan iemand wat bietjie soetsappig is, hm, of, ja, iemand wat bietjie in die verlede leef ook. […] Daar's ook vir my 'n ander aspek [daaraan] wat nie so negatief is nie. Dis dalk net iemand wat soos 'n sterk emosionele lewe het, wat nie noodwendig net oor die verlede gaan nie, maar selfs iemand wat die lewe as ryk, emosioneel ervaar.

Nicholas: Ek dink as kind was ek ontsettend sentimenteel gewees. Ek was half 'n opgaarder. Ek het goed opgegaar en ek het goed gebêre en goed geargiveer. Lyste van goed gemaak en versamelings gehad van goed. En histeries geraak as ek 'n versameling van goed nie kon voltooi nie.

River: Um, ja, *obviously* mense wat waarde heg aan goed om hulle, wat *memories* het. Dis waaraan ek dink. Nie veel anders nie.

Hellen: Ek dink aan iemand wat waarde heg aan iets. Of 'n... gewoonlik dink ek aan 'n iets, 'n fisiese ding. […] Seker maar 'n plek [met sentimetele waarde] ook. […] Iemand wat sentimenteel nogal is oor... Ja, plekke en vakansies en goeters wat mense vir hulle gee. Al is dit 'n klein geskenkie, 'n blommetjie.

Lilly: Ek sien my ma en my ouma. My ma is baie tradisievas […]. Sy glo sy moet elke Kersfees in die Paarl wees en ons probeer vir haar sê, "Ons hoef nie, kom ons breek die tradisie". "Nee, maar ons dit al al die jare!" [Lag].

Susanna: Um, ek dink dis iemand wat… eerder klein… objects of… selfs miskien net *services*... ek dink nou aan die *five love languages* vir die een of ander rede... [Iemand wat] enige iets kleins waardeer en koester en dit, as hulle huis moet afbrand, eerder dit sou vat as belangrike dokumente. […] Iemand wat kan sit en… wel, ek gaan nou myself beskryf, want ek sien myself as 'n sentimentele persoon, maar jy kan, byvoorbeeld, tyd spandeer met jou goedjies om dit

rêrig net te waardeer. Soos, jy maak tyd daarvoor om terug te dink aan wat hierdie ding vir jou beteken.

Jack: Iemand wat emosionele waarde heg, wat nie gekwantifiseer kan word nie, aan sekere reëele [maak aanhalingstekens met vingers] objekte. In watter vorm dit ookal kom, groot of klein.

Figure 6.9: Do you consider yourself sentimental?

Alta: Ek self dink nie ek is 'n sentimentele mens nie, maar toe probeer ek dink, is dit net 'n blind spot in my, dat ek *is* sentimenteel, ek besef dit net nie. […]. So, sukkel om uit te *figure* of ek dit het. Ek dink nie ek het dit nie. Nie so erg nie.

Jack: Ja… Maar nie oorsentimenteel nie. Ek sal myself nie as 'n *hoarder* beskou nie.

Nicholas: Ek sou definitief sê dis […] energie wat van vorm verwissel het. […] Dit het die fokus veskuif van die objek as sentimentele ding, na meer as ervaring as die sentimentele ding.

Mary: So, ja en nee. […] Ek dink nie ek's verskriklik sentimenteel wat die verlede betref nie. […] Ek heg nogal meer waarde aan, sê nou maar, familietradisies of spesiale plekke waar ons was of ja, spesiale oomblikke wat ek wil celebrate of watookal. In daai aspek is ek nogal emosioneel.

Susanna: Ja, absoluut.

Lilly: Ek gaan nou vir jou sê, ons het vier keer alles verloor in die laaste 12 jaar. Dit was *hectic*. Wat ek sê is ek moet elke keer oor begin. […] Maar so moes ek oor die jare net... ek moes gewoond raak aan *loss*. […] Ek sal sommige goed onthou, maar miskien maak ek nie plek in my brein om dit alles te *memorise* nie.

River: Ek is nie baie nie. Nee. Nee. *I mean*, oor *weird* goed. En ek het nou agtergekom dat die sentimentele waarde is nie noodwendig... Ek het iets nou al so lank dat dit nou maar sentimenteel is. Soos, [proeslag], "*we had it coming*: Ek het nou al soveel keer rondgetrek met jou, ek is nou al *attached* aan jou. Ek kan nie nou ontslae raak hiervan nie. Dit is nou maar *deel* van my!" […] Maar ek's nie baie sentimenteel nie.

Earl: Oef! Tot 'n ma... tot 'n sekere mate […]. Ek hou nie van goed opgaar nie, maar as iets vir my verskriklik belangrik is of as… ag, dit maak my seker 'n sentimentele mens, maar die idee van daai opgaarderelement hou ek nie van nie. Daar is sekere goed wat ek sentimentele waarde aan heg en ek sal dit hou. […] Ek kan net nie met goed opgaar nie. Dit frustreer my eindeloos.

Hellen: Ja, tot op 'n punt, want ek voel enige iets wat... 'n issue raak moet jy eerder laat gaan. So, as dit inpas by jou… as jy genoeg plek het, byvoorbeeld. Maar sodra jy nie meer plek het nie, dan is dit... dan maak daai sentimentele goed eintlik 'n slegte deel van jou. So, ek probeer goeters hou as dit *rêrig, rêrig, rêrig*... ek probeer nie van alles sentimenteel te maak [nie]. Ek's nie oor elke ding sentimenteel nie, behalwe goed wat ek in my kop geag het as belangrik oor die mense [waarmee ek dit assosieer].

Figure 7.2: Do you think that choosing an eco-conscious lifestyle is changing/has changed your relationship with your sentimental memorabilia?

Lilly: [Pouse.] Hm, ek dink'ie so nie, laat ek gou dink. Um. [Lang pouse.] *No*. Ek weet dat die goed waaroor ek *sentimental* is [het 'n] storie en dit was op die *old-fashioned way* gemaak, reg? Ek dink dit is, dit is, dit is... dit pas in by my *values* van *environmental consciousness*. Soos, ek dink, definitief een van die goed wat ek besef het toe ek in die besigheid begin kom, veral [die besigheid] van *furniture making* is [dat] die ou manier hoe mense goed gebou het is... dit was 'n langer [proses], [goed] was sterker, dit was net meer... *sturdy*. Ek het baie respek vir dit. En ek dink daai's besig om verlore te gaan. […] Ek sien 'n ou oom in sy *workshop* sit met skaafsels en hierdie *handtools*. En hy's *happy* om dit te doen, hy voel nie gejaag nie. Dis hoe dit moet gedoen word.

Susanna: Nee, ek sal nog steeds byvoorbeeld, as ek sentimenteel voel oor 'n foto, 'n foto laat *print*. [My omgewingsbewustheid] laat my nie met meer waarde kyk na my besittings as wat ek voorheen daarna gekyk het nie. Ek sou nie sê my *eco-consciousness*... ek sou nie sê dat dit *overlap* nie. […] Dis nie teenstrydig met mekaar nie. Dit pla my nie. […] Ek moet sê, nee. My eerste ding is om nee te sê. Dit het nie vir my 'n wrywing nie. […] Ek dink nie my sentimentele goed is sleg vir die omgewing nie, wat seker goed is? Ek kan nie dink aan iets [wat vir my sentimenteel is] wat wel sleg sal wees vir die omgewing nie.

Mary: Laat ek net die vraag bietjie *process*… Ek dink nie so nie. Ek dink dit sal beïnvloed hoe ek nuwe memorabilia in my lewe toelaat, maar ek dink nie dit beïnvloed die verhouding wat ek het met dit wat reeds in my lewe is so baie nie. […] Ek dink [omgewingsbewustheid en sentimentele objekte] is nog steeds vir my baie versoenbaar. Soos, memorabilia is juis iets wat uitsonderlik behoort te wees en wat baie waarde behoort te hê. Met ander woorde, daar moet tog 'n mate van *permanency* daaraan wees. […] So, ek sal eintlik nou juis vir myself eerder afvra as ek iets in my lewe toelaat: "Wil ek hierdie hê, gaan ek hierdie vir lank wil hou of gaan ek vinnig moeg raak daarvoor en gaan die betekenis daarvan vir my vinnig *fade*?".

Alta: Ek dink so, want objekte gaan ook oor *consumption* op 'n manier. Jy wil iets hê en dan koop jy dit. En dan moet daai ding êrens heen gaan op die ou end. Um, so ek dink dis definitief… um, daar het 'n verdere soort *detachment* gekom met objekte omdat ek probeer om minder goed te hê; en om minder waarde te heg aan wat ek het. […] En ja, om minder om te gee oor die dinge wat my *surround* as 'n soort *environmentally conscious*, so half, ingesteldheid. […] So, ek dink dit alles hang ook so half saam.

River: [Pouse.] Ek dink so, want as ek kyk na my klere waaroor ek sentimenteel is, is dit goed wat ek weet is *locally manufactured*. […] So, sodra ek weet iets is gemaak op 'n meer *ethical* manier, heg ek meer waarde daaraan. Definitief. Daar's liefde in. […] Dis oor wat jy in die tóékoms doen, oor die núwe goed wat aankoop. [Die verband tussen omgewingsbewustheid en sentimentele objekte] gaan meer oor die toekoms.

Hellen: Ek dink dit het [my verhouding met my sentimentele objekte] ge-*fine tune*, as ek dit so kan stel. Ek moes op 'n stadium daaroor dink en het besluit maar ek gaan nie – net omdat ek voel ek wil niks hê nie – van goeters ontslae raak van wat eintlik vir my belangrik is nie. So, ek het in my kop net vir myself gesê, "Dit is oukei, hou dit min, maar spesiaal". So, dit het dit

verander, maar nie drasties nie, nie in 'n ander rigting in verander nie. Ek sou eerder net sê ek koop nie onnodige… maak nie emosies van te veel aardse goed nie.

<u>Earl:</u> Ja. Um… *I suppose*, ja. Want… laat ek gou dink… *Let's just digitalise* die ding. Laat ek probeer my gedagtes nou agter mekaar te kry… […] Het my eco-consciousness… my verhouding met sentimentale goed verander? [Pouse]. Ek sal sê ja. Want hierdie *digitalisation* van, van, van *memories*. Dis'ie nodig vir my om fisiese goed te hê nie. Kom ons vat 'n foto van dit, plaas dit op Instagram. Instagram is *essentially* maar tot 'n mate, wel ten minste vir my, 'n *collection of memories*. En dan, I *suppose*, hierdie nuwe ding wat ek wil doen waar ek wil gaan kyk na 'n elektriese braaier ook. Want, kyk, 'n braai is ook... dis nie net vleis wat jy eet'ie. Dis 'n *experience*. So, *I suppose* dis een manier hoe ek dit probeer verander… soos, *we can still have those memories, but it doesn't have to be detrimental to the environment*. So, ek dink dis die goed wat ek nou probeer doen.

<u>Jack:</u> Ja. Dit het meer... [Die verhouding] het versterk en dit het meer intiem geraak, omdat ek die waarde van dit wat ek het op hierdie stadium werklik begryp het. En daar's 'n rede gewees hoekom ek... hoekom ek so lank hierdie goed gehad het en dit so lank wil hou. En ek waardeer dat daai kopskuif, as 'n katalisator… dis die verkeerde woord, maar as katalisator gedien het tot my verhouding met, of *sterker* verhouding met my besittings. […] Ek het in 'n arm huis groot geword. So, dit het my geleer om dit wat ek het, ongeag die waarde daarvan, op te pas.[…] Daar was 'n tyd toe ek oor dit gewonder het, byvoorbeeld, nou gebruik ek hierdie goed en dan... jy weet, op watter punt kom ek dan en sê, "Dis nou een te veel. Dit gaan nou skade kry"? Of, "Ek gebruik dit nou eintlik verby die punt van redelikheid… waar dit nie meer gebruik *kan* word nie. Maar dan argumenteer ek, "Wel, dan moet ek net bietjie versigtiger werk". […] Dit is gemaak om gebruik te word, nie om gestoor te word êrens nie, want dan moet ek iets koop om dit te vervang. En ek eintlik wil ek dit benut en die gevoel hê wat saam met dit gaan.

<u>Nicholas:</u> Ek gaan nou net spontaan reageer. Hoe kan hierdie objekte [wat ek in my besit het] … skade berokken? En ek kan nie, my eerste reaksie is 'nee'. […] Daar's niks van hierdie goed wat, um, soveel plek opneem of soveel… want dis redelik hanteerbare, klein goed. […] Ek bêre nie nou 'n koolstoof van my ouma nie, jy weet.
[…]
Um [stemtoon verander], dit maak my dalk 'n bietjie bewus van die… uh, die woord 'onnodig' kom by my op? [Lang pouse. Kyk na die objekte op die tafel]. Mens kan nie help, as jy hierdie goed nou sien, om te dink: "Ug, oukei, dis in elk geval net objekte wat leweloos is, so hoekom is daar betekenis daaraan?"
[…]
Maar in terme van die omgewing, dink ek… hoe ek verander het oor die jare, miskien. [Lang pause]. […] Ek dink byvoorbeeld aan dokumentasie. As ek dink aan hoeveel onnodige papiere ek in my lewe, jy weet, gebêre het. En dan hierdie massas wat ek weggegooi het. […] So daar's definitief 'n skuldgevoel wat ek nou so bietjie ervaar. Daar's 'n bietjie van: "Ag, ek moes die skoonmaakproses beter bestuur het". Maar in terme van onmiddellik nou op daardie vraag beantwoord… Ek skei [omgewingsbewustheid en sentimentele objekte], ek voel nie noodwendig anders daaroor nie.
[…]
Um, wat my wel gelukkig maak […] is die feit dat ek dit minder gemaak het [oor tyd]. Kyk, hierdie wat jy hier sien is die *bare minimum*. Dis alles wat ek as sentimenteel beskou.
[…]
Ook, ek vra myself deesdae af of ek goeters moet hou of nie. […] So, hoe gaan hierdie bydra tot my lewe? […] Kan ek dit elke dag gebruik? […] In 'n sin van om goed weg te gee in plaas van om nuwe goed te gaan koop, dink ek definitief dit het 'n [kleiner] impak op die omgewing. Goed soos ou klere weggee, byvoorbeeld […] So, miskien, soos, in terme van funksionele objekte, ja.

[…] Ek dink, in terme van die goed wat ek hier het: dit gaan nie noodwendig vir ander mense van waarde wees nie. Dit is so persoonlik, dit kan nie enige funksie vervul behalwe as die funksie van sentimentaliteit in my eie lewe nie.
[…]
Ek het glad nie 'n korrelasie tussen [tussen die sentimentaliteit en die omgewingsbewustheid voor die onderhoud gesien nie, maar wanneer mens natuurlik in enige iets delf, ja, want daar's verbande tussen alles.
[…]
Ek dink sentimentaliteit het 'n sterk element van beskerming in. En omgewingsbewustheid ook. Dit sou miskien 'n interseksie kon wees? Beide is vorme van bewaring, die een is miskien net meer persoonlik. […] As ek moet dink aan 'n interseksie tussen die twee is die woord 'bewaring'. Met verskillende motiverings.
[…]
Kyk, ek weet nie wat sê die literatuur oor mense wat opgaar nie, want daar is definitief vir my 'n omgewingsimpak!
[…]
Ek dink nog steeds, op 'n hipotetiese vlak, sê nou maar ek besluit wel om van hierdie goedjies ontslae te raak, noudat ek hierdie gesprek gehad het, sal ek definitief gaan kyk na omgewingsverantwoordelike maniere om daarvan ontslae te raak om dit nie, jy weet, net weg te gooi nie.

APPENDIX D: PARTICIPANT QUESTIONNAIRE

PhD RESEARCH QUESTIONNAIRE: ***Belongings in the twenty-first century: reconciling memorabilia and the Anthropocene***
Participant pseudonym:

Do you know the term Anthropocene? YES/ NO

If yes, describe what you understand under this term in one sentence:

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Please arrange the following items from what you think is your biggest environmental footprint to your smallest environmental footprint (1 the biggest, 5 the smallest)?

_____ TRANSPORTATION

_____ FOOD

_____ HOUSEHOLD EMISSIONS (appliances such as fridges and washing machines, electricity usage, heating and cooling)

_____ WATER CONSUMPTION (cooking, washing, pool, watering the garden)

_____ VISIBLE HOUSEHOLD WASTE (packaging, the content of my dustbin)

PLEASE ANSWER THE FOLLOWING QUESTIONS.

1. I am constantly aware of my carbon footprint. YES / NO / SOMETIMES
2. I weigh my options in order to minimise my footprint. YES / NO / SOMETIMES
3. I am aware of both the visible *and* invisible pollution caused by my consumption. YES / NO / MAYBE
4. I am trying to send as little waste as possible to landfill. YES / NO / MAYBE
5. I am looking for responsible ways to get rid of my visible waste. YES / NO / MAYBE (if applicable, mark specific instances, please: *packaging, electronic appliances, clothing, books, furniture, others*?).
6. I feel that I am saving money through this lifestyle. YES / NO / MAYBE

7. I favour a healthy lifestyle (mentally, physically, spiritually, etc) and environmental consciousness links closely to this choice. YES / NO / MAYBE
8. I have considered vegetarianism/ veganism for environmental reasons. YES / NO / MAYBE
9. Through my job/ studies I come in contact with environmental issues. YES / NO / SOMETIMES
10. I use solar power for electricity, water heating and other. YES / NO / SOMETIMES
11. I cook with gas. YES / NO / SOMETIMES
12. I am conscious about electricity usage and switch off lights when I'm not in the room. YES / NO / SOMETIMES
13. I am aware of the amount of water I use. YES / NO / SOMETIMES
14. I am trying to minimise the amount of paper I use. YES / NO / SOMETIMES
15. If I can, I don't mind working with digital documents instead of printed documents. YES / NO / SOMETIMES
16. I would rather store photos and sentimental media digitally than printing them out. YES / NO / SOMETIMES
17. I am aware that (invisible) online storage units are run by visible machines somewhere out of sight. YES / NO / MAYBE
18. I am trying to minimise my e-waste footprint. YES / NO / SOMETIMES
19. If I have the option, I would rather support a local business than an international one. YES / NO / MAYBE
20. I actively refuse plastic straws, unnecessary plastic bags and pamphlets when in public. YES / NO / SOMETIMES
21. I carry my own reusables when going out. YES / NO / SOMETIMES (please mark: *shopping bags, coffee cup, water bottle, straw, cutlery, containers, other*)
22. I try to reduce my consumption of goods in general. YES / NO / SOMETIMES (please mark: *food, clothing, household appliances, furniture, books, other?*).
23. When I buy something, I try to take the whole lifecycle of the product into account. YES / NO / SOMETIMES
24. I wonder whether the stuff I send to be recycled actually gets recycled. YES / NO / SOMETIMES
25. I make my own products YES / NO / SOMETIMES (please mark: *deodorant, toothpaste, cosmetics, soap, perfume, washing powder, dishwashing liquid, other?*).
26. I would like to try to make my own products, but I have never done it. YES / NO / MAYBE
27. I have tried making my own products and I don't like it. YES / NO / MAYBE

28. I use a metallic safety razor for shaving. YES / NO / SOMETIMES
29. I know what to do with used razors and/or razor blades. YES / NO / SOMETIMES
30. Females: I use a menstrual cup and/or reusable cloth pads during my period. YES / NO / SOMETIMES
31. I go to health/environmentally conscious shops to do my shopping YES / NO / SOMETIMES (please mark: *Nude Foods, Shop Zero, The Farm Table, Wellness Warehouse, others*).
32. I buy things online from environmentally conscious stores because I can't find it in a shop near me. YES / NO / SOMETIMES (please mark: *Faithful to Nature, The Refillery, Unwrapped*)
33. I am aware of the environmental footprint associated with online shopping. YES / NO / MAYBE
34. I am aware of unnecessary food/product packaging. YES / NO / MAYBE
35. I actively look for grocery stores where I can buy food/products unpackaged YES / NO / SOMETIMES (please mark: *fruits & vegetables, meats, grains, others*)
36. I am actively looking for alternatives to plastic packaging. YES / NO / SOMETIMES
37. I compost YES / NO / SOMETIMES (please mark: *I use an organic compost heap in a garden, I use a bokashi, I use a worm farm*).

Is there anything else you would like to add? Please write your comments here.

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Thank you very much for your time. Your input will enhance my study greatly.
Olivia Loots

STUFF MATTERS AND MOVES:
Analysing Environmental Consciousness and Memory Objects through a New Materialist Lens

Olivia Loots