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A Critical Cartography of the Governing power of Disposable Plastic

A thesis presented in partial fulfilment of the requirement for the degree of Master of Arts in Psychology at Massey University, New Zealand

Angelique Noll

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Abstract

Plastic pollution is a global, wicked problem leading to large scale ecocide, but the burden of pollution is carried asymmetrically on the various bodies, including human ones, that are affected by it. Western psychology has been slow to respond to the crisis, even though plastic is a ubiquitous part of daily socio-cultural practices and has catastrophic impacts on people going about their everyday lives. In this thesis, I offer a critical cartography (Braidotti, 2019) tracing the agency of waste, plastic, and particularly of disposable plastic, informed by new materialist methodology, in order to explore whether plastic is a governing power. I take up the concept of mundane governance (Woolgar & Neyland, 2014) mapping three landmarks as sites of potential governance – material semiotics, the circular economy and disposable plastic as an ethical intermediary. The figuration of the privileged consumer emerges from discussion of these sites to become ethically questionable within a cyclical process of governance and coercion. Questions of power and violence consistently surface from the cartography, questioning not only the agency of the visible privileged consumer but also the impacts of continual plastic colonialism on those who invisibly (humans, animals, plants, the environment) and silently bear the brunt of western capitalist recycling and waste disposal systems. The importance of bodies (human and non-human) and of bodies-as-politics emerged as an essential landmark feature that underpins disposable plastic governance and our relations with this material. The formulation of the plasticised psychological subject as one who is inextricably intertwined asymmetrically within practices of biopower, global power

relations and unpredictable and unstable associations with the plastic itself opens up questions for the discipline of psychology.

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Dedication

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Prologue

In 1980, a movie titled “The Gods Must Be Crazy” was released in South Africa. The movie is about a Coke bottle, carelessly dropped from a small airplane flying over the Kalahari Desert. It lands in the hot sand behind Xi (the *x* is pronounced with a tongue click) who belongs to the hunter-gatherer Bushman (San) tribe of the region. Having never before seen such an item - glass bottles being a product of western technology, far removed from the reality of his indigenous life in the desert - Xi picks it up and takes his find back to the tribe, where they discover many uses for it, from pounding vegetables and carrying water to tracing circular shapes and making music. The tribe initially assumes that the bottle was a gift from the gods, since it fell out of the sky. However, because there is only one glass bottle, it starts to cause interactions and emotions between the normally peaceful and cooperative tribe members that they are unfamiliar with, such as competition, jealousy, impatience and questions of ownership, as they start fighting over this scarce resource. When one child hits another one over the head with the bottle during an argument, the tribe tries to get rid of the bottle by throwing it far away, or burying it in the hot desert sand. But every time they attempt to get rid of the bottle, it finds its way back into their tribe through seemingly natural events like a wild animal digging it up or the wind blowing the sand away and exposing the bottle. The tribe eventually decides that Xi must walk to the edge of the earth and return the gift to the gods, because it is causing unrest and disturbing their peaceful way of life. On his journey, he becomes embroiled in the affairs of western outsiders (a school teacher, a biologist) and a local guerilla group’s political fighting. Xi receives money from the biologist and school teacher in return for helping them out of a difficult situation, but money is another western product that he knows nothing of and has no use for, so

he discards it and continues on his journey to end of the world. When Xi finally reaches a clifftop and looks down, he is above a thick layer of cloud, which convinces him that he has reached the edge of the world. He thanks the gods for the gift, and explains that it is causing unrest amongst his people before throwing the glass Coke bottle down the cliff, into the clouds, and returning home to his tribe.

As children and young teenagers, we loved this movie because of its innocent humour and the endearing Xi. Now I see the film in a new light as I ponder my own relation to waste. My waste is essentially a byproduct of my life in a westernised country driven by capitalistic values that place much emphasis on material goods while ignoring their afterlife once they've been discarded. The effects of this type of lifestyle on nature and on people (usually other people, and especially those who are socio-economically and politically marginalised, as it is rare that we have to face the consequences of our materialistic, capitalistic lifestyles ourselves) is also apparent to me now. The Coke bottle being carelessly thrown into nature from the airplane by a rich western traveller, with the assumption that it doesn't matter, that no human or non-human bodies worth taking note of lives down there anyway, and that we can distance ourselves from our rubbish by throwing it somewhere where we can't see it anymore, is symbolic of our contemporary consumerist attitudes. These attitudes are driven by capitalism and underpinned by the western anthropocentric, androcentric extractionist worldview. The Coke bottle scenario plays itself out on a much larger scale every day. We, the consumers in the developed world, (which includes New Zealand), who have enough spending power to make purchasing decisions based on ease and comfort, rather than necessity, all throw Coke bottles out of the plane. We all play the 'out of sight, out of mind' game every time we purchase items that are unnecessary, or items that are packaged in excessive plastic. However, since we are

also living in a capitalistic society driven by financial motivations, we often find ourselves with little or no choice in our consumption behaviours as we face aisles of pre-packaged necessities and non-essentials.

As I walk in the streets of my neighbourhood, I notice that we don't only throw our proverbial Coke bottles out over a piece of nature that is seemingly uninhabited and far away like the global large-scale waste trade does. Locally, I see crisp packets, lollipop wrappers, chocolate bar foils, plastic energy drink bottles and plastic sauce sachets from instant ramen noodle meals that have been thrown into the hedges or simply onto the pavement. I am tempted to pick it up every time I take a walk, but sometimes, it is too much to carry in my hands. I also feel resentment for my fellow neighbours well up. Sharing a house with a newly independent young adult daughter, I watch as the number of online purchases and their accompanying plastic packaging and wrapping fill up the council recycling and rubbish bags, and contribute to the landfills, islands of rubbish floating on the ocean (Arnall & Kothari, 2020., Barnes, 2005., Mohrig, 2020) and the containers full of waste that move, generally speaking, from the developed world to the undeveloped (Liu et al, 2022; Wang et al, 2020). On a daily basis, we all contribute to this waste.

Both waste and its corollary, pollution, are wicked problems, because both of them become increasingly complex the more we try to understand them. Waste is a subjective term (Drackner, 2005) and while everybody on the planet contributes in one way or another to the creation of waste, their relationship to waste is different as the rubbish generated does not affect everyone in the same way, given that not all have access to the same resources. Depending on how one is positioned in relation to waste, wealth and privilege, it can be perceived as an aesthetic problem, a public health risk to be managed, a source of income (Drackner, 2005), or as a combination

of these. Waste is therefore not an easily defined, known entity as it can be potentially wanted or unwanted, valued or unvalued simultaneously (Alexander & O'Hare, 2023). Waste can also be supportive or unsupportive of self-perceptions and our personal environmental ideologies, depending on how our bodies interact with the waste. For instance, if our bodies participate in the behaviours required by recycling, such as sorting waste and cleaning it, it provides an avenue for a positive self-perception, framing ourselves as better than those whose bodies do not participate in this work (Zhao et al, 2021), or those who are perceived to be mismanaging their waste.

The various bodies involved in questions of waste, such as bodies of land, water, people, animals, plants, and waste itself, differently engage our psychological processes as we deny, plan, invent, experience emotions and form judgements based on how we encounter these bodies and where they fit into our own beliefs about our relationship to the environment. For instance, encountering a body of land, like a beach, filled with waste washed up from the ocean, engages us differently depending on our personal environmental ideology and our beliefs about who is responsible. Thus, the interrelationship between the encounter with bodies related to waste and our personal environmental beliefs, radically affects the way that we displace, move and contain bodies. (Do we pick up the rubbish that we didn't cause or leave it for an unidentified someone else? Do we feel a sense of disgust at the sight of a dead bird tangled in plastic, or do we believe it is survival of the fittest?) How we rationalise these choices that might remind us of wasted places and of wasted human and non-human bodies (Alexander & O'Hare, 2023) is a product of our personal understandings of ourself in relation to our personal environmental ideologies. Thus waste, as an "unruly, lively and messy" matter (Alexander &

O'Hare, 2023, p. 420) has the potential to engage us in psychological processes of ignorance, rationalisations, self-perceptions, problem solving, invention, classifying and categorising, as we constantly interact with it through the position of our own environmental ideologies.

From my own standpoint as a socio-economically privileged woman living in New Zealand, a first world, capitalist country, I notice how the capitalist drive to buy, consume and, by necessary implication, create waste, seems to be ubiquitous and omnipresent. I also notice that because I have some spending power, there are different choices open to me with regards to my consumer behaviour around plastic that are not necessarily available to everyone else. Yet even though I have the financial privilege of sometimes being able to choose paper or glass over plastic, there seems to be an aspect of being controlled by plastic and times when interacting with plastic has left me feeling powerless, coerced or manipulated, or that plastic has somehow entered my ethical deliberations. For instance, the option to purchase many grocery items (rice, pulses, meat, cheese) or other household necessities (toilet paper, cleaning materials, toothpaste,) without plastic packaging isn't necessarily available at my local grocery store. I have no choice but to engage with plastic because these items are necessary, and yet, I feel uncomfortable with the amount of plastic waste that I generate, even though I recognise that I don't have a choice much of the time. It is this feeling of powerlessness against the constant onslaught of plastic and wanting to understand why plastic is such an entrenched, accepted part of my daily life, that that became my entry point into my cartographical journey.

Chapter 1 – Finding our way

A cartography, as I have come to understand, is a process of simultaneous knowledge production and sense-making in a reiterative flow. In the beginning stages of my journey into the literature, I noticed that there are many issues with power relations threaded across the scholarly work of the various disciplines that I engaged with. The notion of power relations also seemed to be inherent in my daily engagements with plastic where the lack of disposable plastic alternatives is experienced as a forced imposition of plastic into my life. This led me to question my relationship with disposable plastic, and whether it is possible to say that disposable plastic governs my behaviour. In other words, I became interested in charting the flow of power in the relationship that we, as western consumers, have with disposable plastic. Are we in control of the way that we use and dispose of plastic, through our purchasing decisions, recycling initiatives and participation in the circular economy, or does power flow in the opposite direction? Is disposable plastic really in charge of our relations with it, and guiding our interactions with it?

Before I could engage with the governing potential of disposable plastic any further, I had to resolve several issues. How do I use cartography as a rigorous research process? Which methodology would be best suited to a cartography? And finally, how do I fit my chosen theoretical research process and methodology into the norm of my academic discipline of psychology?

How to do a cartography?

A critical, cartographic reading is a politically informed reading of the theory, with the aim of recognising power relations and how they function within a particular situation (Braidotti, 2017). I could not find any material that specifically laid out how to do a cartography in practice. After reading what I could find on the process(s), I

came to understand that a posthuman cartographic mapping is a process that unfolds with the doing of it. I undertook to approach the cartography much like an explorer (or cartographer) would approach new geographical terrain that needed to be mapped. I kept an image of this explorer in my mind as I tried to figure out how to conduct my cartography.

In my understanding of doing a cartography, plastic becomes what Braidotti (2019) refers to as a conceptual persona. A conceptual persona is an active participant (Schönher, 2021), a relational being, that helps me chart a theoretical domain, and perceive how power relations are entangled within the complex connections that underscore plastic governance. I interpret the researcher and the conceptual persona of plastic as nomadic explorers in a fraught and asymmetrical relationship with each other, traversing across academic discipline borders, and using the knowledge gained in various fields to provide a map of how politics and power shape the terrain of inquiry. For this thesis, we crossed the border of my discipline of psychology, and visited various other academic territories, following the complex trail of power embedded in plastic relations (or in other words, our relations with each other). With plastic as the active participant leading the way, the trail led us through the rugged scholarly terrains of psychology, sociology, economics, marketing, law, environmental sciences, anthropology, medical science and philosophy. The decision of what to include or exclude from my cartography was mostly guided by the conceptual persona of plastic, while I charted the map of relations.

I initially entered into this terrain through my own misgivings about my plastic consumption, my interest in the environmental crisis, and wanting to address it for this thesis. Before plastic became my uneasy companion on this journey, my interest

was further sparked by peer-reviewed journal articles written by Sosna (2023); Hetherington (2004); Hird (2013); Spelman (2011) and Hawkins (2001). Reading these articles, where waste, as a specific aspect of the environmental crisis, was addressed from different perspectives, such as anthropology, philosophy, waste studies, and new materialism, showed me that waste can be interpreted as something more meaningful than mere discards, and aligned with Alexander and O'Hare's (2023) conceptualisation of waste as indeterminate, lively and undisciplined. Right from the outset then, my reading was transdisciplinary, traversing the murky, western imposed boundaries that categorise and separate academic fields of study. This first exploration into the theoretical offerings of the problem of anthropogenic waste in general and plastic, and disposable plastic waste, in particular, revealed some of the governing capacities of plastic. Hence, these first articles of interest provided the starting point for plastic, as my relational, agential cartographic partner, to guide us further into the transdisciplinary literature of plastic from a socio-cultural and political perspective. This ability of plastic to be both the guide and the material that is the subject of attention simultaneously, in other words, to be both relationally object and subject at the same time, is a theoretical position that I encounter throughout the cartography as plastic leads the way through its own history, its wickedness and, finally, the governing power of its own sub-species - that of disposable plastic.

New Materialism as a guiding methodology

Through my cartographical charting of the literature, especially that emerging from the post humanities, I felt that something was missing from the discussions when anthropocentric viewpoints, dominant in western academic literature, were preferenced. I wanted to open up possibilities for addressing an agentic presence

and governance *by* plastic, not possible through western anthropocentric ideologies of human dominance over animals, objects and artefacts. Materialist ideologies therefore enabled me, through my relationship with plastic, to further explore one of many questions that were beginning to emerge for me through my journeying through the literature: How might plastic have the ability to govern our lives in western capitalist, extractionist societies?

New materialism is a relational methodology that acknowledges the agency of non-human bodies, which includes animals, plants, bodies of water, bodies of land, and also of artefacts and objects, and acknowledges the relationships that we are inextricably intertwined in with these agentic bodies. It is a framework that asks us to reconstruct our orientation to the material world around us (Benson, 2019) because by anthropocentrically objectifying our external realities and positioning ourselves, the human beings, as the main subjects, we can never fully understand the human or other non-humans (Latour, 1993) that we relate with. The anthropocentric perspective aligns with an old materialist framework that views matter as deterministic and mechanistic (Tillman, 2015), where matter is passive, behaves according to fixed and identifiable laws and is, for all intents and purposes, inert (Benson, 2019) and available for our (human) technological mastery (Tillman, 2015).

New materialism, by contrast, reflects a worldview that starts with completely different assumptions, such as that human beings are not exceptional, nor are they the only entities with agency. It challenges the mechanistic view of reality that positions the natural world as knowable, controllable and predictable, and instead argues that all matter is relational and dynamic (Benson, 2019) rather than passive and separatable (Tillman, 2015). All matter therefore includes humans as well as plastic.

From a new materialist perspective, knowledge is not produced by, for instance, studying controllable cause and effect relationships or other commonly used research methods, like phenomenological research, narrative research or ethnography, but is regarded instead as a reflection of the specific arrangements of matter at the time of observing, since the act of observing already influences the observed (Benson, 2019). It is because of this way that observing and observed interact that new materialism collapses the distinction between ontology and epistemology – what we know and how we can know it are not two separate things, but rather one process (Benson, 2019). Cartographically then, my process of engaging with the literature and mapping the stories is one seamless and reiterative process with no distinct starting or finishing place.

Cartography and new materialism, thought together, provide a way of understanding the world around us without dissecting it into power laden binary and categorical distinctions, such as subjects and objects, active and passive, humans and nature, or cartographer as separate from, and superior to, the landscape being mapped. Instead, we are in a constant process of dynamic relations and entanglements (Conty, 2018) with everything in our environment. Reality becomes a relational, and reiterative, phenomenon, rather than a fixed, controllable and predictable experience (Benson, 2019).

Human beings are part of, not outside of, a complex network of relationships (Benson, 2019), which is why Hird (2009) describes new materialism as being about engagement. This dynamic view of materiality also has implications for the concept of agency, because new materialism ascribes it to all living and non-living matter and dismisses ideologies of human exceptionality (Benson, 2019). Agency is regarded as a property of anything that influences and interacts, like plastic, for instance, as well

as of the process by which interactions occur (Benson, 2019). Thus, there are no individual units to speak of, but rather networks, connections and assemblages created by a multitude of relations, rather than units separated by firm boundaries and binary groupings (Benson, 2019). New materialism therefore provides a way of looking at the network of complex plastic relations that allows me to decentre the human being as the main, and most important, actor, and to chart a new map of our relations with plastic from the vantage point of plastic as an integral agential element that we have relations with. My cartography is thus underpinned by a relational epistemology, with new materialism as the guiding methodology.

Approaching disposable plastic from a new materialist perspective, I recognised the potential power of this species of plastic to modify and influence behaviour and relationships. The three specific landmarks of disposable plastic governance that emerged, as a mixture of material places and immaterial spaces (de Certeau, 1985), did not come from one specific author or piece of literature, but from the nomadic, transdisciplinary mapping of work from the scholarly terrain of predominantly the humanities, but also some of the sciences as they pertain to environmental issues and especially to waste. Places, according to de Certeau (1985) are the geometrically defined geographical areas, such as landfills or factories with incinerators, whereas spaces are comprised of indefinable areas with no specific boundaries or surfaces, where particular ways of being and doing operate, such as shopping isles where decisions about whether to buy plastic or cardboard are made, or the socio-cultural rituals of disposal that we engage in, for instance. I recognised the figuration of the privileged circular consumer as it materialised from the exploration of the sites of plastic governance, because I am the embodiment of this figuration. Figurations are repeated instances of a specific social

position in which a subject is embedded, and that this subject embodies (Braidotti, 2011b). Figuration does not assume knowledge as a representation of reality, but provides a way of thinking that creates awareness of different problematic subject positions. Figures can be understood to be affective “material-semiotic creatures” (Thiele, 2021, p 231), that can help us to understand a particular aspect of being in this world, differently. The figuration of the privileged circular consumer that emerged from my cartography enabled my understanding of how mundane plastic governance is related to anthropocentric, androcentric, racist and colonial ideologies, and also to the large-scale destruction of bodies, including humans. The figuration of the privileged consumer evolves as the governing capacity of disposable plastic widens, and the essential role that the reproduction of this figure plays in maintaining plastic governance becomes clearer. Charting the relational complexities of disposable plastic governance therefore required a relational methodology to encapsulate the complex tangle of relations that exist with disposable plastic in these spaces and places.

Once I had charted the spaces and places where I encountered disposable plastic as a governing power, using a new materialist, relational methodology, I had to reflect critically on my work because there seemed to be a continuous thread running through the cartography that related plastic governance to my academic discipline of psychology. It was not only that of power relations, which appeared all over the map, albeit in different guises, but also that of bodies. Through the work of, most notably, Mbembe (2019a, 2019b) and Braidotti (2006, 2016, 2020), I saw that biopolitics, which is a form of power relations, was yet another thread in the complexities of the governing powers of plastic in western, capitalist, extractionist

societies the unifying concept that I had been reaching for. It is the most persistent, insidious relationship in this critical cartography.

The problem of established research norms – How to choose a specific population

An aspect of my nomadic, transdisciplinary cartography that was most problematic for me was deciding on a specific population to engage with, which would be a normative expectation in psychological research. The combination of a new materialist methodology, which decentres the human being as the main vantage point from which human-animal/plant/inanimate relations are understood, offers the challenge of exploring the potential governing agency of plastic in a relationship with people, objects and the environment, from a perspective of relational equity. How could I choose a specific population within this theoretically equitable relational framework? Combined with my chosen research process of a critical, nomadic cartography, which enables cross-sectional engagement, with various populations and classifications, the challenge of choosing a specific population to comply with the norm in psychological research, took a considerable amount of time for me to unravel in the context of my theoretical project and I was also very aware of problems that might occur should the scope and terrain of my project become unmanageable.

That disposable plastic is ubiquitous, and forms part of everyone's lives, regardless of socio-economic standing, nationality, country, gender, race, age or any other criteria that could be used to select a specific population, reflexively and theoretically compounded the problem of population choice for me. Due to the reiterative, simultaneous nature of the cartography, I was already into the process of mapping out some of the complex relational aspects pertaining to the governance of

plastic while I was struggling to gain clarity on the question of a population. Through my critical engagement with the transdisciplinary literature, it became clearer to me that while everybody participates in the use and disposal of plastic, not every group, or even individuals within groups, experience plastic waste in the same way, because even though the plastic waste problem affects everyone, not everyone is the same, socially and contextually and nor are they, in a western cultural position, hierarchically equitable (Braidotti, 2020).

Working in a cross-sectional, transdisciplinary manner guided by my nomadic insidious companion (plastic), I could map out and understand more deeply how and where power flows through the various populations and individuals within populations as we interact differently, and inequitably, with disposable plastic. For instance, while women waste pickers in a capitalist African country might be classified as one group, there are individual differences in how disposable plastic is experienced within this group. Some women view this material as a valuable resource that enables not only economic activities to take place, but also provides opportunities for invention, creativity and problem solving (Hartocollis, 2019; Fufu & Baba, 2025), as well as a technology that has the potential to make lives that are already difficult, easier (Braun & Traore, 2015). Even amongst socio-economically privileged consumers from western, industrialised first world countries, there are variations in how individual consumers experience their relations with disposable plastic, ranging from feeling confusion, anger and guilt (Franklin et al, 2022), to appreciating the practical advantages of disposable plastic use, such as having a container that does not break easily on a bicycle ride home (Müller & Süßbauer, 2022).

Noticing how disposable plastic is experienced differently by various groups of people made me cautious to not become complicit in a grouping or classifying practice based on my own western, socio-economically and politically privileged position. I did not want to automatically assume that other people are marginalised or disempowered when their personal experience of engaging with disposable plastic might be one of empowerment and enfranchisement. That would be akin to colonisers making assumptions based on their own worldview about the populations in new territories, rather than being a relationally-equitable explorer.

The problem of choosing a specific population was thus influenced by this caution and awareness, created through the critical, transdisciplinary cartographic approach to the literature. Classification, categorisation and exclusion are some of the relational characteristics of disposable plastic governance that enables the flows of power to continue to marginalise and stigmatise certain people and places, in both underdeveloped and developed capitalist nations and regions. I was concerned that my choice to focus on how a particular population is possibly governed by disposable plastic might be following along the same lines of categorisation, classification and exclusion. Additionally, my approach to the terrain of disposable plastic governance was not to chart whether, or even how, certain groups experience governance or not, but rather *where and how* disposable plastic exerts its governing power over the daily lives of the bodies that interact with it.

A way forward through this ethical dilemma was to start from my own standpoint as a woman, living a socio-economically and politically privileged life in a western, capitalist country (New Zealand), and to chart my map from this perspective. Like any cartographer, I can only interpret the landscape as I find it

through my own embeddedness. A different cartographer might venture down different paths of the same terrain, or map the same paths differently.

Maintaining my focus on the trails of power that plastic, my agential cartographic and potentially both equitable (theoretically) and inequitable (politically) relational companion and guide, highlighted for us, led me to the most likely sites of disposable plastic governance and power. I followed and documented the flows of power through and affects the relations between disposable plastic and the bodies of humans and non-humans, but also between people themselves. I saw this process of mapping out the flows of power as being similar to charting the river currents in my new territory, showing how the currents weave about through the various different regions (populations), affecting everyone differently, while the focus stays on the currents (flows of power), not on the specific regions. This method clarified for me that, beyond the obvious effects of disposable plastic in terms of pollution and the unequal power relations inherent in the waste trade, even consumers like myself, who are in a privileged socio-economic and political position, are affected by the power relations inherent in the use and discard of disposable plastic. Plastic governance seemed to be covert, insidious and based on the deeply engrained anthropocentric, Eurocentric and androcentric values that underpin the capitalist system, and thus consumer behaviour, in industrialised and capitalised countries.

Anthropocentrism is the belief that human beings, and human concerns, are of central importance, and nature, including land, water, animals and plants, only exist to serve human interests and therefor has no intrinsic value of it its own (Booth, 2024; Zhang, 2025). Anthropocentrism gives permission for human beings to do what we like to non-human beings and other entities (bodies of water or land) who exist only as means to satisfy our ends. Eurocentrism, as a form of ethnocentrism, is

the belief that one's own ethnic group and its associated social standards and practices, are superior (Joseph et al, 1990), and can be used as the yardstick against which to measure the shortcomings of another ethnic group. Androcentrism is the term that describes the belief that men are the gender-neutral, default standard of humanity, and as such, androcentric societies are arranged according to the needs and values of men, who are prioritised, to the exclusion of women (Bailey et al, 2019). Taken together, these values all point to an extractionist world view that sees human beings (as represented by the default figure of the European male) as the centre of the universe while all other life-forms (including all of nature and anyone who does not conform to the standard of the European male) are reduced to objects that can be used and controlled to further the dominant group's interests and to ensure their own thriving (Ogunyomi, 2025).

Before I begin with my journey in earnest, I wanted to emphasise that due to the practical demands of representing the cartography in an orderly, readable manner, the presentation of my mapping in sections may appear as categorical and linear. In reality, it was a messy, reiterative process of traversing new territories, making sense of them, backtracking, following side trails, and making my way back to the main road by following the twisty paths on which my cartographic nomadic partner, disposable plastic, took us, while reflexively tackling roadblocks and ethical dilemmas simultaneously. With this caveat in mind, I start the presentation of the cartography broadly, with anthropogenic waste in general and the socio-cultural history of plastic, which is relevant to understanding why plastic is a wicked problem. I then locate plastic pollution within academic psychology before mapping the governing power of disposable plastic through disposable food packaging is particular. I did this not to suggest linear progression, but to give a cartographic

sense of where the specific problem of disposable food packaging can be located within the bigger terrain of plastic, of waste, and of the socio-cultural, political and economic systems that necessitate our continued relations with this material.

Scouting the territory of anthropogenic waste

The problem of people, consumerism, and garbage is a global, far-reaching one, leaving no continent untouched. Annually, 2012 billion tons of waste is dumped at sites around the globe, including hazardous chemical wastes like asbestos and other toxic metals, chemical persistent organic pollutants, electronic waste containing heavy metals and toxic chemicals that have the potential to affect every system of the human body, and other forms of general waste like plastics, textiles and food (The World Counts, n.d.).

Reno (2016, p.1) refers to the “slow violence of toxic contamination”, which sounds very far removed from our daily lives, but in reality it is the byproduct of living in a capitalistically motivated society that encourages the buying of a new cell phone to upgrade from a fully-functionally old one, the as-new clothes we throw out because they’re from last season and the bottle of water we buy with our fish and chips, the food we throw out of the fridge, unopened and/or uneaten, and the plant poison and pesticide we buy from the shelves of our grocery stores to keep weeds out of the rose bed and snails off the garden path. Right from the start, waste can be positioned as a privilege, because being able to generate waste at all, especially in the quantity that privileged consumers in capitalist societies with some spending power is able to, is not available to everyone. Seen from this perspective, disposing is a reminder of our privilege, because it assumes that more can be obtained.

Human produced waste reveals histories and stories of a future upon us

Privileged or not, the problem of man-made, or anthropogenic, waste is not a new one. Archaeologists know that wherever they find a ruin indicating human presence from hundreds or thousands of years ago, a garbage pit or mound will be found within a short distance as well (Rathje & Murphy, 1992). These garbage pits or mounds are a sure sign of human presence. They stretch back two million years, starting out with non-toxic discards such as waste flakes produced in the making of stone tools and broken pottery shards thrown into the earth, to the increasingly toxic rubbish produced later on in the timelines of human recorded and untold histories,. Major events in human history such as industrialisation, urbanisation and globalisation affect the flows of waste, because as an increasing number of people across the globe are adopting urban lifestyles, the waste produced in cities is quadrupled from that produced in rural areas (Lindner & Meissner, 2016). This global concentration of waste in urban areas evidences the urban lifestyle, (take-away food containers, lipstick containers, polystyrene drink cups (Rathje & Murphy, 1992)). My cartography of anthropogenic waste also extends beyond the limits of physical earth to account for the scientific exploration of space as well as space tourism. Concerns are already being documented about space sustainability (Flamm et al, 2024) due to the effect that anthropogenic waste in space has on earth's atmosphere and protective ozone layer, while space-based waste management systems are under consideration (Fung et al, 2022). The threat from human produced space junk surviving re-entering the earth's atmosphere and causing damage on earth is also listed as an emerging risk factor to watch (Tallon, 2024) and a viable issue affecting climate change (Maskell, 2026).

Some man-made waste products are lovingly cared for on museum shelves, and renamed *artefacts*, whereas others are unceremoniously dumped into the trashcan as rubbish. Even some of the anthropogenic waste in space is endowed with historic, aesthetic, scientific or cultural value, and while these objects are not in a museum, their protection in earth's orbit is being called for on the basis of their cultural value (Gorman, 2017). Garbage, then, can be seen as indicators of a society's way of life, at specific points in time, to be made sense of in the future, and what we throw out as rubbish today, on earth or in outer space, might be the archaeological finding of tomorrow.

In the process of sifting through rubbish (at least the rubbish on earth) and deciding on what counts as a valuable artefact and what does not, rubbish serves as a useful corrective to potentially biased historical narratives that rely on many written artefacts and documents to reconstruct the past. Many of these narratives are "little more than self-aggrandizing advertisements" (Rathje & Murphy,1992, p.12), especially if they take the form of a history recorded by the ones in power. This could be personal histories (and victories) of reigning pharaohs recorded on clay tablets or painted onto vases and tomb walls, or the modern war victors' versions of conquest written up in some of the history books that we teach at school. There are thus threads of subjectivity and power running through our relations with rubbish that stretch far back into history. Anthropogenic waste in space also tells ongoing stories of subjectivity (surprisingly) and power, because the waste in space is being produced as the result of activities by a few powerful billionaires and state leaders who use technological advancements to promote a narrative of opportunities being opened up for *all* of humanity, when in reality space expansionism, and most of the benefits from it, is only for the very wealthy and is still based on the same

extractionist and anthropocentric values that underpins historical and current forms of colonialism (Rothe & Collins, 2025).

To archaeologists and anthropologists, contemporary garbage dumps or mounds also tell stories of society that might differ from the public narratives, pointing not only to the relational importance of rubbish, but also to the power relations that are evident in the flows of our waste, from buying power to disposal. Even in my own life, my personal narrative is that I care about the environment, and yet I am baffled by the amount of commercially produced and organic waste that I discard in our weekly rubbish and recycling bags. As much as I care about the people, animals, plants and other aspects of the natural world around me, my waste will inevitably have a harmful impact on them, and thus, willingly or unwillingly, I contribute to what Bender (2003) identified as the culture of extinction.

The culture of extinction expresses the impact of industrial culture, driven by western capitalist values, on the environment, which Bender (2003) equates to the destructiveness of the meteorite that led to the extinction of the dinosaurs. The culture of extinction is based on the deeply engrained anthropocentric, Eurocentric and androcentric values that underpin the extractionist attitude of industrialism and capitalism, which enables us to produce so much toxic waste that many plant and animal species are on the brink of extinction, along with the ones that we hunt, fish, or farm to this same precarious brink (Bender, 2003). It is also in the name of western capitalism (based on these anthropocentric, androcentric and Eurocentric values) that we continue to produce, manufacture, sell and buy consumer commodities that eventually land in our rubbish bins, landfills and oceans, that McDermott (2016) boldly refers to as our dumpsters, and leading to large scale ecocide (Bender, 2003).

Ecocide describes the culture of extinction's relentless assault on the environment, and stems from contemporary western capitalist values that place too much emphasis on economic growth, progress, property rights, consumerism, and especially anthropocentric, technocratic ideals that favour optimal conditions for human - specifically white, male, Euro-American human - existence (Koch, 2021) to the detriment of all other life forms (Manes,1991).

Ecocide seems to be what Braidotti (2020) refers to as the sixth great extinction, and what Tasnadi et al. (2018) also predict when they observe that the endlessly linear economic model of extraction-production-distribution-consumption-disposal is simply not sustainable on a planet with finite resources. Maintaining this linear economic model could potentially lead to societal collapse caused by increased wasting and the associated damage to the environment and to the general health of the biosphere (Tasnadi et al. 2018), even if it is a biosphere which, from the viewpoint of western capitalism and the values that underpin it, centres around the Euro-American west. The impacts of the western capitalist model on historically colonised communities, with the ongoing ramifications thereof, also continues to be ignored in favour of supporting western capitalism (Koch, 2021). The people inhabiting the colonised regions often have their different ideological understanding that influences their relations with the natural and inanimate world around them, disrupted by capitalist practices that view the natural world as a resource for human economy. Colonised peoples are often not economically and politically empowered to resist the damage done to their lands and ways of life by the western capitalist ideology that affects them.

Rather than ecocide, Koch (2021) prefers the word apocalypse, and asks us to consider whose apocalypse is being portrayed in current narratives of

environmental and climate destruction and whose way of life is being threatened by climate change and anthropogenic pollution. Braidotti (2019) points out that much of our current, western apocalyptic nostalgia, i.e. all the movies and books about the apocalypse that romanticises the western, white, male hero as the saviour of the world, speak of a specific world, or rather a specific way of life, being threatened by waste and pollution and climate change. This specific way of life is that of the white, western, affluent person who benefits from the capitalist market economy that is built on a foundation of extractionism, anthropocentrism, androcentrism and eurocentrism. Braidotti (2019) also reminds us that many Indigenous populations have already experienced their versions of apocalypse or ecocide when they were colonised and their environments (inclusive of both human and non-human elements) and ways of life were completely destroyed. I think the same question can be extended to the concerns of Tasnadi et al. (2018) when they predict large scale ecocide – whose ecologies are mostly being affected by the continued wasting and damage to the biosphere?

Topographical feature - Landfills tell stories of grouping and classifying, strangeness and the placing of absences

Sosna (2023) remembers his first trip to a landfill in Bohemia. He describes the picturesque scene as one reminiscent of Sleeping Beauty. Crawling through dense spruce forest and barely penetrable bushes, he emerges to the sight of an astounding wastescape that is one kilometre long, half a kilometre wide and 40 meters high. The human-made structure is so tactfully hidden that most people, especially consumers privileged enough to maintain a distance, are oblivious to it. In trying to ascertain why a certain piece of land is chosen to become the next designated landfill site, Sosna (2023) follows the logic of anthropologist Mary

Douglas (Douglas, 2003), who stated that power does not only reside in the known forms of things, but also in the grey and murky areas outside of the formal classificatory boundaries. Sosna (2023) shows that the authorised process of selecting a site for landfill is ostensibly based on calculations that aim to minimise the negative environmental, social, political and economic consequences of creating a landfill site in that location, but that there are other vague and inarticulate factors affecting the selection process as well. That is, outside the boundaries of the institutional site selection process, there are other forms of power at work, including covert stakeholder interests, informal negotiations, and historically based classificatory logic that groups together certain bodies (indigenous peoples, poor people, Jewish people, black people, plastics, electronic waste). These groups are then allocated a shared fate (land removal, waste colonization, death, incineration, recycling).

Mbembe (2019a) writes of the socio-political encampment of various groups of bodies around the world (refugee camps, camps for displaced people, detention centres, expulsion camps, ghettoes, hostels, migrant homes), but he addresses these camps as metaphors for thinking about the way that we tend to draw borders around that which is wanted, valued and deserving. We enclose these wanted things away from that which we would rather not know about (our excesses, whether organic or non-living, but also our humans-as-excess) even as we dispose of it, because it disturbs our way of life. Classifying and grouping things together is a way of managing life that allows us, the ones who are grouped together in the privileged camp, to feel safe and secure by avoiding that which has been classified as strange and dangerous, as well as the space they take up (Sosna, 2023). When we group unwanted living and non-living bodies together and place them at a specified

location, both the bodies and the location become tarnished with what Spelman (2011) referred to as a distinct fragrance of rejection, allowing us to not only actively avoid these places (and the human and non-human elements that they contain), but also the alternative experience of coming to know that which we would prefer to avoid (Reno, 2016). While Reno (2016) was referring to the unexpected consequences of permanent war-readiness and the military waste produced in the name of a war that has not happened, the same is applicable to factory farms, Nazi death camps, hospices, military areas, mine fields and landfills. To Mbembe's (2019a) camps I would add landfills and rubbish dumps, as well as the human and non-human life surrounding these camps because they are also tarnished with the scent of rejection (Spelman, 2011).

Hird (2012, 2013) positions landfill sites specifically as places of forgetting. In this view, landfills are indicative of financially privileged consumers from the developed world's desire to forget, which is enabled through legislature, engineering and community buy-in via the socio-cultural rituals that we perform (Hawkins, 2001) to distance ourselves from our rubbish. The ritual weekly task of cleaning out the bins in the house, placing the content into the council bags or wheelie bin, and putting it out on the pavement early in the morning before the municipal waste collectors come around to pick it up, is one such socio-cultural ritual. The rest of the journey for our bags of rubbish, from pick-up to landfills and incinerators, all reinforce this desire to forget, but it is effective only for those who have enough socio-economic and political power to enjoy this distance from their waste that enables the forgetting.

Spatial separation and avoidance thus play an important part in our efforts to live a meaningful life as this separation of things that we classify as unwanted is

essential in the process of locating ourselves in the part, or camp (Mbembe, 2019a) of life that is wanted. Both consumerism and the associated waste process, from deciding what is wanted and valued, to deciding what is unvalued and hence waste to be collected and removed to a location out of sight, is eerily reminiscent of the Holocaust, the Hutu and the Tutsis and other forms of historical and ongoing genocidal events These displays of biopower classify certain people as waste. They are gathered up, and removed to a site that has been selected by those strange powers outside the official decision-making system that Douglas (2003) alluded to, and disposed of.

Landfills emerge as sites for the management of presence and absence

Sosna's (2023) includes all things designated as strange in his thinking about waste, and he positions acts of disposal as the management of presence and absence. For instance, the link between waste and the bodies of marginalised people is reinterpreted as a management of presence and absence when we look into the history of the selection of landfill sites and notice that many of them are in areas that are populated by groups of people that have been marginalised, or absented from socio-economically and politically privileged society because of their 'strangeness', such as poverty, race, violence, disease and other forms of stigma (Sosna, 2023). In New Zealand, 40% of the people who live in the lowest socio-economic areas also have hazardous landfill sites located in their areas (Salmond, 1999) and a Christchurch based study by (Pearce et al, 2006) shows that air pollution, which is an expected consequence of consumerism, due to prolific online shopping, incinerating and burning waste, is notably higher in disadvantaged communities, while the economically advantaged consumers who are responsible for producing most of the pollution are not exposed to the polluted air to the same

degree. Thus, material waste and bodies-as-waste are grouped together and their presence is absented from society, prompting Hetherington (2004) to explicitly position practices of disposal (of all things strange) within a society as a way to manage social categories of membership and belonging,

Sosna (2023) however, points out that strange things are often attracted to other strange things by a presence of strangeness that attracts them. This circular logic indicates an intimate relationship between presence and absence, so that when we classify something as strange or unwanted, as waste, and remove it from our lives, we simultaneously give it presence in a different system, place or time. In South Africa, two young women started their own fashion and accessory company by turning unwanted plastic and other strange materials from landfills into new, wanted presences as bags and accessories (Rakhetsi, 2021). The body of a once loved dressage horse also becomes strange in its old agedness, with its skeletal frame and wheezy chest. We absent it from our lives when we retire it to a new owner, who might give the body of the horse a new presence. Glue, perhaps.

Thinking in a posthuman, relational sense, becoming is an immaterial characteristic of waste that sometimes leaves material evidence. Not only are our things, our material purchases, and also our bodies, along with other non-human bodies, always in the process of becoming waste, but as our waste deteriorates, it too becomes something else (Gregson & Crang, 2010). When our consumer waste enters the municipal landfills, it enters an inhuman network economy of bacterial production and consumption (Hird, 2012, 2013). This inhuman economy in the landfill is alive and vibrant as bacteria ceaselessly metabolise some of our waste and transforms it into leachate – a viscous sludge that is the end product of the bacterial action. This leachate can escape the boundaries of the landfill, and filter into the soil

and groundwater where it enters into and becomes part of plants, animals, fungi, trees, insects, the atmosphere and the bodies of human beings as we breathe the air and eat the plants and animals that have been affected by the leachate. As the leachate travels both vertically and horizontally through the landfills and beyond, it assembles inhuman geo-bio networks that create both known and new lifeforms (Hird, 2012, 2013). Landfills can thus be conceptualised and mapped as places where human discards, inhuman bacteria and geological forces collaborate to form shifting assemblages and create new entities, some of which have known effects on humans, animals and plants, and others which are new and whose effects are still unknown.

Garbage, trash, rubbish, waste – they all represent aspects of our lives that, once relegated to the landfill, present as something separate from, and largely indifferent to, the interdependent reality of the manifest world, as if they have no connection to the material reality of our lives (Kennedy, 2007). However, the leachate that is produced by all our garbage, rubbish, trash and waste, and the landfills that enable the leachate to form, is anything but indifferent. Leachate, and the groundwater and landfill soil that it permeates, corrodes, moves, explodes, slides and collapses. In other words, it is alive and very much a part of the materiality of our manifest world. Charting geo-bacterial relations in this way, as being a part of our materialist, consumerist lives, and not something that is separate from us, reminds me that we are also part of this vast, vulnerable network of human and non-human relations (Hird, 2012, 2013).

However, landfills have the potential to impact broader society, albeit to varying degrees, regardless of socio-economic class or political influence, as seen when legacy landfills leak and distribute their contents outside their boundaries. In

2019, the Fox River township, located on the West Coast of New Zealand's South Island, flooded, causing the landfill to erode and leak over 15 tonnes of municipal waste across 50 kilometres of coastline (Smith, 2021). Landfills also contribute to the general air and water contamination through their gaseous emissions (Gumede & Gumede, 2025), which affects everyone as air and water has no boundaries, and yet it is often the case that minority communities with less socio-economic and political power live near landfill sites and suffer the consequences of this more intensely than communities further away (Williams, 2022). These consequences include health hazards, such as respiratory problems from poor air quality (Gumede & Gumede, 2025), increased risk of certain cancers (Jarup et al, 2002), higher incidence of birth defects (Elliott et al, 2001), and psychological impacts such as low mood, depression and anxiety, lack of appetite, sleep problems and extreme tiredness (Peprah et al, 2024).

There are, thus, formal and informal systems and practices within our westernised, capitalist society that enables landfills to be created in places out of sight, in the margins of what is considered to be civilised society. The landfills contain our excesses in the form of waste – waste which is designated as such not necessarily because the items are defective or used up, but often because we simply decide that it is waste. Due to waste often being the product of a decision, Prendeville (2024) positioned waste a problem from the human interior. Spelman (2011) states that these distancing rituals and practices are maintained as we seek to be distinguished from our waste, not through it. However, contrary to Spelman (2011), Hird (2012, 2013) proposes that we (those of us with the socio-economic power to do so) can indeed come to know ourselves through our rubbish. If at least some of our rubbish is the result of a self-defining process enacted through the

purchasing of specific material goods, then this is also a socio-economic privilege that can only be engaged in if one has enough disposable income to make purchasing choices based on considerations of self-concept, rather than out of a need for basic necessities.

Our economically privileged consumerist behaviour, driven by the need to define our self-concept, such as fashion or make-up purchases, therefore links the western socio-economically and politically privileged consumer to complex global relations of cheap labour, long-distance haulage, neoliberal capitalism and historical events of colonialism and slavery, which has present-day felt ramifications (Perrotta, 2020).

Waste as the product of colonialism and capitalism

The extractionist mindset that is enabled by capitalist ideologies that underpin much of our waste generation and disposal practices is evident when we acknowledge the ways in which consumer waste changes our landscapes, and the bodies, (including human), associated with these landscapes, through the creation of managed and unmanaged landfills and other dumping sites. Maxwell (2023, p289) refers to these as “colonial landscapes of modern-day capitalism” to figure the enormity of the problem and what our waste can tell us about contemporary politics, as the connections between our rubbish, capitalism, and colonialism become clearer. Maxwell (2023) is also referencing the directional flow of the waste issue, as the global waste trade, or waste colonialism (Peryman et al, 2024), seems to flow almost unilaterally from the conceptual global north, consisting of the over-developed nations (Braidotti, 2020) with high gross domestic incomes (GDI), to the global south, or the underdeveloped, low GDI countries. However, Wang et al (2022) suggests that the issue of waste colonialism is not strictly one of developed countries to

undeveloped countries, or from the core of the capitalist, product manufacturing countries to those on the periphery. Even though these peripheral regions, and the human and non-human bodies that populate them, are frequently positioned as available for the plundering of raw materials and for the dumping of rubbish onto, waste colonialism also occurs within countries and between countries in the same conceptual hemisphere, making the problem a much more complex one.

From a new materialist perspective, waste colonialism, as the byproduct of western capitalism, affects not only the natural environment, but also the human and non-human bodies that inhabit those environments. Mountains of rubbish create new landscapes, and new human and non-human ecologies as human bodies (waste pickers, people living near landfills or other wastescape, municipal landfill workers) and non-human bodies (animals, insects, plants, bacteria) interact with the new landscape. My cartography notes the mountain of discarded clothing in Peru that is the byproduct of our participation in fast fashion (Maxwell, 2023), and swamps, beaches and roadside ditches filling up with e-waste in Lagos, Nigeria, which look the same as the mountains of e-waste accumulating in Guiya, Mumbai or Accra (Sullivan, 2014). The global waste trade that delivers the heaving amounts of waste is enabled by our need for a new electronic gadget, or a new item of fast-fashion. Yet these changed landscapes are rarely deserted. As Hird (2012, 2013) pointed out, it is land in the margins of society that is changed and colonised by western, consumerist excess, land that is populated by non-human and human life, especially Indigenous people, socio-economically disadvantaged people, far-out rural communities, and other disadvantaged groups that have been designated by androcentric, anthropocentric and Eurocentric value holders as less worthy and as discardable.

Spelman (2011) positions garbage as an epistemologically privileged resource that can further our understanding of communities, individuals, and of ourselves. One such understanding is that satisfying our consumerist needs is made easier by the abstractness of the waste that the local and global waste trade enables as it removes our waste out of our sight. This is especially true in a westernised first-world country like New Zealand, where many of us have some measure of spending power to participate in consumerism that goes beyond buying essentials and extends into buying by choice. The consequences of these consumer choices are an abstract notion as our efficient municipal waste collection system removes the waste from our lives. This abstractness is enabled by the colonialist foundations of capitalism (Perrotta, 2020) and the flows of waste from privileged areas and people to underprivileged regions, and all the human and non-human entities who populate these regions.

Moore (2015) refers to our historical time period as the Capitalocene when discussing this problem of consumer waste and its connection to the abstract forms of labour that provide the foundation of consumerism and also of disposal. The Capitalocene, which Braidotti (2020) links to consumerist greed, is a time period that links you and me and our rubbish in the contemporary capitalist world-ecology temporally to sixteenth century colonialism, when western markets flourished on the backs of unseen, far-away abstracted notions of labour, natural resources, time and space (Kim, 2024; Perrotta, 2020). Slaves, as the exemplar of a far-away abstract labour source, were used as far back as the ancient world, to benefit the pockets of those who could afford them, since long before sixteenth century colonialism and the rise of large-scale capitalism (Perry et al, 2021). Driven by capitalism’s constant need to consume, *natural resources* like the bodies of people, land, animals, plants

and water, amongst others, are enslaved and come to be viewed as other (Ricket, 2021). *Others* are categorised as plunderable, extractable and usable in capitalisms' relentless processes of production and manufacture. The designation of some natural resources as other is based purely on human-led categorisations (as opposed to any natural, innate characteristics) that draws borders around some life forms as suitable for slavery and not others.

Along my cartographic travels, I also encountered other words that are used to describe the relationship between capitalism and its effects on the human and non-human environment, such as environmental imperialism, eco-imperialism, green imperialism, corporate imperialism and corporatocracy. These words all link the concept of colonialist power in particular, which include slavery ideology and abstractness or distance between slaves (including all the bodies that perform slave labour like animals, plants, land, and human) and the ones who benefit from their labour, like you and me, to capitalism. Stories of profit and money, extractionism and power, and also unresolved histories and injustices, are embedded in the terms Capitalocene, wasteocene, corporatocracy and the various iterations of imperialisms. They reflect the power stealthily embedded in the consumption demands of consumers with buying power in capitalist-driven societies, and the waste that this consumption necessarily produces.

Green Imperialism, the twin sister of eco-imperialism, specifically capitalises on potential solutions to the environmental problems, such as waste, by producing new environmental technologies that can increase profits while soothing the conscience of consumers, manufacturers and producers who continue to produce waste (Pratt & Montgomery, 1997) through their economic activities. Corporate Imperialism is a term used to describe the neoliberal corporate practices of

international expansion, the purposeful driving of production and consumption patterns while these same corporations exert an ever-extending influence over policy making and society, illustrating the flow of power relations and profits embedded in our waste products (Peryman et al, 2024). Corporate imperialism links to systems of power that were established during colonial times and, alongside more contemporary ideologies, such as neoliberalism, explains how it is that our socio-economic relationships allow for so much pollution and degradation of natural places (Peryman et al, 2024) while ignoring the large-scale consequences of this. Corporate imperialism and corporatocracy both reflect the disproportionate amount of control in the hands of relatively few large corporations, and the resultant power that this control yields to them over national and international policy makers, economies, and over society in general. This asymmetrical power exacerbates old, and generates new, inequities and continues to deplete planetary resources and impacts all the bodies that live on this planet (Peryman et al, 2024) but not in the same way, depending on how a body is positioned in relation to the powerful decision-makers.

Corporate imperialism, with its colonial connotations, also links us back to the generations before us and helps us to make sense of the concept of legacy pollution. Legacy pollution takes account of the networks of relations that travel across time and space into both the past and the future, as we deal with the rubbish left by those before us while constantly creating new rubbish for the generations of humans and non-humans after us to deal with. Plastic waste is a good example of legacy pollution, because of the intergenerational, trans-boundary, nomadic nature of plastic waste. Plastic pollution across the lifespan of plastic, is connected to many cultural, historical and political injustices, starting from extraction of raw materials to production and manufacture and finally to product consumption, discarding the

legacy of rubbish and pollution that the plastic life-cycle leaves in its wake for future generations (Peryman et al, 2024).

Armiero (2021) also locates waste as the byproduct of capitalism, and as one that creates many kinds of human and non-human waste. Similarly, Moore (2022) positions the problem of waste in the nexus between capitalism and colonialism by describing capitalism “a history of waste” (pg 5) resulting from civilising projects. These projects sift out those who are valuable and deserving (the ones with enough money, the right gender, the right skin colour or the right species), from those who are not, and who are easy to forget about because of the abstractness or distance between the practices of consumption and disposal. This process of sifting, sorting and classifying of people according to who is civilised and who is not, is again reflected in Mbembe’s (2019b) concept of borderising. Borderising is a global practice of putting up material structures (e.g. walls, fences or landfills) and immaterial practices (laws, attitudes, values, property prices, narratives) that classify and group, include and exclude, in the name of managing risk and safeguarding wealth and identity. As in the case of local landfills, the global waste trade also uses various socio-cultural practices to create borders between people and other non-human life forms, separating valuable life from invaluable life. The camp of valuable life enjoys the benefits that come from being wanted, such as political power and socio-economic privilege. The camp of invaluable life is associated with the detriments of this classification, such as disempowerment, lack of privilege and being subjected to colonialist practices. This is because the classificatory practices are based on socially embedded androcentric, anthropocentric and Eurocentric ideologies that treat some life forms as disposable while reproducing and reinforcing

ongoing structural inequities such as racism, economic inequities and waste colonisation.

Topographical feature - The internal governing effects of waste on bodies made visible in emotions and commercialisation

There is widespread awareness of environmental devastation caused in large by human activities. I have charted the effect of anthropogenic waste and its dire consequences for marginalised human and non-human life, but even within the developed nations and amongst socio-economic and politically enfranchised groups the impact of the environmental devastation is experienced differently amongst different groups. Hickman et al (2021) conducted a global study amongst young people from both developed and underdeveloped nations and found that 60% were extremely concerned about the climate, with half of them feeling sad, angry and powerless to do anything about it. Stanley et al (2021) points out that climate change is contributing to depression and anxiety but that research has largely ignored the other affective experiences that are also related to climate change, such as feelings of frustration and anger. The same authors found that eco-anger was correlated with better mental health outcomes and more pro-environmental activist engagement, whereas eco-depression and eco-anxiety were correlated with lower levels of wellbeing.

Hickman et al (2021) positioned the emotional distress about climate change as a moral injury, after finding that nearly half of the young people surveyed reported that their distress about the climate affected their daily functioning. Wu et al (2020) called for psychologists to respond to the increasing climate distress before it leads to long term health and developmental trauma. Like Wu et al (2020), they also

extend a warning about the mental health effects of increasing worry and sadness about climate change. Tasnadi et al (2018) point the finger for the responsibility of waste and environmental degradation to the economics of capitalism and consumerism that includes the ongoing and thoughtless exploitation of natural resources, the corruption of governments, the manipulation and control of socio-economically empowered consumers' minds and behaviours through marketing and advertising which enslaves them to products of all kinds, and causes what Tasnadi et al (2018) refer to as the "disease of shopping" (p 102).

This disease of shopping is fuelled by the neoliberal commodification of everything (Mbembe, 2019a). From material goods and land and bodies, to immaterial commodities like mental health and knowledge, everything is available as a marketable product. The environmental crisis itself is capitalizable, as seen earlier in my cartography in the rise of eco-capitalism and green imperialism.

For a commodity to become classified as waste, however, it has to undergo an ontological change, in other words, the consumer has to decide at some point after the purchase, that it is waste. A cup is found as a cup on a shelf in the shop, and it stays a cup, a desirable commodity, but at some point, it changes ontologically from being a desired cup to undesired garbage (Kennedy, 2007). The cup changes from being wanted to unwanted for any number of reasons. Perhaps it simply broke, or maybe it was sitting in the back of the cupboard, once embodied and embedded with familial connections and memories, now forgotten behind newer cups with catchier slogans, reflecting the way that some people and relationships are made redundant by newer versions, and their value changed from wanted to unwanted. Living in a capitalist society that constantly pushes for new and novel, while discounting the value of the old, means that a lot of rubbish is created because the

money-driven values that underpin it changes the ontological meaning of the things that we buy, to rubbish, and not necessarily because the items no longer function, or break irreparably, or are used up.

Waste, as byproduct of consumption, is thus a material indicator of a capitalist ideology that encourages excess – an excess that can be satisfied by increased plundering and extraction from nature and from people who do not have the power to refuse (Perrotta, 2020), enabled by the anthropocentric, Eurocentric value system inherent in capitalism. A large part of our waste is thus created because economically privileged consumers choose to designate a commodity as waste, which is easier to do when there is always more to buy and when we are entrenched in an individualist, isolationist disconnect from the waste that our consumerist objects will become. One form of waste that seems to be in never-ending supply, is plastic.

Mapping the socio-cultural history of plastic

Meikle (1995) and Roberts (2013) point out that plastic, as substance, has no cultural value until it takes on a specific shape, such as replacement limbs, heart valves, toilet seats, infant feeding bottles, medical tubes and toys, or replacements for leather, grass, glass, or wood. Its transformation into a culturally useful and commodifiable form is a display of agency that enables it to serve a purpose, satisfy demands, take on cultural meaning and interact with its environments in ways that are both predictable and unpredictable.

Since plastic is a socio-technical material it might be more useful to think of plastic in terms of process, rather than function, because it emerges out of the events in which it participates (Michael, 2013). This is apparent from the cultural history of plastic, which is deeply intertwined with our own social needs and desires, as well as capitalist ideology. Barthes (1988) wrote that plastic has bourgeois origins.

By the mid nineteenth century, the need for a new type of material to be invented to replace ivory became apparent. The popularity of billiards was causing a strain on natural supplies of ivory, obtained through the killing of elephants (Science History Institute, n.d.). A plastic material was invented in response to this challenge, followed soon after by Bakelite, the first true plastic because it contained no natural compounds at all (Science History Institute, n.d.). Plastic could now replace any natural material, including tortoiseshell, horn or ivory. Bakelite was a great insulator, and it was durable, heat-resistant and suited to mass production because it could be moulded and shaped into almost anything, with its most serious drawback only being that it lacked flexibility (Meikle, 1995). The impact of Bakelite was of such proportions that by 1924, Bakelite became synonymous with plastic as well as cultural modernity (Meikle, 1995). The invention of plastic thus signified the beginnings of the manufacturing era where humans no longer depended on natural resources like animals for the production of consumer goods. In this sense, plastic was positioned as the saviour of the natural world and of the animals whose body parts previously supplied things like billiard balls, piano keys, harness fittings, denture plates and small novelty items (Meikle, 1995). All these items would have been of interest only to those with sufficient time and money resources to engage in activities like playing piano, billiards, shopping or horse or horse drawn carriage riding.

Plastic thus started life hailed as the liberator of the natural world and of the people who were no longer constrained in their economic activities by the limitations of finite, seasonal, and expensive natural resources (Science History Institute, n.d.). Its presence in our cultural mindset as a hero material, capable of saving the natural world, easing economic struggles for people and promising to be anything anyone

wanted to make it into, continued as it was enlisted into second World War efforts, where plastic provided the necessary synthetic substitutes for scarce natural resources. In the form of Nylon, a synthetic silk substitute, it was used in the military for parachutes, body armour, ropes and, as Plexiglass, it was a substitute for glass in military aircraft (Science history Institute, n.d.). Plastic was also used in aircraft cockpit covers, mortar fuses, bayonet scabbards, lining inside helmets and in the making of the atom bomb (Meikle, 1995). The agency of plastic affecting human and non-human bodies was already apparent.

Once the war was over, plastic became the comforter of the people, helping to restore a sense of normal life by providing cheap toys (hula hoops, Barbie dolls, frisbees, model cars and planes, Lego blocks), home decoration and furnishings in the form of Formica tabletops and plastic appliances and crockery, Tupperware, Naugahyde furniture and Styrofoam for protecting delicate eggs. Plastic made its way into shoes, cars and onto Christmas trees (Meikle, 1995). Over time, plastic has become the workhorse material of economic production (Jacques, 2023) and has entered every sphere of our lives, from medical equipment and food packaging, to cosmetics, fabric and toys. Perhaps less obvious is the role that plastic plays in our technology, enabling not only cars, but also our lightweight mobile phones, electronic entertainment devices and anything else requiring an LCD screen, because of the strength and electrical and thermal insulation that plastic provides (Farrelly et al, 2021). Over time, traditional, natural materials consistently lost out as plastic slowly replaced them all (Freinkel, 2011), with the last natural material frontier that it has not (as yet) completely replaced being organic human and non-human bodies, including yours and mine.

Plastic thus exists in the events of which it is a part, including the social and material elements that constitute that event (Michael, 2013), such as the need for cheap plastic toys as material elements that can help restore a sense of wellbeing and economic security after a major world war. The history and development of plastics, and how this material became so intertwined in our daily lives, highlights how their development arose out of a socio-cultural need, providing solutions first to replace bourgeoise items that relied heavily on natural resources, and then to replace those resources in almost every facet of life. Plastic permeated our socio-cultural and economic world as a hero. It heralded as a saviour for the environment and the animals and financially liberated people who were restricted in their economic activities by the finite, costly and seasonal availability of natural resources. Plastic became invaluable during the second world war before turning gallantly to the role of normaliser and stabiliser of society by offering affordable comfort and need satisfaction to post-war consumers. This *everywhereness* of plastic (Hawkins, 2017) and its ability to respond to human needs and desires to such an extent that it enables the winning of a war, or the settling of a collective mindset after the war while enabling greater economic prosperity to many people, already reveals the past, present, future and potential, governing power of plastic.

Plastic has since changed from being considered a hero, to being framed as an ultimate villain. During the 1960's, a time when environmental consciousness started growing as people became increasingly aware of the dangers of pesticides, oil spills and polluted waterways, plastic started becoming visible in the ocean, and its persistence became troubling (Science History Institute, n.d). Instead of being the material that indicated quality and socio-economic affluence, as it did when plastic replaced ivory and tortoiseshell for upper-class citizens, plastic became synonymous

with cheapness, superficiality and conformity, especially as disposable single use plastics increased (Science History Institute, n.d). But by the time the persistence of plastic was noticed, especially in the form of plastic waste, it had already infiltrated every sphere of our lives, and, as Meikle's (1995), observed, the average person, presumably referring to the western, economically privileged consumer, had become conditioned to (or governed by) plastic.

Chapter 2 - Wicked agency and mundane governance

There is practically nowhere, and no life form, on earth today (and beyond, as evidenced by the problem of anthropogenic waste in space) that is not touched by plastic in some way or another (Farrelly et al, 2021). The word plastic serves as an umbrella term for materials that are composed of many different molecules, that allow for the property of being moulded while still soft, but which will eventually harden to retain the desired shape (Ramli et al, 2024). Plastic is big business and is not only a major contributor to the global economy but the global trade in plastic waste is itself a multi-billion-dollar industry (Wang et al, 2022). This means that many people from all over the world benefit economically from plastic in one way or another while simultaneously being part of what Haas (2021) described as large-scale self-destruction and mass murder when referencing the effects of anthropogenic waste on all life forms. Our oceans are particularly affected by plastic production and use, with a truckload worth of plastic being dumped into the ocean every minute. This volume is set to double by 2040 (De Groot & MacNeil, 2025), because plastic disposal, from plastic consumption, is increasing (Khan et al, 2019) (both economically and physically).

Plastic has also been found in the Arctic Ocean, in more than three quarters of the worlds' tap water samples, in honey, in beer, in sea salt and in the air, and in one hundred percent of the animals that were tested from the deepest reachable part of the ocean, the Marianna Trench (Farrelly et al, 2021). Plastic represents a specific form of rubbish that is not only an epistemologically privileged resource due to its longevity (Spelman, 2011), but because it is so ubiquitous, the term plastisphere was coined to describe the synthetic ecosystems that can be found developing on plastic

debris (Vithanage et al, 2025), entangling our consumer behaviour once again in posthuman relations with non-human bacterial ecosystems.

Plastic is thus a defining feature of contemporary capitalist society and a major source of the pollution that is enabled by capitalism (Van Rensburg et al, 2020), with dire consequences for all life forms. Single use plastic is particularly problematic, especially in light of the microplastic problem, and constitutes roughly half of the world's plastic waste (Cornago et al, 2021). Due to its applicability to almost every sphere of our lives, some authors have started using categorical psychological pathologizing descriptors like plastic attachments (Sattlegger, 2021a), plastic dependency (Simon, 2022) and plastic addictions (Meyer, 2025) to describe our relationship with disposable plastic. The term Big Plastic (in line with Big Pharma, Big Oil, Big Tech) also refers to the power and political influence that the plastic industry has on government, policy making and on individual people (De Groot & MacNeil, 2025).

The global mismanagement of plastic, either through a lack of infrastructure, or through excessive plastic production, contributes significantly to our anthropogenic waste problem (Diggle & Walker, 2022). The current volume of global plastic production and consumption is not sustainable from an ecological perspective (De Groot & MacNeil, 2025) because all plastic, whether responsibly managed or not, eventually enters the biosphere (Farrelly et al, 2021). Plastics that make their way to the oceans will remain there for centuries and work their way into the marine food chain and into the bodies of the people that consume marine life. Plastics that do not reach the oceans or are not recycled find their way into landfill sites where they leach their toxins into the surrounding land and ecosystems. Alternatively, they may be incinerated, a process that also releases a toxic cocktail into the surrounding

environment (De Groot & MacNeil, 2025) that human and non-human bodies have to inhale.

Due to their chemical composition, plastics are not readily broken down by natural agents in the biosphere, and, once disposed of, they are exposed to the elements in the forms of wind, sunshine and water and are eventually broken into tiny pieces of microplastic or nano plastic that are small enough to penetrate the cell membranes (Farrelly et al, 2021) of animals, including humans. These microplastics are particularly concerning (Wang et al, 2022). Simon (2022), describes microplastics as a poison that is in the air that we breathe, in our food, our clothes and our homes. Microplastics often contain toxicants, like Bisphenol A and styrene, along with plasticizers, flame retardants, colourants and UV stabilisers, all of which leach into and bioaccumulate in the flesh and organs of the human and non-humans bodies that are penetrated by micro and nano plastics. When bodies lower down the food chain become food for those higher up, these toxins magnify and accumulate in increased concentrations as they ascend the food chain, causing ecological and biological havoc (Farrelly et al, 2021). All bodies suffer serious consequences from microplastic ingestion and inhalation, which has been correlated with diabetes, hormone disruptions (including phytohormone disruption in plant bodies (Zhuang et al, 2025)) and cancer (Simon, 2022).

The violence of plastic

Leonard (2011) shows that the typical, linear model of the materials economy, which provides us, as consumers, with all of our plastic, excludes the broader ramifications of plastic relations, such as mismanaged pollution, environmental degradation, microplastic ingestion and asymmetrical power relations in the global

waste trade. It presents only a neat, clean economic process, devoid of the messiness that, in reality, constitutes the materials economy.

The materials economy refers to the economic process of transforming natural resources into commodities (Bridge, 2009), and, by implication, their correlates in waste. It is typically depicted as a straightforward production→ transformation→ consumption → disposal process (Bridge, 2009). As a form of organised violence, the materials economy upholds contemporary forms of capitalism (Mbembe, 2019a). It starts with the, more-often-than-not, violent process of extraction of natural resources, in the more-often-than-not underdeveloped nations and pockets of the world, where many people and local environments and ecosystems are adversely affected by the process of extracting these natural resources (Leonard, 2011).

The materials economy is thus not a neat, logical sequence of events. It involves many muted actors (Godin et al, 2025) whose agency is overlooked, such as the bodies of plants, animals, water, land and marginalised people who are not always recognised as agential, and often forcibly silenced (Andreucci & Kallis, 2017). These bodies form the “undesired masses of populations” (Mbembe, 2019b, p. 9), the mostly unseen or unrecognised elements of the capitalist economic model. All the elements of this model, recognised and unrecognised, animate and inanimate, constitute a complex network of intricate relations and agential capacities that affect one another and are in turn affected (Fox & Alldred, 2015). The plastics economy, which is embedded within capitalism, is equally as complex and relational as the capitalist economic model.

Capitalism is inextricable from the problem of the general anthropogenic waste that this economic model enables, and colonialism, mapped in my cartography as implicit in capitalist practices, is also deeply engrained in the plastic waste industry (Gündoğdu, 2024). When one group of people dominate another group in their homeland through waste and pollution this is referred to as waste colonialism (Gündoğdu, 2024). From the inception of classical imperial colonialism, a product lifecycle revolving around a coercive arrangement of social relations aimed at extracting natural and human resources, has always been present, including the process of basic capital accumulation and the creation of captive marketplaces (Stoett, 2024). The waste aspect of any product's lifecycle is often skipped over, even though waste plays a major role in the legacy of toxic colonialism and structural inequities (Stoett, 2024). While classical imperial colonialism is often associated with obvious and recognisable forms of violence, such as massacres and torture (Kalman, 2010), or rape and brute force (Dwyer & Nettleback, 2018), Stoett and Omrow (2021) have described the waste associated with extraction of natural resources for plastic as a form of eco-violence. This is because of the violent nature of the extractions themselves, (blasting, digging, drilling, and land-clearing activities such as cutting and burning) but also because the indigenous populations and local marginalised groups (including the non-human life forms) often bear the brunt of these wasteful practices. When human bodies resist these extraction activities, they are often met with violent repression (Andreucci & Kallis, 2017).

The important aspect of this flow of waste from developing nations to developed ones, and back again, is that western colonialism, predicated on violence, (Dwyer & Nettelback, 2018), has enabled these relations, including the extractionist violence and associated waste, which is often masked as *development* for

everybody's benefit (Andreucci & Kallis, 2017), and that much of it has been achieved through violence and even genocidal practices (Stoett, 2024).

The unequal governance of plastic leads to much of the plastic waste, and the resultant social and environmental harms, being relocated far away from the economically able consumers and closer to low-income level communities and areas referred to as the global commons (Stoett, 2024). The global commons reference areas that do not belong to any country, such as the deep sea, the atmosphere or outer space (Oral, 2021). When plastic waste is relocated, the recipient nations or areas often suffer from inadequate waste management infrastructure, leading to plastic leakage (Barnes, 2019) and the negative health consequences on the marginalised human and non-human bodies living near the plastic waste management areas, such as landfills or plastic incinerators. It is often the poor, socially marginalised people, and particularly women who are affected by the flood of plastic waste, especially in African countries (Wakunuma, 2021) and Latin America. In both these regions, women are also overrepresented in the informal employment sector, including that of waste-picking (Ogando et al, 2017). Waste pickers are the men, women and children who physically pick through the waste in landfills, or collect directly from household, business or public park rubbish in order to retrieve and sort recyclable goods, such as plastic (Dias, 2016). However, women have more safety concerns, and are disadvantaged in terms of earnings and working conditions. They also frequently have to care for households, engage in unpaid domestic labour, care for young children, and have less access to funds for starting small businesses (Ogando et al, 2017), funds that can come from plastic waste collecting. Dias and Fernandez (2013) find that women waste pickers in these countries are generally

paid less for the same amount of recycled goods collected as men are while also enduring gender-based violence (Ogando et al, 2017).

Plastic injustice, or blue injustice, is an environmental activist theme that highlights the way that lack of effective waste management in one area, such as a heavily industrialised large market economy, has detrimental effects on people and other life forms far away, or the ways in which those who contribute the most to the climate problem suffer the least from it (Stoett, 2024). For instance, these effects are experienced when ocean currents, tsunamis or storms cause discarded plastic to wash up on the shores of distant islands, or when the sunny, sandy holiday hotspots of the southern hemisphere become engulfed in plastic during the trash season of tourism (Kerber & Kramm, 2021). While this is arguably not the same as intentional waste colonialism, it is plausible that foreknowledge of the plastic's ending up on the unintended shores, exist (Stoett, 2024), but because nothing is done to stop it, it still constitutes an act of violence.

The Circular Economy as an upholder of plastic consumption

The Circular Economy (CE) is a direct link between plastic waste and consumer behaviour. It is a proposed solution to sustainable development practices that includes a new plastics economy which aims at addressing the environmental problems caused by the production, consumption and disposal of plastic (Wang et al, 2022). The concept of circular economy means different things to different people (Wang et al, 2022) but it is mostly used to refer to a combination of reduce, reuse and recycle activities (Kirchherr et al, 2017). It includes concepts like the optimisation of resources, repairing and fixing instead of buying new, responsible consumption and sustainable supplies (Pihlajarinne, 2022). With its goals of overall economic

material efficiency and extending the value of existing products, the CE aims to reduce the environmental impact of our economic activities (Ramli et al, 2024). The idea of a product having an end-of-life is replaced by restoration and the use of renewable energy is promoted while discouraging the use of toxic chemicals that might prevent reusing and recycling. The CE thus strives to eliminate waste altogether through the use and implementation of better materials, products, systems and business models to support sustainable economic development (Ramli et al, 2024). Discussions on sustainability, however, cannot be divorced from the concept of plastic consumerism, since plastic constitutes such a large part of the CE.

Tasnadi et al (2018) refer to consumerism as a cancer borne out of despair, and positions this disease, which is eating away at society, as being located within the neoliberal capitalist economic model that places a financial value on everything, including the bodies and, where applicable, the lived experiences of all living beings.

Sustainable development and the circular economy are thus entangled with neoliberal marketing practices that continue to push for economic growth through continued trade activities, while it simultaneously marketizes the CE and sustainability for financial gain by appealing to the more affluent consumer to make environmentally friendly shopping choices (Jones & Stafford, 2021). Thus, the concept of sustainable development has been coopted by neoliberalism (Obeng-Odoom, 2014) and is used in marketing tactics like green marketing and eco-consumerism. The neoliberal economy uses these corporate greenwashing tactics (Stafford & Jones, 2019) as a capitalist strategy to increase profits. However, the prompting to go green could have the adverse effect of intensifying some neocolonial activities such as increasing the amount of second-hand clothing, that contains much

plastic, to flow from green-minded consumers in the developed nations, to developing nations as second-hand stock (Stoett, 2024).

Neoliberalism in particular, refers to the idea that the market exchange is able to guide human action and therefore is a form of ethics in itself (Harvey, 2020). The doctrine of neoliberalism has dominated the political and economic landscape in the western world since the 1970's (Harvey, 2020) and it promotes the idea that free markets lead to individual freedom and economic benefits for all actors without state interference (Jones & Stafford, 2021). Economic systems like neoliberalism that are focused on constant growth are not only at odds with the environmental crisis, they also prevent governmental interventions that could have a greater positive impact on the environmental crisis, such as taxation, subsidies or legislation, than what current neoliberal approaches that leave the choice up to the consumer have (Jones & Stafford, 2021; Stafford & Jones, 2019). When markets are positioned as an entity that is separate from society and therefore not restrained by any form of intervention, self-regulated markets, like neoliberal capitalist markets, can destroy society and nature as they receive increasingly less protection from the constant growth of these markets (Jacques, 2023).

The importance of a specific consumer within the CE is also evident when much of the research on proper waste management, including that of plastic, focuses on the role of the economically privileged consumers in a reverse logistics process, which involves collecting used products, sorting them for reprocessing into new products, and then redistributing the new products (Khan et al, 2019). The economically privileged consumer is thus positioned as both the neoliberal shopper who consumes too much plastic, as well as the entity in the network of plastic relations who is responsible for cleaning up the environmental disaster caused by

over-consumption of plastic. Nowhere in this reasoning is the agency of the multitude of other actors involved in the plastics material economy featured.

The classification and categorisation of bodies, whether animal, plant or human, is also evident in the discourses of the CE that focus on sustainable development. These discourses are embedded in a capitalist and consumerist way of life that inherently favours certain bodies over others as the CE is also underpinned by androcentric, anthropocentric and Eurocentric extractionist values. This is apparent in the writing of some authors on sustainable development, especially those from the conceptual North, who tend to focus on ways in which the current environmental constraints can be overcome *so that* affluent standards of living can be maintained. Concern for the development and access to resources for all people in the world has not been given much attention (Mitlin, 1992). After the millennium, Alaimo (2012) notices that sustainability discourse, at least in the United States where she writes from, echoes the conservation discourse from a century earlier, where the natural world is positioned as a storehouse of resources for the elite. These discourses show a heavy anthropocentric, racist and classist bias as much of the conservation efforts were driven by a desire to ensure that America's resources are for some groups only, and not for others, such as immigrants. She also points out that contemporary sustainability discourse is driven by anti-immigration sentiments and the desire to entrench systemic inequalities (Alaimo, 2012).

The linking of sustainability to constant economic growth is also questioned, as sustainability has come to imply that some bodies can maintain living standards and comforts despite the economic and environmental crises. It has also been suggested that the word *sustainability* serves more of a psychological wellbeing

function that allows us, the economically privileged consumers who continue engaging in plastic consumption, to ignore the impending apocalypse (Alaimo, 2012). We, the privileged consumers, live knowing that an ecological catastrophe is probable, but we continue as if it is not (Zizek, 2010).

In the absence of strong governmental involvement, relying only on market forces to address the environmental crisis has negligible effects, and CE concepts like *eco-consumerism* serves mostly to ease consumer guilt (Stafford & Jones, 2019). Van Doorn et al, (2025) also demonstrated that when governments do step in and attempt to control aspects of the market through enacting regulations to decrease the use of plastic bags, outright banning or charging for plastic bags, it has a positive effect on consumers by strengthening descriptive social norms to avoid plastic, which then has a knock-on effect on other forms of plastic use such as water bottles. Current neoliberal ideology that focuses on a free market, however, instead of governmental regulation, encourages not only policies that are environmentally destructive (Jacques, 2023) but also questionable ethics and behaviours, such as designing products with a built-in obsolescence to increase spending amongst consumers (Emsley, 2006), which in turn leads to a relaxed attitude to disposability, creating what is known as the throwaway culture.

Throw-away culture enabled by plastic

McDermott (2016) asserts that the throwaway culture has created an attitude of disrespect for our material products, and it is this attitude that turns our natural resources, (which is an anthropocentric way of referring to all plant and animal bodies, which includes human ones, as well as to the earth), into rubbish after a single use. Throwaway culture, which has become synonymous with fashionableness, relevance and modernity (Chirisa, 2013), overlooks the connection

between the world's poor and the fragility of the planet because when it is the poorest sectors of society that are more closely dependant on a healthy environment, they also suffer the most when the throwaway culture turns that environment into rubbish (McDermott, 2016).

Consumer attitudes and expectations play an important role in the development of product lifespans, which in turn affects the decisions made to manufacture disposable products or products with a longer lifespan (Pihlajarinne, 2022). Consumer attitudes toward product lifespan also play an important role in their own choices with regards to repairing existing products or choosing to dispose of them and purchase new ones, and for how long they are willing to use the same products overall (Pihlajarinne, 2022). The culture of waste, however, arose out of mass production techniques, providing consumers with cheap product options, so if lengthening the lifespan of products is an aim of sustainability, Pihlajarinne (2022) states that it would be necessary to devise techniques to shape consumer behaviour patterns and practices.

Tasnadi et al (2018) approaches the paradoxical relationship between the attitude of disposability and the consumers responsibilities within the circular economy to reduce and reuse, from a different angle. Since the neoliberal economic model generates corruption, a wasteful attitude and addictions, Tasnadi et al (2018), suggest a change of conscience that includes a careful, relational and ethical consideration of how we act and the consequences of our behaviours for other human and non-human life forms.

Neither of these approaches, put forward by Tasnadi et al (2018) (a reconsideration of our actions and consequences) or Pihlajarinne (2022) (finding

techniques to shape consumer behaviour), seems to me to address the paradoxical relationship between consumers in a throw away society, where market forces encourage continued consumption of plastic, and the CE that expects the consumer to reduce and reuse plastic. Placing the ethical responsibility for environmental and human protection solely on the shoulders of the individual, socio-economically privileged consumer indicates a narrow focus that ignores the continued pressure on the consumer to participate in shopping and also the roles played by all the other actors in the lifecycle of disposable products.

Also going unacknowledged is the rampant and unchecked growth of free market economies like neoliberal capitalism where the global flow of plastic is embedded in socio-ecological protections which allows plastic and capitalism to organize one another (Jacques, 2023). In other words, as capitalism evolves so too does plastic. For instance, plastic is an integral part of treadmill of production (Gould et al (2004), which describes the observation that after World War II, capital investments increased production, leading to a correlating increase in the use of natural resources and production processes that were chemically and energetically intensive. As capitalism evolved into its current neoliberal form, plastics evolved as well to being the third most manufactured material that is increasingly inextricable from modern, western, neoliberal ways of life (Jacques, 2023). Neoliberalism also intensified the unequal flow of plastic, especially in the form of waste, to the global South labour markets and ecosystems (Gould et al, 2004).

In this way, the development of capitalism and plastic goes hand in hand, organizing one another, and leading to a faster rate of plastic pollution (Jacques, 2023), causing the plastic pollution problem to grow along with the economy. However, my cartography also maps signs of other avenues emerging for

approaching the plastic pollution problem, and some of them prioritise bodies rather than profits, for instance, framing plastic pollution as a human rights violation rather than as just another marketing opportunity, as neoliberal marketing practices would do (Stoett, 2024). This approach can be seen in the work of Schurman-Grenier (2019), who argued, from her location in Gambia, that plastic pollution is a violation of the human right, set out in the African Charter of Human and People's Rights, to a healthy environment. McDermott (2016) echoes this viewpoint when emphasising that every person (and I add non-human life forms as well), has the right to exist in an environment that is free from toxins and plastic pollution. This approach highlights that sustainable development should be a pursuit for international, intranational, intergenerational and intergender justice, and not a marketing tool (Stoett, 2024). Until the plastic pollution issue is seen as a justice issue, and treated as such in international diplomatic circles where large scale decisions are made regarding the environment and the effects of plastic pollution, those who are faced with the injustice of the problem, such as health and development challenges, will continue to live precariously alongside the influx of plastic pollution (Stoett, 2024).

So far in my new materialist, critical cartography, I have chartered the transdisciplinary landscape of general anthropogenic waste before following the trail of plastic and it origins as a socio-cultural material. This trail has led me through a complex and non-linear journey to the rugged landscape that embodies the wickedness of plastic waste, where the impact of plastic waste on all living beings (plants, animals, humans, land, water) and the air, becomes even more apparent. Pathways that haven't yet emerged for me and my dubious companion and guide so far however, are those that thread through my academic discipline of psychology: it's presence and origins seem more difficult to access. Given that the discipline of

psychology is about people, their health, pathologies, livelihoods, inequities and everyday lived experiences, we wonder at the presence of absence in research of the wickedness of plastic in the discipline.

Locating coordinates (and bodies) – where is plastic pollution in western psychological territory?

The state of the planet, and our relationship with the natural environment is currently the biggest challenge to survival facing all human and non-human life forms, each one differently, since people and other life forms are all variously positioned in relation to western dominance and western ideology that separates humans from the natural world. Due to our dependence on the planet for our survival, all other concerns are necessarily secondary, and as such, all academic research, from any of the various disciplines, should be focused on how to stop and possibly reverse the current climate decline (Horsthemke, 2025). Academic psychology has been slow to become involved in the search for answers to the current climate crisis, which is due in large part to our anthropogenic waste (Hibbard, 2003), particularly that of plastic. The climate crisis is thus primarily human caused, with unique impacts on different populations embedded in unequal power relations, which sits squarely in the field of psychological research.

WEIRD psychology

This tardy response from western psychology to the climate crisis could be due to modern psychology, as a distinct area of study separate from philosophy, originated in the developed west (Danziger, 2013; Sprung, 2001), meaning that the bulk of the findings from the experimental branches of psychology are based on western, educated, industrialised, rich and developed (WEIRD) nations, and specifically on American undergraduates (Henrich et al, 2010). American values tend

to be the most individualistic in the world (Henrich et al, 2010), and yet the knowledge derived from this research is automatically assumed to be applicable globally (Anderson & Ahmed, 2003; Henrich et al, 2010). This carries the potential of further marginalising other populations whose cultural beliefs, values and relationships with the natural world are different from those of WEIRD and American populations. Because of this, some schools of western psychology have also been accused of being a form of colonialism because they export the individualistic constructions that they generate through research, based on a Eurocentric worldview, to the Global south (Bhatia, 2017; Bhatia & Priya, 2021; Logan, 2021) while negating the specific practices and knowledges of other groups of people (Dudgeon & Walker, 2015). Western psychological practices, when it is exported in a colonialist manner, have devastating effects on human and non-human populations, cultural practices, and development plans (Adolfsson & Finyiza, 2024; Bedi, 2018; Deahl & Andreassen, 2024). Additionally, the discipline of psychology is historically entangled with the concepts of racism and inequality (Anderson & Ahmed, 2003; Awad et al, 2024; Hall, 2003; Henwood, 1994), eugenics (Pilgrim, 2008; Yakushko, 2019), sexism (Anderson & Ahmed, 2003; Condor, 1991; Henwood, 1994; Voss & Gannon, 1978) and androcentrism, which are all the same concepts that my cartography noted as underpinning much of the wickedness of plastic waste.

It is also the consumers who reside in the WEIRD countries that consume the vast majority of plastic (Hossain, et al, 2021; Lynn et al, 2017) and who enjoy the convenience that is offers, (amongst other things) the most (Bernat, 2017; Farrelly et al., 2021; Hawkins, 2017; Warner, 2009). Since the direct negative effects of plastic waste and pollution disproportionately affects people of lower socio-economic and political standing, and women in particular (Lynn et al, 2017; Wakunuma, 2021), and

mostly those who are in non-western countries (Cotta, 2020; Gutberlet, 2023) then perhaps it makes sense that psychology has been slow to respond to the crisis, as it is a crisis that that seems to be predominantly (but not exclusively) centred on populations that are not white, western, affluent or male. Psychological knowledge has always been used in war efforts in various ways (Matthews, 2020) indicating that psychology as a discipline is an active upholder of the some of the elements (war, violence, colonialism, preferencing production and capitalistic outcomes over human wellbeing) that has brought us to this point of climate crisis.

In our technology fuelled western civilisation, all forms of nature, including humans, are regarded as means to an end, through our almost exclusive focus on the bottom line which, in turn, inhibits any possibility of ecological concerns (Yunt, 2001). Together with this single-minded focus on profit, there is also a strong focus on reductive empirical science, especially in psychology, which reinforces the dissociation between our own wellbeing and that of the natural world around us. The personal and collective dissociation from our plastic rubbish and the multi-species harm it causes, mostly out of sight, also enables our modern, hyper-technical culture that wouldn’t even be able to exist without this dissociation (Yunt, 2001).

Mainstream psychology also tends to conduct the majority of its research into topics that are of interest to its main readers and supporters, namely those from the same WEIRD societies (Henrich et al, 2010) where psychology originated. When a disproportionate amount of the psychological research literature is focused on the WEIRD subject (Henrich et al, 2010), a psychological subject with enough socio-economic and political agency to make choices within a neoliberal, consumerist context, this subject becomes the implicit standard against which the problem of climate change and plastic pollution is framed within the psychological literature.

The problems that this narrowly defined subject experiences in relation to climate change and plastic pollution are very different from those experienced by the variety of populations (bodies) who live in close proximity to the waste out of necessity. These bodies are not necessarily passive subjects, nor do they lack in agency. There are powerful examples of people who live in close proximity to waste who do make choices that pertain to the environment, to pollution and to the economics of it. In Abidjan, West Africa, a group of women start before daybreak to collect plastic rubbish from the consumer-class neighbourhoods. This rubbish was initially sold for recycling, but now they are part of a project that converts this plastic waste into plastic Lego-style bricks, which is used to build classrooms and side streets (Hartocollis, 2019). This example provides an interesting display of the agency of plastic as well, because it is simultaneously the cause of a problem and the solution of another one.

In Ghana, Abugri Ajabow collects plastic bottle lids and turns them into beads, necklaces and musical cymbals that she sells, earning her enough money to maintain her family (Fufu & Baba, 2025). Although these are strong reminders of how the plastic waste trade affects different populations differently, it is worth bearing in mind that the non-western, non-affluent, non-western educated, and otherwise marginalised peoples, excluded from mainstream psychology studies, have individual agency that is enacted within the context of westernised, capitalistic neoliberal values that drive excessive plastic production and consumption in the developed west. These values are exported to less developed countries along with the plastic in the global waste trade, where it continues relations with women like Abugri Ajabow in Ghana and the brick-making women in Abidjan.

By privileging certain stories (WEIRD stories) while excluding others (Jussim et al, 2015), psychology research assists in the maintenance and safeguarding of specific worldviews. In these worldviews, subjects from WEIRD societies are privileged, valued, and more important than the subjects from poorer and undeveloped sectors of societies. These subjects' stories and bodies are marginalised and disposable as part of the borderising process (Mbembe, 2019b) that separates the WEIRD subject from the non-WEIRD. The bodies (and their experiences and stories) that are enclosed within the conceptual and geographic WEIRD fences and walls benefit from this safeguarding that highlights their importance, while the excluded and marginalised populations, the "undesired masses of population" (Mbembe, 2019a, p9) have no safeguarding to benefit from.

In this way, the enclosures and borders created by biases within the discipline of psychology, tarnishes those who are excluded from the safe and valuable camp with the scent of rejection (Spelman, 2011) that surround marginalised groups, especially those living in close contact with plastic pollution and waste. Thus, when mainstream psychology focuses most of its work on the WEIRD consumer, especially in terms of individual pathologies such as plastic addictions, it helps to maintain the structures that underpin the organised violence of contemporary forms of capitalism (Mbembe, 2019a) while ignoring contextual injustices.

Rhodes and Dunk (2023) also criticise mainstream psychology for being ontologically aligned with our current era which has been termed the Anthropocene. The Anthropocene describes the actions of human beings, seen as external to any ecological connections, as causing an observable effect on the environment. It is

clear that our current climate crisis is caused primarily by human behaviour, but that most of the research in mainstream western psychology is done from an anthropocentric perspective, which is why Rhodes and Dunk (2023) accuse mainstream psychology of being ideologically aligned with the Anthropocene.

Being guided through the trails of plastic development alongside the history of western psychology, revealed their relational complexities in that both developed in response to the needs of western, socio-economically privileged consumers. Both are entangled with thorny issues of asymmetrical power relations based on colonialist ideals that draw borders around some people as privileged and worthy of having their needs met and living a good life, while excluding others as less than worthy.

There are, however, sub-disciplines within psychology that have started to respond more directly to the environmental crisis, but much of the psychological literature on the environmental issue, even from these sub-disciplines, is still based on the same Eurocentric and increasingly American-centric (Muthulrishna et al, 2020), anthropocentric and androcentric values that characterises much of modern psychological research, as mentioned above. One such sub-discipline of psychology is ecopsychology,

Ecopsychology

Ecopsychology, which distinguishes itself from other fields of psychology by starting from the premise that human beings are interrelated with the non-human world, and that there is a problem with the relationship between humans and non-humans (Hibbard, 2003). Ecopsychology rests on an assumption that humans are inextricably rooted in the Earth and that we are naturally, inherently, predisposed to connecting emotionally with non-human living organisms (Rozak, 1995; Sampson,

2012). A dominant understanding in ecopsychology is that loving the earth and bonding with living and non-living elements is an *innate* characteristic within every person (Ricket, 2021), whether it is consciously experienced or not. Ecopsychology, as a subdiscipline distances itself from environmental psychology, because the focus of the latter is on how environments – including man-made, urban, and unnatural ones, influence human wellbeing, whereas ecopsychology is concerned with our two-directional relationship with the natural world, and asks not only how the natural world affects us, but also how we affect the natural world (Hibbard, 2003).

Both ecopsychology and another subdiscipline, that of conservation psychology, can be regarded as crisis disciplines responding to a critical situation (Yunt, 2001). Ecopsychology originated as a reaction to our increasingly technologically mediated and mechanised ways of living. There is general agreement amongst ecopsychologists that our industrialised, capitalised society reinforces the fictional division between human beings and the natural world through various mechanisms, such as long indoor working hours and the general technologically enhanced lifestyles that sees us remaining indoors while activities that would normally require us to leave home, like shopping for groceries or meeting with friends, are technologically enabled to happen without leaving home, through home grocery delivery services, Zoom meetings and WhatsApp video calls (Glendinning, 1995; Hillman, 1995; Louvre, 2008; Macy, 1995; Macy & Brown, 1998; Metzner, 1995; Sampson, 2012; Shepard, 1995). Roszak (1995), widely regarded as the founder of ecopsychology, suggests that our ecological fears, which are a potent source of anxiety, might be alerting us that we have replaced our soul with things, notably with the things that neoliberal capitalist marketing offers us, and that it is this recognition that is the cause of much of our panic and ecological anxiety. As we seek

to manage our ecological anxiety, indicative of a deeper estrangement from ourselves, we retreat inwards, indoors, to shopping malls, indoor arenas, indoor play and workspaces with fake grass and plastic wood flooring. Alternatively, we venture outdoors into artificial nature spaces where we find cafes, restaurants, carefully managed water systems and clearly laid out, specific paths for walking on, and artificially managed entertainment in the forms of theme parks or caged animals (Aizenstat, 1995).

In the enclosed, (recalling here Mbembe's (2019a, b) concepts of camps, enclosures and borders), carefully managed and manipulated spaces that seek to cater to our every need and comfort, we find feelings of security and control to manage the anxiety. These managed and manipulated places contain us within high walls (houses, offices, malls, indoor play facilities), where the temperature, sounds, sights and smells are carefully controlled (air conditioning units, scented candles, timed odourless insect sprays, carefully chosen wall coverings or curtains and blinds). There is no sign of pollution, environmental degradation or waste of any kind in these artificially controlled places. This implies that distancing ourselves from the plastic pollution and waste that our excessive consumption causes, is essential to our psychological well-being, and enables our continued participation in neoliberal capitalist consumerism.

Ecopsychology, however, has evolved. First generation ecopsychology, which is discussed above, started as a critical discipline, reacting to the overly scientific and technological modes of society and of psychology, and placed a heavy emphasis on the importance of connection to land and environment as essential for wellbeing (Davidson, 2021). Ecopsychology was regarded as a vehicle to critique the social structures that uphold the dualist, Eurocentric and androcentric worldview that

maintains and upholds the objectification and exploitation of both people and nature (Davidson, 2021).

However, contemporary, second generation ecopsychology is more aligned with mainstream western psychology that is based on a scientific worldview favouring empirical research informed by dualist, anthropocentric and androcentric values separating people and nature, and which focuses on individual pathology external to the ecological context (Rhodes & Dunk, 2023). In this alignment with mainstream western psychology, contemporary ecopsychology views people as being outside of the webs of nature or the natural ecology, acting with either pro-environmental or anti-environmental attitudes upon it.

Contemporary ecopsychologists work in a scientific paradigm to enrich some people's lives through the use of nature. This focus on enriching the lives of privileged people through ecotherapy, which is a big focus in ecopsychology (Hibbard, 2003), is reflective of western, Eurocentric, anthropocentric, and individualistic values. Ecotherapy uses the non-human bodies that constitute nature to help people who are suffering from physical and mental distress (Buzzell & Chalquist, 2009). The emphasis is no longer on social justice or on critiquing the western, Eurocentric, dualist values that separate people from the natural world in the first place, making waste and pollution that much easier. Ecotherapy can take the form of care-farming, animal-assisted interventions (AAI) or social and therapeutic horticulture (STH), spending time in healing gardens, participating in assisted green exercise (Sen, 2024), wilderness therapy, green views (gazing at green spaces) (Summers & Vivian, 2018) indoor ecotherapy counselling (Smith, 2025) or various mindfulness practices (Summers & Vivian, 2018; Hinds & Jordan, 2016), and thus implies a clientele that has the financial and time resources to participate in these

forms of therapy. It is unlikely that the waste picker or otherwise marginalised person who is suffering from the effects of living near a landfill or plastic incinerator is likely to have access to ecotherapy. Ecotherapy is thus a monetised profession, and exists within the capitalistic, Eurocentric, anthropocentric structure that upholds the plastic production and disposal systems, including the waste trade, making it out of the reach of the marginalised sectors of the population that suffer the most from the effects of plastic waste and pollution.

Both generations of ecopsychology also rest on the problematic assumption that a homogenous *everyone* has a connection to the natural world, which positions many people as flawed or immoral if they do not display this connection. My partner, for instance, feels no affinity for the natural world at all. From the ecopsychology perspective, he would be flawed, having disconnected from an integral, inherent part of himself - his connection to nature - even though he does not see himself as a flawed or incomplete person and feels no such disconnect within himself. He does, however, take much care not to pollute or damage the environment while also making a conscious effort to minimise his plastic consumption, even without this connection to nature that ecopsychology posits as natural to everyone. There are also many people who have to participate in destructive acts towards the environment out of socio-economic need, and it cannot be said that all these people are psychologically flawed because they are damaging a forgotten connection between themselves and their natural environment. This position ignores the asymmetrical power relations that necessitate many of these acts that are perceived as destructive. In South Africa, where I am from, women sell three tomatoes or two onions, prepacked in plastic bags at the taxi ranks and bus stops, especially in the late afternoon. These women are part of the informal economy with precarious work

and income, and they sell their vegetables in small quantities. Their customers, mostly other women who are also in the lowest income bracket, can only buy small quantities on a daily basis, as they live in impoverished townships where there are no municipal services. Fridges in which to store extra fresh produce are also not necessarily available.

A study, conducted in Mali, showed why women are the biggest consumers of plastic bags in this low-income African country. Gender ideologies that place the main domestic and child-care responsibilities on women, and the logistics of living in rural Africa, which often excludes electrical infrastructure, necessitate daily market trips for fresh produce. The women use plastic bags for carrying market goods and water, back to their homes (Braun & Traore, 2015). Just like the women at the taxi ranks in South Africa, market vendors in Mali rely on plastic to pre-package their fresh produce as this is easier for their consumers to carry home (Braun & Traore, 2015).

It is unclear to me how these women would fit into the ecopsychology theory of perhaps damaging the connection between themselves and their natural environment by participating in the plastics economy out of necessity. The same critique would apply to the waste-pickers and other people who use recycled plastic to make consumer goods as a livelihood. The South African and Mali women, and the waste pickers in various other countries, have no choice but to live their lives within the context of imposed western, capitalist ideology that appropriates any natural areas, and also the commons, as a source of capital. These natural places are not available to the people to live off of, as all is owned by someone. In ecopsychology terms, these South African and Malian women and waste pickers might be viewed as psychologically flawed, because of their perceived disconnection

from nature and the environment, which enables them to participate in the use and disposal of plastic. This viewpoint is clearly problematic as it ignores the context, economic and political power in which plastic use, and engagement with it, is forced to occur.

Work and consumer psychology

Ecopsychology is not the only arm of psychology that, directly or indirectly, participates in and supports the extractionist, capitalist system underpinning plastic consumption and disposal. In this exploration, we follow sparse psychological trails that enable a critique of the principles that uphold the psychological sub-disciplines, principles that are shared with mainstream western psychology, so while there are many excellent and caring practitioners in each psychological field, the underlying principles of western psychology are still present. It is with this acknowledgement that our cartographic travels extend into a critique of work psychology and consumer psychology. In work/organisational psychology, critical perspectives that challenge the dominant biases in western psychology is still rare (Newton et al, 2023) and there is a well traversed and recorded history, both theoretical and practical, of actively upholding values of money over well-being, with a focus on increased productivity and managerial control rather than on, and often at the expense of, worker well-being (Prilleltensky & Stead, 2013).

Consumer psychology conducts its research for the benefit of profit-driven businesses, policy-makers and, of course, consumers, especially North American consumers (Pham, 2013) who are entrenched in a capitalist, neoliberal economy. Pham (2013) also recognises that the knowledge garnered in consumer psychological studies, based on the North American subject, has been

overgeneralised to other populations, which is a common finding across much of the critical psychology critique of the discipline.

The subject in consumer psychology research is therefore the economic participant that is in the privileged position to make financial and time choices with regards to their consumption habits and who live in developed nations where they are not necessarily faced with the close-up repercussions of their behaviours, due to the sanitised distances between many consumers in these developed nations and their plastic discards. As such, consumer psychology suffers from the same WEIRD bias as mainstream psychology (Saad, 2021) and contemporary forms of ecopsychology. Consumer psychology therefore largely ignores the majority of people in under-developed, non-WEIRD regions who are impacted by environmental change, especially from plastic, and who do not necessarily have the luxury of distance between themselves and the waste. For instance, research by Stangherlin et al (2023) demonstrates this bias when writing about the circular economy in Europe and around *the world* as a system that requires *consumers* to focus on reducing and recycling waste, including from households. Consumers cannot be positioned as a homogenous group of people, especially not when it comes to their ability to make pro-environmental decisions, as many of the pro-environmental options are only available to those with the political and socio-economic power to make those choices, making the whole concept of sustainability a commodity in itself.

The ability of households in particular to separate their waste and take it to designated containers or collection points, as Stangherlin et al (2023) suggests, ignores research that shows that many of the underdeveloped nations that are the recipients of the global trade in plastic waste, do not have the proper infrastructure to

deal effectively with waste or with recycling (Akanbi-Gada, 2024; Alam et al, 2025; Barnes, 2019; Kumari & Raghubanshi, 2023; Ofori, 2025; Oyedele, 2016; Rauf, 2024; Thapaliya, 2024). McDermott (2016) also asserts that environmental justice is for all, and that communities must realise that they choose their structure and values, and that once this is acknowledged, communities will be able to change their wasteful ways. This morally righteous suggestion rests on the assumption of an homogenous idea of a community as one where all its members are able to make these ethically better choices, and ignores the many different communities that are adversely affected by plastic waste and who do not have these choices available to them.

Consumerism, and its associated waste and the throw-away culture based on disposability, becomes clearly a psychological issue when we see that the market logic that engendered these values of single use and disposability, while disregarding the consequences of our consumptive and disposal behaviours, is applied to human relations. People are reduced to their consumption habits, and people themselves (along with other life forms) come to be regarded as consumer goods that can be disposed of (Tasnadi et al, (2018). The same authors refer to Pope H.H. Francis pointing out that a culture driven by market logic considers it newsworthy that the stock market lost two points, but an elderly homeless person dying of exposure is not. The global crisis of consumption based on the market logic that the Pope observed, and its related intricacies of pollution, waste and disposability, is driven by a dictatorship of a faceless economy, which entails a carelessness and indifference towards vulnerable human and non-human life forms, that are grouped and classified as waste and thus excluded (Tasnadi et al, (2018).

Subjugated bodies: Mainstream psychology as a colonial upholder?

The dualist, anthropocentric philosophy that underpins mainstream western psychology, (including contemporary ecopsychology, work psychology, and consumer psychology), embraces a worldview of our separateness from nature (Fisher, 2019; Kurth et al, 2020), and places the non-human bodies of nature at the disposal of the human as a helpful aid to enrich his or her life. This worldview serves modern capitalism, which thrives on modes of divide and conquer, disconnect and colonize (Fisher, 2019) (or classify and draw borders around camps of people in the style of Mbembe, 2019b). Mainstream psychology has been critiqued by some writers as continuing to reproduce and reinforce colonialism (Coope, 2019; Fisher, 2019; Jones & Segal, 2018) as it exports western, individualist values to the rest of the world. Contemporary subdisciplines of psychology perpetuate the same injustices that mainstream psychology does when it continues to uphold Eurocentric, androcentric and anthropocentric values, while ignoring the historical, socio-cultural and material processes by which a psychological subject comes into being (Davidson, 2021).

It is clearer to me now why my plastic companion and guide into the landscape of plastic consumption and disposal has not led me to more psychological literature. New materialist methodology has allowed me to follow trails where all life forms interact and where human perspectives are not necessarily prioritised. By contrast, western psychology only prioritises certain human bodies, mostly from a western, individualistic, anthropocentric perspective. However, psychology is about understanding how people think and feel and make sense of life around them, and also about how people interact with and relate to one another (New Zealand Psychological Society, n.d.). The work of a psychologist is, after all, in aid of human

wellbeing (Oskamp, 2000). Understanding the complexities of how plastic affects our own behaviours and attitudes, and the ongoing impacts, identified as displays of plastic agency on human and non-human life forms around us, both immediate and distant, is vitally important, and necessitates a new direction for psychological inquiry. The anthropogenic, western, individualist perspective, dominant in mainstream psychology, seems to be limited in its capacity to understand the intricate web of relations that entangle all life forms and bodies, including the bodies of plastic.

Mapping the agency of plastic

Hawkins (2006) points out that positioning plastic waste as a one-way, linear flow, is missing the active connection between people and plastic waste in the sense that *both* are produced, not only waste. From the above critique of psychology's slow response to the environmental crisis, the field's reliance on the anthropocentric perspective, and its insistence on capturing and isolating constructs, it would seem that the permeability of plastic and its refusal to be contained and in some cases, observed, goes some way towards allowing it to escape psychological notice.

Plastic is a designed material that leaches out of its temporal and spatial boundaries – temporal because plastic never ends, despite terms like 'end of life', and spatial because plastic is found everywhere, even in unintended places (Farrelly et al, 2021). Plastic is feral and promiscuous and its molecules do not remain where they are supposed to (Roberts, 2013). In its uncontainability, plastic demonstrates not only the agency that new materialists attribute to everything around us, but also the importance of relationality when attempting to understand plastic and its governing ability.

Plastic affects the world in undefinable and infinite ways, and as such it becomes implicated in other things to create novel ecologies and systems (Farrelly et al, 2021). For instance, the plastisphere (Vithanage et al, 2025), describes the way that microorganisms immediately colonise any plastics that enter our environment, changing the physical and chemical properties of both the plastic and the environment, and affecting their ultimate fate in the ecosystem of which they are a part (Latva et al, 2022; Rillig et al, 2024). In this way, plastics, whether in salt water, freshwater or on land, become the colonised as they are invaded by microbial communities, while the plastic itself releases chemical compounds into the soil or water, affecting the natural ecology, and those dependent on it. (Rillig et al, 2024). The plastisphere findings in particular show that plastic is far from being a lifeless, unassertive material, and that is has the potential to provide the ground for new ecosystems to develop while it simultaneously changes the natural environment around it, in the same way that plastic continues to change our own lives in so many ways. Due to this constant interaction with the world around it, plastic exemplifies a leaky, active and transformative agency, which is at odds with the usual conception of plastic as a material that is static, inert and passive (Farrelly et al, 2021) and that permeates and interacts with the existences of many, human and otherwise.

As I continue to map the complex networks of relations and mutual interactions inherent in the plastics material economy, the pathways include those involved in the extraction and processing of petrochemicals for polymers and those involved in the production and manufacture of plastic products for every industry and field of interest, from medicine and technology to packaging and fast-moving consumer goods (FMCG) (De Groot & MacNeil, 2025).The product disposal networks include municipal solid waste collections, materials recovery facilities,

waste pickers, informal waste management systems and various components of the recovery, recycling and disposal tasks involved in the end-of-life processes (De Groot & MacNeil, 2025). This web of interactions is, however, supported by the complex relational network composed of all animal bodies, which includes humans, plants bodies, the environment and the objects that are bought, made and sold to you and me, the consumers and disposers of plastic located in a western, neoliberal society.

This cartographic exploration of the relationships intertwined with plastic indicates that it is not only the human actors in this territory that have agency or relations with one another. Plastic also affects those it interacts with, as the plastisphere example shows. Other bodies in the environment, such as the plants, animals, landscapes, waterbodies and microbes are also affected at every relational intersection by plastic, as are the people that participate, formally and informally, in the materials economy. Instead of viewing plastic from an anthropocentric, extractionist viewpoint as a sterile product for human use, which is then discarded, it emerges instead as a fully relational complexity, constantly interacting with, and shaping, its environment and ourselves.

Due to the cultural and environmental everywhereness of plastic, Hawkins (2017), states that we are not separate from plastic and Mbembe (2019a, b) also notes that humans are becoming plastic as we become part of what Roberts (2013) calls the plasticized food chain. We are deeply connected to and in relation with plastic as we live in complex patterns of economic, social, cultural, political and toxic *interdependency*, implying an agential relationship that flows both ways, with this material. We have what Nyabola (2022) refers to as a paradoxical relationship with plastic, as, on the one hand, plastic has benefitted our lives in undeniable ways,

contributing to hygiene, cleanliness and medical interventions, as well as comfort, ease and convenience, while these benefits come with a hefty price tag of toxicity and pollution. Plastic is affecting us just as much as we are affecting it, making it a more than human, agential subject (Godin et al, 2025). It is an entity that affects those it relates with, and one that invites us to rethink our ideas about agency and governance.

Reflecting on the governance of plastic in everyday life

Coming out of the store earlier today, my arms full of groceries, I realised that every single item was packaged in plastic. I had bought them habitually, without thinking. I ran into the store with a list of items that I needed and simply picked out my usual choices. I felt a sense of relief when I realised that, even if I had remembered plastic, I would not have had non-plastic alternatives available anyway. Ethically, I could let myself off the hook. Rice, chicken for the dogs, raw meat for the cats, toothpaste, toilet paper, bread – basic household items for which there is no plastic-free alternative at my closest store. Given that I live rurally, I am also somewhat dependant on this store.

Back home, sitting at my desk, working on my cartography, I look around me and notice that my immediate landscape within which I am immersed, consists of my laptop, which seems to be made entirely of plastic, various pieces of technology (a mouse, several headphones, a spare hard drive, USB cables, a desk fan) and a Jimbo's cat food tub, repurposed for a mixture of peanuts and raisins. All these items are made of plastic (except the peanuts and raisins, although, they may well contain elements of it). Through my reading, the literature alerted me that the tea that I am drinking possibly contains microplastics, as does the clothes that I am wearing and the cushion perched on the edge of the desk, with a live ginger kitten sleeping on it.

The kitten might be made of flesh and blood, but it is as much part of the plasticised food chain as my dogs, my children and I are. We inhale and ingest microplastics from various sources on a daily basis from table salt, tinned and fresh fish, honey, sugar, teabags, bottled water, and the plastic tubs, bottles and pouches that contain our food (Fadare et al, 2020). A few years ago, when my oldest daughter was a young teenager, she was dubbed the plastic police in the family, as she would keep a sharp lookout while we were shopping for unnecessary plastic purchases. She became so anxious about plastic and its detrimental effects on the environment, that she would lie awake at night, unable to sleep. Now that she is a young adult, she refuses to engage in any plastic policing, as the relentless persistence of plastic and its unavoidability causes her too much anxiety. Instead, she is now on anxiety medication, and, earning her own wages, she has no option but to engage with plastic as she attempts to navigate her own buying power within the bewildering neoliberal consumerist world of plastic.

The consumer embedded in mundanity and problematization

Once the shops are filled with plastics products, we have no choice but to consume them, regardless of whether we think plastic is good or bad (Meikle, 1995). As a post-world-war two marketing strategy, this continues to work well. Looking at all the plastic that I came home with from the store, and that surrounds me as I work on my (relationally guided) thesis, the lack of choice embedded in these plastic presences are startling. I live in a neoliberal, consumer-driven society, and I have the socio-economic privilege of being able to make consumer choices. But even with these privileges, my options around disposable plastic food packaging are limited to the alternatives that are available at my local store. Alternatively, I could drive forty-

five minutes into Auckland, where I can access more plastic-free options, but this also requires more resources in terms of traveling time, fuel and the money to cover the extra cost that these plastic free options attract. I also have to choose between life systems, with plastic as one of the intermediaries guiding my decisions, for instance, when I have to choose between doing what is best for my dogs, or doing what is best for the environment. My dogs get meat instead of biscuits, because I believe this is healthier for them, but the meat only comes pre-packed in small plastic portion sizes, whereas the dog biscuits, which I feel are not so good for the health of my dogs, come packaged in one large plastic bag, which would make it a better choice in environmental terms. Regardless of which life system I choose, my choice feels unethical toward the life system that is losing out. As a privileged consumer who is able to make shopping choices, I still feel coerced into engaging with plastic. In this lack of choice, I recognise that plastic, my guiding companion, necessitates this research.

My examples above are all instances of how plastic is embedded in the governance of our daily lives. Governance here refers to the Foucauldian sense of governance that includes subtle rules and practices that shape and inform our ways of life (Hawkins, 2019). Governing in this sense includes the moral responsibilities of things, like disposable plastic, and how they should be related to, because we increasingly make ourselves and our behaviour available to be managed and governed through our relations with these objects (Hawkins, 2019). Braun (2014) points out that it is important to realise the direction of governance through these disposable plastic objects. It is not that government exists and then uses the plastic objects – mobile phones, internet, coffee cups, disposable razor blades, disposable water bottles, plastic packaging for food – to govern the behaviour of the people. It is

that these technologies and objects come into existence and present themselves as important sites of governance of everyday life.

The mundanity of disposable plastic

Woolgar and Neyland (2014) offer the term mundane governance to describe the phenomenon that considerable concern about the nature and extent of governance often centres around the quotidian objects and technologies of our lives, reflecting the amount of regulation and control that is enabled through these everyday objects and technologies. An ontological politics forms the basis of the mundane governance concept, where the practices and processes of material objects and entities, like plastic, are understood as being of this world so that issues of relations and governance arise directly from their attributes and identities. This echoes Braun's (2014) suggestion that governance stems directly from the object itself. This is in accordance with a new materialist perspective that acknowledges the impact of various human and non-human entities on one another, and how mundane elements, like plastic, can act as social agents that enact change (Fox & Alldred, 2015). In mundane governance, the character of the quotidian 'thing' is inextricably linked to a politics where the validity of the political action is exhibited in and through the 'thing' itself (Woolgar & Neyland, 2014), in this case, a 'thing' consisting of plastic.

Disposable plastic is therefore not being used as a tool by an existing governmental system to control and manipulate, or govern, our behaviour, thoughts, attitudes, values and emotions. Instead, disposable plastic *is* the new form of governance that has emerged. As a privileged consumer who feels coerced into engaging with plastic, this makes sense to me, because even though I have some financial privilege to make different choices, it seems that plastic is always there,

mediating these choices and, often times, negating them all together. This makes sense in light of the observation by Woolgar and Neyland (2014) that politics normally arises out of the ordinary stuff and events of our lives, like plastic. Governance relates to examining the various sites and connections of accountability, where accountability is not seen as a top-down process of assessment, but rather a co-created process of mutual sense-making, and for which kinds of behaviours this accountability is applicable (Woolgar & Neyland, 2014).

Sites of mundane governance are often characterised as being omnipresent, of great significance and with the potential to evoke strong emotions (Woolgar & Neyland, 2014). All three of these characteristics apply to disposable plastic – it is unavoidable in every sphere of our western consumer driven lives, and since the rise of environmental awareness, it has taken on great significance and evokes strong emotions in people. Furthermore, there is nothing natural or inherent in the objects and technologies implicated in mundane governance (Woolgar & Neyland, 2014). We could, for instance, choose to resist the idea that disposable plastic is just a natural part of everyday life, and that we cannot avoid it. We could also resist the idea that disposable plastic is necessarily passive, inert and always bad. Thus, there are processes that we could pay attention to whereby the capacity of disposable plastic is contingently enacted, because plastic only derives its value from the socio-cultural relations from which it emerges. These relations value the form and function of the disposable plastic enough to enable it to become a part of our daily lives (Barthes, 1988; Meikle, 1995). Just like plastic itself emerged and developed in response to the socio-cultural needs of western capitalist society (as has the privileged consumer), so too is there a human-led, socio-cultural path by which, for instance, unwashed plastic becomes non-recyclable, or food that is not plastic

wrapped becomes constituted as unhygienic or dirty. This indicates that without human relations, there would be no need for disposable plastic or plastic governance. All living bodies are intertwined within an existential and inequitable relationship with disposable plastic, and the existence and continued production of plastic govern our behaviours and interactions with it.

The objects and technologies that fall under the scope of mundane governance are issues of daily life that we mostly do not give much consideration to. They constitute the behaviours and the rules of conduct, according to specific ethical and aesthetical ideas, that we use to transform ourselves and our lives (Hawkins, 2001) as we enact certain styles of self or ways of being. Fundamental to these ways of being is problematization – the process of looking beyond conventional understandings of a subject so that new insights can be gained, or simply to treat the subject as a problem (Merriam-Webster, n.d.). Problematizing enables an understanding of the political nature of disposable plastic and highlights the governing capabilities of this dynamic material.

Problematization

Problematization is also central to new materialism, because when we redefine agency and power to extend to non-human nature, and we decentralise anthropocentrism, commonly accepted understandings of life are similarly called into question (Lemke, 2014). Plastic commodity relations, such as buying plastic wrapped food or take-away meals in plastic containers, are a commonly accepted part of life, and problematising these plastic relations has broader ramifications, including for other living bodies, such as the plants, animals (including humans) and bodies of nature around us as our disposable plastic interacts with them. Our relations with plastic commodities thus need to be questioned.

Disposable plastic relations, especially in the form of food and beverage packaging, is one of the most ubiquitous and mundane forms of plastic that we encounter in our daily lives. Due to its ordinariness, it needs to be problematised in order for it to become visible and remodelled into a material that carries epistemic value and one that demands that the human actors it engages with pay attention and do some work (Cetina, 1997; Miettinen & Virkkunen, 2005). Cartographically, disposable plastic food packaging is a relational landmark where other strands of theory and literature intersect, such as the circular economy, the problem of microplastics, and the politics of the waste trade.

The problematisation of any form of waste due to its destructive impact on the environment (and on the people in these environments) is a contemporary cultural development (Hawkins, 2006). However, problematising the issue of disposable plastic food packaging has led to various campaigns and programs designed to change the way that we relate to waste. In the CE, our relationship to certain waste items went from a relationship with rubbish to one with a resource. The agency of disposable food packaging to determine and shape the technocratic relations constituting the materials and carbon economies that underpin the production, transportation, storage, selling and buying of food, has also been revealed (Cochoy, 2007; Hawkins, 2018; Phillips, 2016; Sattlegger, 2021b). For instance, disposable plastic has enabled new forms of packing, layering, bundling, transporting and presenting food to emerge, which in turn gave rise to the expanded supply chains necessary to accommodate the new products that could to be developed, especially for the economically privileged consumer in a neoliberal, market-driven economy that values convenience, (baby food pouches for on-the-go consumption, pre-packed lunch box items, ready-made dinners). Novel shopping behaviours emerged (self-

service, monthly grocery shopping), and the ways in which food products are assessed for their value also changed (Sattlegger, 2021a, b).

Our material object relations with disposable plastic in food packaging continues to evolve as the problematization of this specific plastic species makes it increasingly actionable. We now see, for instance, not only bio nano-degradable plastics emerging as possible alternative packaging options (Russell, 2014), but also different shopping behaviours being enabled, yet again, by this problematisation, such as stores that adopt the refill-station model, where customers bring all their own food containers and fill or refill these, instead of purchasing pre-packaged food (van Herpen et al, 2016). Disposable plastic food packaging also continues to evolve as our western consumer preferences change, indicating the relational nature of our interactions with plastic packaging, which in turn affects the way the work surrounding food shopping takes place (Sattlegger, 2021b).

Problematising plastic has also highlighted the extent to which disposable packaging has become embroiled in the formation of self-regulation practices via the moral avenues of guilt and conscience (Hawkins, 2006), This is not surprising, since Woolgar and Neyland (2014), observe that narratives about mundane governance, regardless of which technology is performing the governance, are typically riddled with moral overtones, and disposable plastic, as a form of proposed mundane governance, is no different. Guilt drives consumers, especially those with the financial ability to choose based on self-regulation practices rather than purely out of necessity, to spend more on plastic alternatives (Zwicker et al, 2020) and people who are usually able to place some distance between themselves and their plastic waste, feel disgust when confronted with images of plastic waste (Septianto & Lee, 2020). Privileged consumers anticipate feeling good about their choice to refuse

single use plastic, which drives their behaviour away from this form of plastic (Sun & He, 2023). In this way, disposable plastics display their agency by forcing thoughts and feelings in those who (are privileged enough to) think with the plastic (Hawkins, 2001). For example, should I opt for plastic or glass? How do I feel about paying more for plastic alternatives? I also notice feeling guilty about the plastic container that my take-away lunch came in, or the frustration that comes from not being able to extricate myself from my relations with single use plastic.

These emotions of guilt or frustration are indicative of moral deliberations and they help anticipate and shape our behaviour, as privileged western consumers with regard to disposable plastic, prompting us to make alternative choices, or not. However, it is not always the government, in terms of legal policies and procedures that prompt these changes in the consumers. It is the plastic itself. There is no law that mandates the purchase of bio-plastic/glass/cardboard instead of regular plastic. It is the complex feelings and reactions that plastic evokes from the consumer that drives the consumer to make these changes. Even if it is the law that enforces change in the way we relate to plastic by, for example, banning or phasing out single use plastic items like drinking straws, plastic cutlery and tableware, shopping bags or plastic produce labels, as the New Zealand government is implementing (Ministry for the Environment, 2024), these changes still arise out of the problematisation of single use plastic, showing that the disposable plastic itself is an agential force that directs individual behavioural choices while also relationally participating in politics.

Chapter 3 - Charting the sites of mundane governance

The sites, or connection points (Woolgar & Neyland (2014) where the mundane governing power of disposable plastic food packaging is most present and embodied are in the material semiotics inscribed on plastic skins and bodies, the circular economy (CE) and consumer ethics in relation to plastic and global power relations in the waste trade. In my cartography, I follow plastic through these three sites as geographical features, and while each site can be charted individually, they do not exist in isolation, much like mountains, rivers, trees, animals, including humans, and plastic do not exist independently of each other. Every trail mapped is inextricably intertwined relationally with the other geographical features, and they all have their own avenues through which they exercise agency and relate and impact on one another.

The privileged consumer in relational discourse with disposable plastic

When my oldest daughter was a toddler, we could purchase juice at the grocery store packaged in the shape of a transparent teddy bear, with an elongated nozzle protruding from its head which could be used as a built-in straw. We would snip off the top of the straw, and she could drink her teddy-bear juice straight away. The teddy bear was, of course, not designed for any further use, and was thrown away. The reason why this particular juice was so popular was not because of the flavour profile, but because of the conversation, the material semiotics, that the body of the teddy-bear plastic bottle entered into with both my daughter and I. It was a conversation that centred around cuteness, the comfort of a teddy-bear, and the promise of almost immediate satisfaction with the convenient straw-top bear head.

Not only did the shape of the plastic bottle participate in this conversation, but the transparency of the bear showed us the (highly unnatural) brightly coloured beverage swishing around inside its round little tummy. It was a masterful conversation, with the disposable plastic packaging fully in charge.

Inclusive of teddy-bear shaped bottles, plastic disposable food packaging refers to the containers used for fast-foods and take-aways, on-the-go drinks and snacks and plastic packaging used for groceries like rice and cereals, as well as fresh meat, chicken and fish. Food packaging accounts for just over a third of the world's plastic packaging market (Ncube et al, 2021), with most of it being single use plastic. Hawkins (2019) suggests that as plastic became ubiquitous, specifically in the burgeoning fast-food industry, the plastic packaging trained socio-economically and politically empowered consumers to relate to it with certain attitudes, emotions and behaviours. This training provides a path through which modes of governance can be actualised. In this sense, the packaging itself shaped our perception of it (Hawkins, 2017) through the material properties of the disposable food packaging plastic, such as its weight, the colour of its skin, its ontological origins, and its shape.

These properties of food packaging train us, as western neoliberal consumers to adapt our behaviours according to socio-cultural, economic and political norms and values. Müller and Süßbauer, (2022) suggest that much of our daily lives are lived in a routine format, with little or no conscious reflection and that material semiotics takes place in the same way as a subtle, subconscious conversation between the materiality of the disposable packaging and the consumer.

For instance, having the material characteristics of being light weight, disposable plastic food packaging makes it easy for us to barely notice its existence,

and to treat it as unimportant and with disregard. This relationship with disposable food plastic packaging reflects broader socio-cultural relations that enables other lightweight, barely-noticeable elements in our society, like ants and butterflies, small flowers and people from under-developed areas with light-weight socio-economic and political rights, to also be treated as unimportant and disregarded. Light-weighted things are easy to borderise (Mbembe, 2019b) and treat as disposable.

Transparency is a material characteristic of many plastic disposable food packages, and it defracts our attention, as everyday consumers, directly to the commodity inside (the food, in this instance) and away from the complexities of itself and our problematic self and global destructive relationship with it. Watson et al (2020) supports this material semiotics of plastic packaging in their observation that most people handle food packaging, from purchasing it to disposing of it, in a way that shows that the packaging is barely noticed in its mundanity and remarkability. Transparency in particular allows plastic to become nothing more than a means to an end that is morally untroubling (Hawkins, 2019), because the conversation enabled by the transparent packaging places the attention on the product inside, like the colourful juice. The conversation does not readily include the transparent disposable plastic itself, which might become more problematic if it was more noticeable.

The ontological anonymity of plastic objects designed specifically for on-the-go consumption (plastic bags, straws, cups, lids, food containers, water bottles, snack packs) also enables their omnipresence as they slip into our socio-cultural routines unnoticed (Hawkins, 2019). They come from nowhere, have no natural origins and their future and present tense are collapsed into one as they simply add

to the vague cultural acceptance of an ever-increasing plastic presence in our daily lives.

The shape of disposable plastic packaging offers yet another material avenue for engaging with us as choiceful consumers. Shape is one of the most salient characteristics in the design of packaging and contributes suggestions of usability, convenience, value, status and possibly fun, if it's teddy-bear shaped, to the conversation (Dadras, 2015). By being able to take on a variety shapes and sizes, such as tubs, squeeze tubes, jars or trays, along with plastic films, bags, pouches and lids, the plastic packaging aims to please all the real and imagined needs of the consumer with financial choice. The various shapes and sizes also embody other characteristics that might be important to the consumer, such as insulation or rigidity, easy access, flexibility, tamper-protection, and pouring and dispensing devices. Research by Poslon et al. (2021), for instance, showed that consumers associate plastic food and beverage packaging with a complicated shape with more intense flavour. The various shapes and sizes, as material attributes, thus offer a complex semiotics between the packaging and consumers that include conversations around flexibility and choice (eat on the go, or carry your lunch back to the office) safety and ease of mind (sealed pre-packed foods, vacuum packing, bacterial resistance inherent in plastic), freedom (to select your own packets and bags of food) and convenience (lightweight packaging, take-aways and on-the-go foods and beverages).

As in many other western Eurocentric political aspects of our everyday lives, the skin colour and appearance of the plastic disposable packaging is important and performs a vital material semiotic function. There is an existing relationship between the marketing of products, including food, and the socio-cultural beliefs that target

and maintain stereotypes and marginalisation through racism and social hierarchies (Davis, 2017). I remember as a child growing up in the tail-end of Apartheid in South Africa, food packaging only displayed white faces. I still remember how noticeable, and surprising, it was when our packaging (and television commercials) started featuring the faces of people of colour. Suddenly, particular food items took on a different, less familiar, and more negative and derogative meaning as we, as privileged white consumers embedded in systems of systemic separatist racism, started to associate them with people of colour in South Africa at that time.

Pereira (2021) states that the colour of plastic skin also offers a meaningful discourse. For instance, yellow and red packaging are associated with traditional foods, blue with restriction or reduction, for instance low fat products, and pink characterises foods that are intended for women as they convey a feminine representation (Pereira, 2021). Through its skin colour, disposable plastic potentially participates in the governance of socio-cultural norms around gender and body expectations. For a while, there appeared on the shelves in our grocery store in South Africa, individual plastic-wrapped toilet rolls. Some plastic wrappers were inscribed with pink princesses and jewelled crowns, others were rendered blue, with cowboys. Clearly the toilet paper manufacturers were using the skin of the plastic wrapping to reinforce western gendered social norms for little girls and boys.

Even clear plastic packaging, taken as the absence of colour and showing the food itself, preforms a relational, semiotic function by allowing consumers to visually inspect the food (Simmonds & Spence, 2017). This transparency builds a trusting relationship with the consumer because the packaging provides a safety barrier. At the sushi shop next door to my daughter’s ballet class, we can see all the clear plastic packets of pre-packed sushi, ready to go. Together with the other customers,

we inspect the quality of the glistening fish, the stickiness of the rice and the freshness of the ginger and seaweed without needing to open the package. The clear plastic packaging, in its honesty, invites trust, and provides reassurance that our food will be of an acceptable standard.

The skin of the disposable packaging can also be inscribed with various messages from all the different actors in the material goods network to communicate directly to the consumer, and again bypassing the need for another human being to be the provider of such information in the store. Food producers, packaging manufacturers, and food and health authorities, can relay information about ingredients, nutrition, health benefits and recycling options. Plastic skin is also available for branding opportunities which allows manufacturers, and privileged customers, to make socio-cultural or political statements through their choices to interact with the branded disposable plastic packaging.

An important aspect of material semiotic conversations is that they are *co-constructed* between the consumer and the plastic packaging, and also between the consumer and other, more distant actors that form part of the materials economy cycle, via the packaging as intermediary (Cochoy & Grandclement-Chaffy (2005). As disposable plastic packaging makes itself available to increasingly complex discourses (Pereira, 2021), threaded through with expedient and possibly unethical marketing narratives of comfort, ease, convenience or status, the disposable food packaging enters into a dialogue with consumers (Kniazeva & Belk, 2007) consisting of the messages, meanings and assumptions that are embedded in the packaging (Coles et al, 2003), but which is interpreted by the consumer through the socio-cultural and political context in which they are embedded. Hence when, as a child, I first started seeing faces of colour printed on the plastic coverings of my favourite

food items, the way that I interpreted this material semiotic was different from how other people, not having grown up in a political ideology of white supremacy might interpret these changes and the powerful political messages that they conveyed at that time. This example does draw our attention to how plastic packaging can perpetuate the status quo through the powers of mundane governance, only brought to our attention through watersheds of change. The material semiotic discourses of transparency, shape, colour, weight and messages inscribed on the skin of the plastic, therefore provides an avenue for the mundane governance of the consumers interacting with the disposable plastic food packaging to occur.

New behaviours for the privileged consumer, but at what cost?

Self-service at the expense of direct human to human relations

As a child, I remember going to the corner store with my weekly pocket money and, feeling very brave, I asked the store owner behind the counter for Chappies, a particular brand of chewing gum, to the value of my pocket money. He randomly selected the Chappies out of a large glass jar on the counter and placed them in my hand. He never asked which flavours I wanted, and I was always eager to inspect the flavours once I'd left the store. Pink, (strawberry), was the most popular, but also the most boring flavour, and if I happened to get a handful of pink, then so be it. Now, these same Chappies are sold pre-packed in clear disposable plastic strips, and my own children can simply help themselves to the flavours of their choice. They can either choose the packet with only their favourite flavour, or opt for a mixed flavour bag. Either way, while they're not going to be disappointed, they are missing out on the part of the experience that is at least a little bit exciting – stepping out of the store, opening one's hand, and sorting the Chappies into piles of nice and not-nice and feeling either disappointed, or joyous.

Material semiotics and the relational conversations that we have with disposable plastic food packaging, albeit unawares, is implicated in mundane governance practices because it reproduces and enables new behaviours while curtailing others, and thus has implications for everyone/thing along the material economy network. The shop owner, whom I had to address and engage with even though I was shy, was firmly in charge of the buying and selling conversation. Now, my own shy daughters can avoid this interaction since clear plastic packaging has taken over the role of sales and engages directly with them. Indeed, selling the product within, by offering the malleability of its body and the surface area of its skin for product manufacturers and brands to reposition the ordinary product within, is the primary function of packaging today (Müller & Süßbauer, 2022), enabling disposable plastic packaging to replace sales staff and shop assistants (Kniazeva & Belk, 2007), thus impacting on employment opportunities. In this way, plastic food packaging demands a direct and embodied relationship with consumers, while de-emphasising the importance of human-to-human relations.

Choosing pre-packed at the expense of direct human-food relations

Plastic food packaging has also managed to erode the relationship between consumers and unpackaged or naked food by casting suspicion on these foods, as they do not come with the protective shell that plastic packaging offers (Cochoy & Grandclement-Chaffy, 2005). Traditional methods of shopping for food that included the human senses of feeling, smelling and visually inspecting the food, has become outmoded with privileged customers now relying on the plastic packaging to convey this information to them (Watson et al, 2020). The need for us to use our own senses to provide the information that we need in order to make our chopping choices, has

been negated by the material semiotics of disposable plastic packaging, and we are forced to interact with our food via the plastic.

Cleanliness and hygiene are some of the favourite conversational topics that disposable food packaging offers. For instance, food that is encased in disposable plastic that can withstand high temperatures allows the consumer to cook their food in the plastic packaging, thus minimising the potential mess involved in cooking, as well as tending to safety and hygiene requirements. Evans et al (2022) show how the technological innovation of the cook-in bag is a conversation between the material aspects of the bag (we can cook in it without having to deal with the messiness of raw chicken, in this specific case) and the desires of the consumer (the desire to be clean, to avoid touching raw meat). The cook-in bag shows how disposable plastic food packaging is well-positioned to respond to customers evolving needs while *simultaneously* playing a role in shaping those needs (Evans et al, 2022), and thus playing a governance role. This cooking technology also demonstrates how plastic, a socio-technical material, continues to evolve out of the events in which it participates (Michael, 2013), such as a socio-cultural desire for increased hygiene around handling raw meat.

In response to consumer's needs for food safety and hygiene, plastic use in food packaging, especially through clingfilm, has, in general, increased (Hawkins, 2018), and the cook-in bag is just another such invention, helping consumers to uphold social norms (cleanliness, hygiene) in a convenient manner (Evans et al, 2022). However, the disposable cook-in bag also affects our relations and perceptions of the food that it houses, especially if this food is raw meat. In the case study of the cook-in-the-bag-chicken of Evans et al (2022), the meaning of the chicken changed from being a natural dead animal, that comes with slimy bits to

handle and possible Salmonella contamination, to a clean, edible product that is ontologically the same as any other product cleanly encased in plastic, ready for consumption. Consumers in general do not want to know about food production or farming practices (Evans et al, 2022), and are increasingly distanced from their food (Dupon Le Priol & Schmitt, 2024). Disposable plastic food packaging both enables this distance as well as provides the solution by becoming an intermediary between the consumer and the food items that the consumer does not want to handle. Disposable plastic food packaging helps consumers to avoid the alternative experience of knowing that which we do not want to know (Reno, 2016).

Practicality at the expense of other human and non-human relations

Disposable plastic also manages to solve many of the problems that consumers find in their consumption practices outside of the shopping isles. Müller and Süßbauer (2022) show that the governing role of disposable food plastic packaging is intertwined with our broader food behaviours, such as shopping for ingredients, or getting the food from the grocery store to our house. For instance, a respondent in the study by Müller and Süßbauer (2022) preferred disposable plastic food containers over glass because the plastic gave her peace of mind that her container wouldn't break on the bicycle trip home. Here disposable plastic solves the same problem for a consumer in the developed west as it did for the women in Mali, who benefited from being able to carry their market goods home in plastic as well (Braun & Traore, 2015), Material semiotics employed in both instances involved reassurance, peace of mind, and practicality while overriding any potential ethical aversion to disposable plastic food containers. Other respondents in the study by (Müller & Süßbauer, 2022), mentioned the specific aspect of disposability in their choice to purchase particular food items because the disposability meant that they

would not need to find storage space for the item, which echoes again the same problem that disposable plastic solved for the South African women that I witnessed selling small, plastic packaged fresh produce because of their customer's a lack of storage space and facilities. With the promise of being able to cook and consume food, while not having to be concerned with the spatial concerns around storage, the disposable plastic packaging is using its material manifestation of disposability to its advantage.

Disposable plastic shapes disposable values

Through material semiotics of disposable food packaging, and the new behaviours that it enables, this species of plastic habituates consumers to the practice of single use and constant waste (Hawkins, 2019) and thus shapes our attitudes and behaviours toward the disposable. The waste generated by disposable plastic packaging is made less morally problematic when the material semiotics employed enables the continued use of this form of plastic to be regarded as less of an individual consumer choice, and more as a reflection of the unintended outcome of enacting an everyday social practice (Bissmont, 2020) or social ethos (Hawkins, 2006), like buying a take away meal or coffee, or choosing plastic wrapped food options because of health and safety perceptions. The material semiotics of disposable plastic packaging allow western, privileged consumers to become ethically blind (Hawkins, 2019) to the many ways in which disposable plastic in particular has come to govern our lives through mundane means, as all the actors in this network of disposable plastic packaging enact disposability, including the material itself and its application. Single use plastic packaging moulded or helped to create privileged consumers who are capable of disregarding waste and wasting, and as this ethical blindness became the norm it also became increasingly important

to the continued economic growth of the plastic industry (Hawkins, 2019). Thus, the plastic industry, including the Circular Economy (CE), is predicated on ethical blindness.

The circular economy and the emergence of the privileged consumer

My stepmother is a privileged consumer embedded in the circular economy of Switzerland, a highly developed, western country with a free market system. Whenever she interacts, willingly or unwillingly, with disposable plastic, the plastic demands many behaviours from her. For instance, as she is embedded in the circular economy (CE), she has to reduce, reuse and recycle. This means that she has to separate her waste, including various types of plastic, and take it to thirteen different sites for collection. Bottles made out of Polyethylene Terephthalate (PET), a sub-species of disposable plastic, have to be cleaned and separated from other materials. Other plastic containers that are not PET also have to cleaned and then placed into their specific recycling containers available at various, but different, grocery stores. If she chooses to engage with metal, glass, cardboard or paper instead of disposable plastic, all of these have to be cleaned as well, and they all go to different recycling points with different rules. For instance, glass is recycled in separate containers each for transparent, green and brown glass, and cannot be mixed. She transports all disposable plastic or any alternatives to plastic, either on foot or by car to their various collection points, which costs her money, time, and penalties if she performs her circular economy duties incorrectly.

The current, western, capitalist economic model is based on a linear depiction of the materials economy, which completely disregards the impact on human and non-human bodies of unsustainable production and consumption habits (Andersen

et al, 2023; Henderson & Loreau, 2023). Tasnadi et al (2018) describes it as an unsustainable economic model that is focused on the satisfaction of ever-increasing consumer demands (Liu et al, 2022) in the context of a finite resource system, thus steering a clear and concerted path toward large scale ecocide. The circular economy is the proposed holistic solution that will deal with the problems of dwindling natural resources (Xiong et al, 2023), which is leading to global conflict and unstable markets (Shahzad et al, 2023; Xiong et al, 2023). Gregson et al (2015) also note that CE policy and practice, in reality, is more about finding efficient post-consumer waste management processes than about a *pervasive* economic revolution. In other words, it is a process aimed at the economically privileged circular consumer, not the producer, and on the efficient handling and continued provision of products to this consumer (Rinkinen & Shove, 2023), especially in the case of plastic food packaging.

My stepmother exemplifies the figuration of the socio-economically and politically privileged circular consumer, who emerges from my cartography as a consumer who has almost *no choice* but to engage with disposable plastic, and make themselves available to be governed by this material through the many duties, responsibilities and disciplining that this relation entails. As a consumer she is simultaneously positioned as one with choice, and thus as the driving force behind the increased need for disposable plastic.

With the focus in the CE on the privileged consumer who has some money to spend, and is thus positioned as free to choose, the governing potential of disposable plastic on this consumer is also increased. The privileged circular consumer is highlighted as the only figure that carries any responsibility for the problem of excessive disposable plastic use, as my stepmother's story shows, and

since it is a problem that extends to environmental degradation, climate change and waste colonialism, this consumer is implicitly held responsible for these consequences as well. By implying that *privileged consumer* behaviour and relations with disposable food packaging needs to change in order to support the proposed circularity of goods (Calvo-Porral & Lévy-Mangin, 2020; Wagner & Heinzel, 2020), the neoliberal capitalist context in which this consumer behaviour occurs is completely ignored. Disposable plastic use is framed as a problem of individual consumption only, and not one of excessive manufacture and production that leaves the consumer, who is engulfed in disposable plastic products, with little to no choice about engaging with this material. The circular consumer thus emerges from the discipline, power and control that disposable plastic exerts over our bodies and behaviours as we are forced to engage with it.

The privileged circular consumer – free to choose or tightly governed?

The circular consumer materialised as one that has more socio-economic and political privilege and seemingly more freedom in their purchasing and consumption choices. It is, however, only a perception of freedom and agency to choose because in the context of being a governed entity amidst the relentless imposition of disposable plastic, the option to not relate with disposable plastic is mostly absent. This questions the freedom of the privileged consumers' purchasing and consumption choices.

The success of the circularity of material goods within the CE relies heavily on this misperception of an agential, empowered consumer, who is constructed as having purchasing and disposal choices. The privileged circular consumer is disciplined into exercising their apparent choice by the material semiotics of

disposable plastic, but also when they are forced to change their behaviour and relations with disposable food packaging (Calvo-Porral & Lévy-Mangin, 2020; Wagner & Heinzel, 2020) by the demands of the CE. This is clear from the example of my step mother in Switzerland, who has to pay a fine if she does not comply with the CE requirements, even though she did not really have a choice about purchasing the disposable plastic in the first place. The privileged circular consumer becomes governable through the misattribution of choice in their disposable food packaging relations. Thus, because of the ubiquitous and pervasive presence of this plastic species, and the material semiotic functions that it performs, the circular consumer is subtly disciplined by the plastic itself, through the false impression of freedom of choice, to engage in new forms of consumption work (Hobson et al, 2021) and disposal work (Holmes & Holmes, 2024).

Consumption work refers to the different practices and behaviours that we have to perform in the purchasing, using, recycling/re-using and disposing of consumer goods and services, such as cleaning, sorting or disposing of recyclables (Wheeler & Glucksmann, 2015). This concept also covers other forms of consumer work not directly related to disposable food plastic packaging, such as building your own flat-pack furniture or other forms of do-it-yourself products, where the problem of disposing of the packaging material still comes to rest with the consumer.

The disposal work specifically created by engaging with disposable plastic packaging of food focuses on the household practices required of the individual privileged circular consumer, as seen in the case of my stepmother in Switzerland, such as identification, preparation, segregation, and disposal (Holmes & Holmes, 2024). The agency that disposable food packaging plastic has to affect New Zealand consumer behaviour is also made clear in The Packaging Forum’s (n.d.) list of some

of the consumption and disposal behaviours required of us, the circular consumers in this country. This includes putting the recycling out for municipal collection, checking individual plastic containers for recycling information, recognising recycling labels, understanding recycling information, making use of public recycling bins where available, making the extra effort to walk to recycling bins even if they are further away, monitoring the litter behaviour of other people, or picking up other people's litter themselves. It also entails engaging in home composting behaviours, which indicates a different relationship with plastic food packaging if the biodegradable options were chosen. Compliance is demanded through the threat of fines, or a revocation of the recycling service to the offending household. Engaging with brand awareness behaviours such as Be a Tidy Kiwi, or Keep New Zealand Beautiful adds a moral avenue to the disciplining of the circular consumer. Becoming aware of plastic package recycling options at supermarkets and engaging with these options, becoming knowledgeable about and forming opinions about who funds the recycling initiatives, such as the soft plastic recycle bins at supermarkets, and the costs involved in these and other similar initiatives, requires the circular consumer to engage in a fair amount of time-consuming self-education.

To these consumption and disposal practices, the governance of the circular consumer by disposable plastic food packaging starts before the consumer even engages with the material itself, such as making price comparisons, especially when there are more eco-friendly alternatives on offer at different price levels, managing a spending budget, managing other people, including little ones, with immediate needs, and managing internal ethical and emotional responses to the often-forced engagement with disposable plastic. It is also in this context of forced plastic relations and subtle disciplining of refusal to engage with disposable plastic that I

mapped the psychological pathologizing descriptors that some authors use to describe the relationship that the privileged consumer has with disposable plastic, descriptors like plastic dependency (Simon, 2022) and plastic addictions (Meyer, 2025). These descriptors become new avenues of discipline. The privileged circular consumer is emerging as a figuration that is far less free than I had initially thought.

Locating coordinates – where is disposable plastic food packaging in the circular economy?

Throughout my cartography, the importance of remembering that consumers are all positioned differently to plastic consumption and disposal, and therefore to the governance power of plastic, is clear. The amount of consumption and disposal labour varies according to socio-economic and political privilege that enables choices to buy and according to which, if any, disposal behaviours are available to the consumer. From the new materialist methodology of decentring the human perspective, however, I notice that while the circular consumers' body, agency and behaviour is being governed by much consumption and disposal work, the plastic packaging itself has a way of evading the CE all together. Only 14% of disposable plastic packaging, which includes food packaging, finds its way into the recycling system, and a mere 5% is transformed into new goods (Ncube et al, 2021). This low percentage suggests that disposable plastic is once again playing the dual roles of object and subject simultaneously, driving much of the discussion around its own recyclability and ways to increase its presence in the CE, while keeping its material self out of the CE loop. The circular consumer, however, does not have the choice to evade the CE, because they are trapped in a constant, unavoidable relational loop with disposable plastic that consists of forced engagement and subsequent disciplining, with few benefits.

Not only is a mere fraction of our disposable plastic food packing actually part of the CE, but a lot of it might be conceived of as recyclable when in fact it is not. This could be because plastic is made up of many different types of materials that cannot be separated, they are made from low quality plastic resins, or they are contaminated with food (Recyclespot.org. n.d.). These include snack wrappers, cellophane, coffee bags and the squeeze pouches containing prepared, convenience food, plastic clamshells most often containing fresh produce or take-away foods, the plastic trays that maintain order inside cookie packaging, desert trays containing donuts, pastries and other sticky sweet treats, food trays, especially the microwaveable ones, any plastic cups contaminated with food, such as the convenience Ramen noodles in a cup, and any Styrofoam food containers (Recyclespot.org. n.d.). This shows how many of the species of plastic that we encounter in our ordinary food packaging practices, evade the CE all together, while it continues to engage us in relations with it, making it easier for these forms of plastics to continue to exist unproblematically, while the circular consumer is positioned as problematic.

If governance relations are about turning people and things into governable entities (Woolgar & Neyland, 2014), the habituation to convenience that has been instilled in us, through disposable plastic, can be interpreted either as providing privileged consumers with consumption ‘choices’, or as a system of relational control enacted by disposable plastic. The subject that is habituated to convenience in the form of disposable plastic is a governable entity without much choice. The disposable plastic packaging itself, however, is not governable because it does not lend itself to being reused or shared, due to its inherent disposability. The training and discipline of the privileged, circular consumer can take the form of compliance

with desired practices (sorting, cleaning, allocating plastic disposable food packaging to the correct bins and so forth), but also of indoctrination, or-re-education, so that the consumers can become accountable for their disposable plastic relations, even though these are often times forced on them. Thus, there are many paths through which disposable plastic food packaging can exercise governance, as the classification of people and waste, like food packaging, are policed by accountability relations, (Woolgar & Neyland, 2014) or in other words, governance in the guise of re-education.

Accountability relations between the privileged circular consumer and the broader plastic network

Accountability relations are enacted in many spheres of the CE where disposable food packaging plays a governing role such as through criminalisation, education, ethics, financial impact and even through innovative/creative impact. For example, education initiatives teach consumers about the behaviours required for the care, use and discarding of disposable plastic food packaging. Criminalisation of certain behaviours around disposable food packaging, such as legally banning their use, is an instance of governing behaviour, and through ethics, plastic governance is enacted when we are forced to make ethical decisions around disposability and comfort. Plastic also governs when it engages us through the financial decisions that we make when we are either engaging with plastic or attempting to disentangle our engagement from plastic, but also through the innovation and science of new products and alternatives to its own existence. Plastic drives the CE (and those of us within it) with its ubiquitous presence, while it simultaneously places itself just out of reach of the CE by being either unrecyclable or un-reusable.

With plastic packaging constituting the biggest category of plastic products produced in the world (Liboiron, 2022), it forms a substantial part of the circular economy, and yet there are some glaring problems with regards to disposable plastic packaging in the CE. Thinking with new materialism, and decentring the human, capitalist, consumerist and extractionist perspective inherent in the CE, I notice that the CE discourses gloss over the need for natural resources including water, clean air and land in order for the recycling activities that form the bedrock of the CE, to take place. Location, context, power, privilege and bodies are all ignored when CE discourses neglect the fact that recycling, and indeed the whole CE enterprise, which includes many activities, have to take place *somewhere*. Recalling both Reno (2016) and Sosna (2023) from earlier in my cartography who argued that disposal is the placement of absences, which takes account of the fact that things we dispose of in our lives, the things we absent from our lives, do not simply disappear into thin air, but require space elsewhere. The CE also does not specify *whose* land and natural resources are going to accommodate the recycling plants or landfills, and by extension, *whose* community resources will be used. In other words, whose human and non-human bodies will be sacrificed for the CE? Already, my cartography emphasises that it is the animal (including humans), plant and environmental bodies that can least afford it, that are being sacrificed to the CE, under the name of the global waste trade, or waste colonialism.

The CE model also aligns itself with sustainable development goals such as clean water supply and active climate action (Khajuria et al, 2022; Ogunmakinde et al, 2021) without clarifying *whose* water supplies will be cleaned. *How* will the microplastics (and other toxins) currently circulating through many of our human and non-human bodies be cleaned up, and *who* will pay for it? The bulk of our current

research within the CE, research into plastic waste and pollution, and possible solutions to these, are taking place in the *developed nations* (Ramli et al, 2024), to help developed nations deal with their *own* pollution. This indicates that hierarchical power relations, mediated by disposable plastic, is driving the CE discourse, and centring it on the wellbeing of developed nations and the bodies that inhabit these regions, while the brunt of the problem resides with the underdeveloped nations and the bodies that reside there. These questions pertain to colonialist activities, and raises the possibility that the CE could be reframed as another form of waste colonialism, dressed up as environmental concern.

Context, location, power and privilege are also overlooked when *the privileged circular consumer* emerges as the most important cog in the wheel of the circular economy. This focus is highlighted in the CE discourses with the concept of *responsible consumption* (Khajuria et al, 2022; Ogunmakinde et al, 2021). Responsible consumption omits the fact that for many consumers, consuming responsibly is rather irrelevant as the need to survive within a capitalist, market-driven context takes priority. This critique applies not only to those from underdeveloped or poorer nations (Liboiron, 2022) but even for those of us who live in first world developed nations, and are privileged enough to be able to have access to and afford a broader array of products, which not everyone in developed countries have. Alternatives to disposable plastic food packaging are not always available or affordable. Neither ‘developed nations’ nor ‘the consumer’, are homogeneous concepts. Even amongst consumers with socio-economic privilege, many are also managing a budget, a household, and carrying other responsibilities aside from the financial ones. These responsibilities also become part of the conversations with disposable plastic food packaging, thus rendering these homogenous concepts,

others like ‘responsible consumption’, pointless as every consumer is positioned differently to their relations with disposable plastic food packaging, and with different understandings of the impacts of waste on the environment and on human and non-human communities.

The circular economy therefore, embodied through the figuration of the privileged circular consumer supports existing patterns of consumption, rather than transforming them (Hobson et al, 2021). It fails to take cognisance of power relations, context, location, and relations between human and non-human bodies. The assumption, then, that recycling or reusing is *obviously* the right thing to do (Rinkinen & Shove, 2023) ignores not only the differences between consumers and their relative capacity to participate in the circular economy, but also differences in the plastic materials themselves, such as the various kinds of disposable plastic, not all of which are recyclable. Plastics, like people, are not a single, homogenous species.

The ethically questionable privileged, circular consumer

Most of the world’s disposable plastic waste originates from developed, affluent countries and cities (Bai & Givens, 2021), indicating that perhaps it is also these regions, that are based on western, capitalist economic models, that are more heavily governed by disposable plastic. On the other hand, it is also the privileged circular consumer that inhabits these economic parts of the world where they are able to resist the governance of disposable plastic by spending more on disposable plastic alternatives, such as glass or metal. However, when we enter into relations with these alternatives to disposable plastic it is still the plastic that guides these behaviours through the moral and affective, embodied reactions, thoughts and feelings that it evokes from us, steering us toward the plastic alternatives. This

resistance then, to disposable plastic, enacted by the privileged circular consumer, might not be from a position of freedom of choice to resist, as much as it is a form of moral disciplining.

In New Zealand, for instance, single use plastic shopping bags are no longer allowed, and since 2022, a multitude of other plastic disposable items have been phased out or eliminated, such as plastic food trays and, polystyrene take-away packaging for food and drinks (Pratley, 2024). Specifically, single-use fresh produce bags, the roll of plastic bags found in the fresh produce section of Pak n Save, New World or Woolworths, that customers could tear off, have been banned, but only if the produce was packaged in it *after* the produce was put up for sale. This means that the store could choose to package their produce in sealed single-use plastic *before* selling it, leading to the bizarre outcome that plastic use in the produce section has likely increased (Pratley, 2024). Therefore, a large part of the single use plastic in our local grocery stores are under the control of the store itself, and thus not in the control of the individual privileged circular consumer, in the sense that stores choose to pre-package produce in clear plastic or in plastic that displays their own in-house branding. From a new materialist perspective, however, it is not clear whether this is really a choice on the part of the stores or whether the stores are also being governed by plastic, given that the plastic packaging of goods in stores are done for the reasons that plastic enables, such as ease of storage, hygiene, easier packing and stacking, and allowing the material semiotics of the plastic packaging to perform the tasks it is meant to perform.

Control over plastic that is outside the hands of the consumer adds to the difficulties of extricating ourselves from our relationship with disposable plastic, (in as much as this extrication is possible given that we ingest plastics), especially because

plastic disposable food packaging supports social practices that minimise the perception of the environmentally damaging effects of the single-use plastic (Shove, 2003). This reference by Shove (2003) that links disposable plastic to social practices normalising its use, is an echo from earlier in the cartography where Michael, (2013) also positioned plastic as a socio-cultural material that arises out of the events, or social practices, in which it participates. External control over plastic, even if it is just a perception of control, takes the responsibility for engaging with plastic away from the individual consumer, by relating the social practices that involve these forms of plastic to the reproduction of normality (Shove, 2003). We continue to engage in relations with disposable plastic because the plastic is intricately intertwined in everyday, mundane cultural practices that uphold the standards of normal, or appropriate, behaviour (Warde, 2005).

Hawkins (2017) suggests that since much of our disposable plastic, including that used in food packaging, is driven by privileged consumer demand, and that we, as privileged consumers, are actually aware of the disposability of the objects, which shows that we are also at least comfortable with this waste, and with the dire consequences of it for all life forms.

Positioning the privileged, circular consumer as having questionable ethics

In this perspective from Hawkins (2017), that the privileged consumer is comfortable with the waste that their consumption behaviours incur, the privileged, circular consumer emerges as one who is also ethically questionable because of their perceived comfort with the waste that disposable plastic becomes. Through this positioning of the unethical, privileged circular consumer, disposable plastic stealthily directs attention away from itself through its material semiotics of comfort, ease,

safety and hygiene, and remains largely unnoticeable. Just like in the CE, disposable plastic is able evade discussions of the ethical problematics of our continued relations with it, by placing the responsibility for these ethical deliberations with the individual, privileged circular consumer. In the CE, the privileged consumer is disciplined when he/she does not behave according to the demands made by disposable plastic, and in the governance site of ethics, the privileged circular consumer is disciplined by the pathologizing label of acting unethically.

As a privileged, circular consumer, I am able to choose the convenience of a take-away dinner over having to cook it myself. I have also tried to avoid interacting with disposable plastic, by taking my own containers to two of our local restaurants and requesting my meals to be placed in them instead of in the disposable plastic trays and boxes on offer. But this, I am told, is not allowed, for health and safety reasons. I have to use the plastic boxes, which are free, or pay an extra 50c for a cardboard container. While some places offer plastic free alternatives, and some grocery stores even encourage consumers to bring their own containers for deli produce so as to avoid using more plastic, these options are not always available. They are also only small acts of resistance when compared to the multitude of food items that are only available in plastic from most grocery stores. So how does the figuration of the privileged circular *consumer* emerge from my cartography as someone who has questionable ethics, and as someone who is governable through the label of being unethical, when the ethical problems seem to reside elsewhere in the network of disposable plastic relations?

Narratives about mundane governance are riddled with moral overtones (Woolgar & Neyland, 2014). For instance, the mundanity of disposable plastic food packaging is not an inherent, natural characteristic of the packaging – it is just

packaging, after all. Following Woolgar and Neyland's (2014) logic of their plastic bin-bag, the disposable packaging derives its mundanity from the discourses that situate the packaging in the structure of a moral order of which the packaging is a part. Thus, it is the mundanity, the ordinariness, of the disposable plastic food packaging that enables the plastic to govern. Linking back to the material semiotics that plastic disposable food packaging enables, when we do not see the clear plastic of the container that holds our food, it is this quality of transparency that allows us to look past the plastic and focus on the commodity inside. We purchase the food, not the food-in-the-plastic-container. This characteristic of transparency is what makes the disposable plastic food container so mundane, so ordinary, that it enables a behaviour which might be perceived as ethically questionable, depending on whether we are a consumer with choice, or one without. However, even the privileged circular consumer does not always have plastic-free alternatives on offer, and there are many degrees of privilege, which might not always extend to the extra costs incurred for the disposable plastic free options.

Being socio-economically able to buy food in a plastic free alternative articulates, according to Hawkins (2017) a moral position, depending of course on whether this plastic free alternative is engaged in, even if it is one that is mediated by the *everywhereness* and inescapability of plastic itself. The plastic packaging also provides the relational grounds on which we make moral judgements about others who we perceive as *choosing* to engage with it. The question of freedom to choose arises yet again. If I am given no choice but to use plastic containers when I order food at my local restaurant, or if I am not able to purchase certain grocery items without them being encased in disposable plastic, then these are not real choices and they cannot be truly reflective of my morals as they are made in the context of

coercion or manipulation. Moral judgements of others who engage with disposable plastic packaging also misses the observations of Evans et al (2022) and Müller and Süßbauer (2022) that our daily routine activities, like buying groceries, or take-away coffee, forms part of a set of mundane, socio-culturally accepted behaviours that occur without much conscious reflection on the part of the shopper. Here, the privileged circular consumer emerges as both ethically lazy *and* unreflective, while this same consumer is located in a context where ongoing relations with disposable plastic is relentless, omnipresent and unavoidable.

The ontological status of disposable plastic items like food packaging, *as disposable*, and our continued engagement with this form of plastic, signals a relationship between the form of accountability that mundane governance assumes, and ethics. Picking up on a thread from earlier in the cartography on mundane governance, the concept of accountability that Woolgar and Neyland (2014) suggests is not the typical top-down one of governance that most commonly relates to issues of answerability, blameworthiness, or liability (Dubnick & Frederickson, 2011), but rather one where accountability is seen as *a co-created* process of mutual sense-making. The ability to waste, which is inherent in disposable plastic food packaging, is an example of mundane governance where accountability and ethics collide, because, as a built-in feature of disposability, it encourages us, the privileged consumers, to use it knowing we will simply discard it (Hawkins, 2017), and that the disposable plastic will be added to the mountains of material rubbish piling up in landfills, leaching into the bodies of earth and water, as well as human and non-human animals, and floating in the ocean. Making sense of these material manifestations of disposability through our consumption practices (Hetherington, 2004), largely depends on people adopting a form of ethical blindness (Hawkins,

2019). However, in light of the lack of choice embedded in our disposable plastic relations, I consider it to be a subtle ethical coercion, rather than avoiding thinking about the consequences of our plastic relations.

This interpretation of ethical blindness as coercion rather than a choice to not engage with the ethics of our decisions, is supported by Palazzo et al's (2012) original construction of ethical blindness as a temporary lapse in understanding the full ethical dimensions of the situation. It is therefore a context-bound moment of unawareness where the full relational implications of the continued engagement with disposable plastic is not immediately clear. This momentary unawareness is enabled in the privileged circular consumer by the disposable plastic itself, through its mundanity, ubiquitousness and the material semiotics offered by its skin and body, but also by its ability to relate to us as both object and subject simultaneously. As a privileged circular consumer, I sometimes do not even realise that I have acted unethically because I feel forced by the lack of choice embedded in my disposable plastic relations. Palazzo et al (2012) ascribe a possible increase in unethical behaviour to this unawareness.

I am becoming aware that lack of conscious awareness seems to be a common thread in the general landscape of disposable plastic governance enabled by structural mechanisms like hidden landfills and sending consumer waste far away to underdeveloped regions, but also by the privileged consumer who is unaware of the complexity of their continued relations with disposable plastic. However, I do not think that this unawareness, stemming from so much relational complexity, equates to questionable ethics in lazy, unreflective privileged consumers.

New materialism also supports the interpretation of ethical laziness as ethical coercion instead. The ethical questionability is also not a ‘fault’ on the part of the individual, isolated consumer, because avoiding disposable plastic is regarded as an interactive process where new relations with the disposable objects need to be negotiated (Sattlegger, 2021a). These new ways of relating to the plastic disposable packaging are not always accessible to the individual privileged consumer, for reasons that are beyond their control, such as the higher cost of plastic packaging alternatives, the lack of availability of such alternatives or choosing between different ethical actions in the same situation.

Ethics, when seen as being a negotiated process of co-created sense-making, resonates with the idea of governability, as they mutually reinforce one another. This compatibility is echoed by Bensaude-Vincent (2013) who points out that during the twentieth century, as plastic became part of the mundanity of life, the concept of plasticity also became one of our main values. We increasingly embraced the change and malleability in our daily lives that the new influx of plastic commodities enabled, while we (initially) turned a blind eye to the material effects of plastic consumption. Even this initial blind eye cannot be an instance of ethical laziness because the waste produced by this material was not readily noticeable, and by the time it was, plastic was already an integral part of our western, socio-cultural lives and we had already become conditioned to (Meikle,1995) or governed by plastic.

Individual plastic relations accountability also assumes that plastic is the only matter to make ethical decisions about when there is a myriad of other factors, substances and entities involved in any ethical decisions that consumers make, even when that decision is about the plastic itself. For instance, when I shop at the organic

wholefoods store, I am attempting to make healthy ethical choices for my body and the bodies of those that I am responsible for, as well as for the environment, by using paper bags and refillable glass jars. Even in this context, however, I am still faced with disposable plastic packaging, because this material is as ubiquitous in the organic food industry as outside of it, with increasingly complex and smaller packaging and more eat-on-the-go offerings (Sattlegger, 2021b). Privileged circular consumers, like myself, have to choose between the health of our bodies, or the health of the environment because of the increasingly unavoidable single-serve plastic packaging, showing how plastic is the factor that creates the ethical bind for the consumer, because regardless of which option we choose, we will be engaging in an unethical action.

Additionally, the positioning of the privileged circular consumer as being individually ethically responsible is wholly anthropocentric and assumes the perspective that the only source of agency is the individual consumer because the consumer is the only actor who is expected to participate in reflective thought, introspection and self-discipline (Hawkins, 2019). While it is true that plastic cannot engage in reflective thought, introspection or self-discipline, the meaning of agency, from a new materialist perspective, is simply the ability to affect another or to be affected. By this new materialist definition, plastic has as much agency as the individual consumer. The anthropocentric perspective is thus one of moral righteousness, and it lays the responsibility, and blame, for engaging with disposable plastic squarely with the consumer, much like this perspective does in the circular economy, while ignoring the agency of all the other actors, including, and more importantly, those in the materials economy network who *intend* for plastic items to be necessary, unavoidable and destructive (Hawkins, 2019). In these ways, plastic

becomes what Hawkins (2019) refers to as an ethical intermediary. By acting as an ethical intermediary, disposable plastic once again assumes the form of subject and object simultaneously by directing the conversation around the ethics of its own agency to intervene in our relations with it. Disposable plastic becomes an active entity mediating our ethical relations.

A relational ethics

Hawkins (2019) suggests that, while we, the privileged consumers, do suffer from a form of ethical blindness, (which I reinterpreted as ethical coercion), a different ethical approach is needed. An ethics that shifts the attention away from ethics as only human duties and obligations and includes a more than human perspective that highlights the various modes and interdependence of other entangled actors involved in plastic, as well as the potential of things, like disposable plastic food packaging, to shape, or govern, human behaviour. This is more in alignment with a new materialist approach, where the relational exchanges between agential actors are foregrounded. A new materialist, relational ethic recognises that plastic is not only a passive, useful-to-human object that exits simply because of our attention to it, but is itself a participant in shaping ethical actions, especially through the mechanisms of problematisation and classification.

For instance, in 2019, New Zealand grocery stores phased out single use plastic bags for carrying one's groceries in (Ministry for the Environment, 2024). This mandatory action caused plastic to became problematised in a way that foregrounded it and rendered some aspects of it unacceptable. By classifying some aspects of plastic as unacceptable, and others as not, based on whether they were reusable or not, our relationship with disposable plastic bags had to change. Classifying is a governance tool that can be used to draw borders around certain

things and group them together based on specific characteristics, and to exclude other things (Mbembe, 2019a, b), enabling us to engage in practices of avoidance (Reno, 2016; Sosna, 2023). Classificatory practises, like problematising a particular species of plastic, are linked to the broader ethical concerns that the waste trade enables, as the logic of drawing boundaries around some bodies, whether plant, animal (including the human animal), or environmental, for the purpose of classifying them as being problematic, is not only inherent in these classificatory actions, but it also makes practices of governing easier. That which is to be governed is clearly demarcated and has been designated as being unwanted. Using the same classificatory logic, problematising and reclassifying some types of plastic (the plastic shopping bag in New Zealand) makes them ethically actionable and justified new ways of relating to them (Hawkins, 2019) and to the materials that we have to use to help us gets our groceries from the store and into the home. This classificatory practise, leading to problematising and reclassifying, is *necessary* in order to change our relationship with plastic bags. Before being reclassified as problematic, there was no reason why we could not use re-usable cloth bags or boxes to carry our groceries home in, but once the bag was separated from other forms of plastic, and thus classified as problematic, only then did we change our relations with it and start using boxes, cloth bags and disposable recyclable paper bags instead

However, instituting a policy of no single use plastic bags in the stores exemplifies the type of ethical action that, once again, places responsibly with the consumer only. Consumers are tasked with the responsibility to remember their plastic bag alternatives. Once again, the agency of all the other actors in the network of relationships that constitute the use of plastic bags is overlooked, and makes the conversation about the ethics of disposable plastic food packaging start and end with

the privileged consumer, when it could start at any point in the network of relations that govern our interaction with this material. Beginning, for instance, at the manufacturing stage, Hawkins (2017) suggests the very act of making something and using all the resources involved for the specific purpose of using it once and then discarding it, is itself an unethical act. There is an ethical responsibility here that does not lie with consumers.

Thinking ontologically with relational ethics

Thinking with Hawkins (2017) about the ontological nature of the disposable plastic food packaging that we encounter in our everyday lives - food pouches, coffee cup lids, plastic bags containing dried pasta, beans, peas, rice, cereals, nuts and seeds, bottled water, packets of crisps, chocolates, lollies, dairy products and so much more - raises relational and ethical questions that pertain to the other actors in the disposable plastic packaging network. These questions are about the economic processes, the resources used, the materiality of the objects and the intended environmental destruction that these objects signify all at once. The processes that enable these objects to circulate in our lives is embedded in and enabled by the concept of disposability, which is ontologically baked into single-use plastic packaging. Disposability is also deeply embedded in and enabled by the western, capitalist, extractionist economic model, based on other notions of disposability such as colonialism and anthropocentrism, which supports it.

However, Hawkins (2017) suggests that since this ontological change of wanted to unwanted is built into the disposability of products, a disposable, single-use food package is *simultaneously* wanted and unwanted, desired, yet at the same time waste, inscribing disposable plastic items with multiple simultaneous identities. Because these multiple identities co-exist in the disposable plastic objects, they do

not emerge linearly – starting out as being a wanted, desired object and then becoming a discarded piece of rubbish. Instead, the disposable plastic packaging is already rubbish from the starting point at the petrochemical facility. It is this multiple identity, this ontological masquerade, that muddies the question of the ethics of single use disposable plastic items. This is what disposability really means, according to Hawkins (2017). It is anticipating and accepting waste, not as the end result after the value has been extracted from a single use item, but waste as a built-in feature of single use items right from the very beginning

If the demise of disposable plastic is already calculated and planned for at its inception, then the privileged circular consumer who interacts with this form of plastic do not have any choice about whether to dispose of it or not. We simply have to. Disposability is pre-calculated, unavoidable, and necessitates, from the point of disposable plastic inception, a global waste trade to manage the flows disposable plastic packaging, a waste empire that follows remarkably similar routes as the Imperial colonialists.

Chapter 4 - Plastic agency: Power, colonialism and biopolitical governance

The ethically questionable, privileged circular consumer entangled in global power relations

My cartography maps the mundane governing power that emerges from disposable plastic to turn people and things into governable entities (Woolgar & Neyland, 2014). Disposable plastic is relationally embedded in subtle rules and practices to mould and inform not only our consumer ways of life (Hawkins, 2019), but also relations in the global plastic waste trade. On an individual level, our western, privileged consumerist behaviours are entangled with the global waste trade specifically through the circular economy and the governance of the ethically questionable privileged circular consumer, who has to engage in a large amount of consumption and disposal work for the circular economy to be effective. However, the global trade in disposable plastic waste is also a relational issue informed by colonialist, extractionist, capitalist, anthropocentric and western ideologies that rationalise the practice of taking our consumerist waste from one region and depositing it in another, within the context of unequal power relations.

Through the global waste trade, the disposable plastic that we, the privileged circular consumers absent from our lives once we throw it into the correct recycling bag or bin, provided we are well disciplined, continues to demand space and natural resources for its own existence elsewhere. The very concept of disposable plastic is therefore not even possible without access to space and natural resources, which implies that disposable plastic can only exist *because of* colonisation of land and the accompanying colonialist mindset (Liboiron, 2022).

Colonialism, as explained by Liboiron (2022) refers to a system that grants colonisers access to land (including the various plant, human and non-human animals and environmental bodies that inhabit that land) for their own goals. such as needing somewhere to dump disposable plastic waste. Peryman et al (2024) defines waste colonialism specifically as the movement of waste from high gross domestic product (GDP) to countries to low GDP countries, and implicates this form of colonialism in corporate imperialism and neoliberal capitalist consumption practices, which are key drivers of both plastic pollution as well as plastic consumption. Waste colonialism, as seen in the cartography of waste in general, can, however, also take place within regions and countries, with the general characteristic being that the waste flows from more developed areas, to less developed ones (Bai & Given, 2021). Across the entire lifespan of plastic, waste colonialism generates historical, political and cultural injustices (Peryman et al, 2024).

Considering plastic as a governing power from a new materialist, non-anthropogenic perspective, it becomes possible to conceptualise plastic waste colonialism as a direct consequence of the mobilisation of the physical and chemical properties of the plastic itself. For instance, disposability, which is a physical property of single use plastic, is intertwined with colonial discourses and concerns about power relations, especially in the form of what Foucault (1990) termed biopower, which Mbembe (2019a) interprets as the grouping and classifying of bodies into camps of those who have the right to live and those who do not, a practice which he links to the global phenomenon of creating borders. When powerful nations export their plastic waste to the less powerful ones, while knowing that they do not have the infrastructure to deal with it, and that the people (and perhaps other life forms as well) who live on and around these sites of waste will suffer from severe mental and

physical health problems, this constitutes a form of biopower. The plant, human and non-human animal, and environmental bodies inhabiting the pieces of land that receive the disposable plastic waste, are bordered off and classified as unimportant and disposable, and conceptually separated from the more valuable (and affluent) WEIRD nations and their inhabitants.

Disposable plastic, including that used in food packaging, therefore demands land, because of its ontological, built-in nature as disposable (Hawkins, 2017) and for its continued post-consumption existence. But this land is not the backyard of the westerns, socio-economically and politically privileged consumer who bought the disposable plastic product. This land is often Indigenous land (Liboiron, 2022., Peryman et al 2024), where the inhabitants do not share the same western values of disposability, ease and comfort at the expense of other life forms. (Liboiron, 2022). Colonial states, and the institutions that they enable, view ‘natural resources’ (human and non-human animals, plants, water, land, air) as assets that can be used in the machinations of institutions that they uphold such as corporate imperialism and increasing corporatocracy, and because of their dominance, these colonial states wield a disproportionate amount of control over national and global economies, where they exacerbate growing inequities (Peryman et al, 2024).

Meeting disposable plastic as an active coloniser

While Peryman et al (2024) view plastic pollution as a symptom of corporate imperialism, from a relational, new materialist perspective, my cartography maps plastic as the driving force behind the sectors of corporate imperialism and the associated waste trade that pertain directly to it. I chart disposable plastic as the agential governing factor, rather than as a symptom of the control of these economic institutions. In this view, it is not the global capitalist system that enables the

petrochemical industry to continue producing disposable plastic and its correlate in waste, leading to the colonisation of indigenous lands and people through the management of the waste. While the capitalist system might have been the original impetus for the invention of plastic, as noted in the mapping of the socio-cultural history of this material, the plastic has since become so valuable and ubiquitous to everyday western life, that the plastic itself now requires the petrochemical industry to continue extraction for the raw materials needed to produce it. Plastic therefore demands land and the sacrifice of lives and bodies, starting pre-conceptively, in the extractive zones where indigenous and marginalised people and other life forms are compromised in the process of extracting the natural oil and gas necessary for the making of disposable plastic, places such as the Far North in the northern hemisphere, Southeast Asia, and western Africa (Liboiron, 2022).The plastic also requires a continued supply of land where it can continue its post-consumer life, not as waste that we can absent from our lives and forget about, but as a new, agential element in the ecosystem in which it finds itself. From here, the plastic can travel or leach (Hird, 2012, 2013), become a home for other life forms and create new plastispheres of synthetic ecosystems (Vithanage et al, 2025). It can also destroy the bodies of plants, human and non-human animals, and the environment it encounters, as in the case of microplastics that are ingested (De Groot & MacNeil, 2025), or the landfills, recycling facilities and incinerators that require land to be cleared of all life, if these facilities are even available (Barnes, 2019).

This new materialist perspective of how disposable plastic might be the driving force, the governor, behind a large part of the colonial waste trade, is supported by Liboiron (2022) when he positions plastic pollution as the continued enactment of colonisation, rather than as a side-effect of colonisation. With plastic

being everywhere and nowhere, a glimmer of Foucault's panopticon of surveillance (Elmer, 2012) enters my cartography, where plastic plays the role of the invisible governor in the colonial waste trade, just as it does in the CE, where consumers are encouraged to self – surveille and exercise self-discipline in their consumer choices.

Plastic as coloniser models its behaviour on human colonisation practices

Colonialism has a rich history of keeping distance or space between the various levels of the power hierarchy, which is an essential element in maintaining power. Disposable plastic, as the governor and upholder of continued colonial relations in the plastic waste trade (Liboiron, 2022) follows the same 'out of sight, out of mind' logic (Barnes, 2019), a logic that could be the mantra of colonial activities. Hence Reno (2016) and Sosna (2023) remind us that disposal is not only about rubbish and waste, but also about managing absence and continued presence elsewhere. Hetherington (2004) locates this reminder specifically within a social, relational system. Sending plastic waste away, along the waste trade route, does not mean that is goes away or that the problem is solved. It is not the end-point of a sequence of behaviours that started with production and ended with disposal. It means that, while the plastic has entered an environment where it continues its agential existence, the environment itself requires ongoing social relations management. In a new materialist sense, the ambit of these social relations includes the bodies of human *and* non-human beings. However, according to Heatherington (2004), social relations do not always involve the presence of material things, like bodies, but can also be about the presence of what is not there (Hetherington, 2004). Thinking with Hetherington (2004), in the context of power relations and waste colonialism, I understand this absent presence to refer to the presence of the *immaterial* aspects of social relations, such as the distance inherent to the success

of colonialism, or the attitudes and ideologies like racism and extractionism that is deeply embedded in western culture and plays an important role in the ongoing social relations with indigenous peoples and with foreign governments. These are immaterial aspects of the social relations in the global plastic waste trade that have to be managed and that the consumer of disposable plastic packaging is mostly unaware of.

These negotiated relations that revolve around disposable plastic waste are also absent from the linear take-make-discard process that consumers are more familiar with. They happen, conveniently, far away and out of sight, and the absence of these social relations, mediated by the presence and characteristics of disposable plastic, is a feature of disposable plastic governance within the waste colonisation process.

Like its human coloniser counterparts, plastic-as- coloniser has specific structural requirements that it requires to continue existing and providing benefits of ease and comfort. For the human-as-coloniser, it might be land, or the bodies of water or of human and non-human animals. For the plastic-as-coloniser, this structural requirement is an integrated municipal waste collection system that can carry the sorted household waste to landfills and recycling plants, where disposable plastic appears to go away (Liboiron, 2022). This is a necessary act on the part of plastic governance to keep us in favour of using it and maintain its continued economic worth, because the integrated municipal waste system only has to function well in the plastic-as-coloniser's home base, which is the western, developed, capitalist countries. What happens to the plastic disposable waste, or the repercussions on the lands that are colonised by the waste, is of lesser importance from the perspective of the plastic-as-coloniser. Hence, many places that suffer from

waste colonisation have no *where* and no *how* to make the waste go away. While countries in the global north are often equipped with effective waste disposal and waste treatment systems (Kaza et al, 2018), the nations and areas in the global south that receive the disposable plastic, compliments for the reproduction of the ethically questionable, privileged circular consumer figuration, often do not have adequate waste management infrastructure, leading to plastic leakage (Barnes, 2019) and adverse health impacts caused by illegal dumping of waste or burning of the plastic waste (Kaza et al, 2018).

The toxic effects on human and non-human life forms of trading plastic waste, have made it an important social and environmental justice concern (Cotta, 2020), especially since it is often poor and socially marginalised people, especially women, and non-human animals, who are adversely affected by the floods of plastic waste Wakunuma (2021). However, there are also other relational implications as the disposable plastic waste trade relies on cheap labour to manage the waste, adding to the understanding that the global plastic waste trade is a form of colonialism (Gregson et al, 2015). Plastic is thereby an integral part of the ongoing colonial mindset (Liboiron, 2022) of the western, capitalist economic model.

Disposable plastic shapes colonial narratives

Plastic permeates itself into many of the narratives about plastic waste management that are intertwined with broader discourses about land and natural and human resource management and who can do it better and therefore should be the ones to do it – in other words, colonialist narratives. Disposable plastic plays a key part in the consistent portrayal of countries like Indonesia, the Philippines or Ghana as mismanaging their plastic waste, or as inept, bad or incompetent (Liboiron, 2022). However, these are the places that do not have the required aforementioned

infrastructure to effectively handle a disproportionate influx of waste from other countries. By placing disposable plastic at the centre of discourses about land management when we question appropriate use of land in terms of knowledge or ignorance, civilised or savage, (Liboiron, 2022), disposable plastic perpetuates a colonialist mindset that positions the coloniser as the one who knows how to do it better, and therefore should be the one in charge of doing so. This mindset still exists today, as Liboiron (2022), points out, especially with regards to disposable plastic, which continues to demand land and resources in order to fulfil its promise of disposable convenience. In New Zealand, the mindset shows itself in the on-going confiscation of Māori land under the Public Works Act of 1981 (Peryman et al, 2024), which allows for the building of landfills on Māori land, thus not only displacing Māori from their land and from their cultural connection with the land, but also serves as an example of a colonial power taking over Indigenous land because it assumes that it can manage or use it better.

Plastic-as-coloniser has embodied effects on all life forms

The impacts of disposable plastic on the bodies and life experiences of human and non-human animals, are also not distributed equally. Disparate distribution has appeared through my cartography in various forms as it follows the trails and relates to disposable plastic waste, such as unequal distribution of power, of resources, of privilege and of waste. The unbalanced impact of disposable plastic makes this species of plastic an integral factor in how power relations are exercised on the individual level. For instance, disposable plastic disproportionately affects the vulnerable and socially marginalised (Wakunuma, 2021). Liboiron (2022) points out that some animal bodies, which includes human ones, are often forced by socio-economic and political circumstances to live within close proximity to plastic waste,

most of which is not of their own making, as they are located in under-developed and municipally under-serviced areas. Peryman et al (2024) showed that in New Zealand, the two groups most affected by the disposable plastics that continue to live post-consumptively in the ocean, are those in the low-income bracket, and the households who rely directly on seafood for sustenance, through their increased exposure observable plastic waste, but also through microplastic. Those who rely directly on seafood have no choice but to allow microplastic to enter their bodies and alter their physiology, as evidence of harm from ingesting the microplastic is growing (Alberghini et al, 2023; Avejoto et al, 2024) and of course, for other animals as well (Jovanović, 2017; Zolotova et al, 2022). The agency of plastic thus mingles with issues of power over the human bodies who are most heavily impacted by disposable plastic waste. They are also the people whom the other actors in the network of the material plastic economy disregards when it continues to make disposable plastic available for consumption. The circular economy also disregards these bodies when it advocates for responsible consumption, without simultaneously advocating for a market revolution that dislodges the strong hold of disposable plastic on the market. The global plastic waste trade flexes its muscles in a display of power when it continues to use natural resources (a clean euphemism for the bodies of life forms (including human), amongst other non-living natural elements that we share our planet with) to accommodate the demands of plastic for a place to live post-consumptively.

Disposable plastic governance as a form of biopolitics

Bodies seem to be important when we do what Hawkins (2001) suggests and think, in a new materialist manner, *with* plastic instead of against it. Charting the governance of disposable plastic over bodies of all life forms and their intricate

entanglement with unequal power relations, what emerged for me is that disposable plastic waste governance extends beyond the ethically questionable, privileged circular consumer and is a disciplining of all the human and non-human bodies that are affected by disposable plastic. Disposable plastic is directly involved in the movement of bodies, the displacement of bodies, the invasion of bodies, the space that bodies inhabit or want to inhabit and the changing of bodies. Bodies of water are changed by floating plastic waste, human and animal bodies are changed by taking in microplastic, and people and non-human animals sometimes have to live with their bodies in close proximity to the bodies of land that are scarred and damaged by the entirety of the plastics economy. The bodies of discarded plastic, still etched with western symbols designed to entice the privileged consumer, are themselves changed by weather and environmental conditions and they also become colonised by microorganisms (much like the bodies of al life forms do). Governing from within the neoliberal market context, plastic governance is also about the convenience of bodies, the usefulness of bodies, the shame and imposed imperfections of bodies, the extravagance of bodies and the distancing of (some) bodies from the consequences of becoming disciplined by disposable plastic. Plastic governance is therefore about the power that some bodies have over other bodies, and thus, it constitutes a form of biopower or biopolitics.

In biopolitics, power and the individual collide in the physical body of the living subject when the body becomes a political technique or tool (Wilmer & Žukauskaite, 2016). Where sovereign power used to consist in the ability to end life, biopolitical power is about optimising, regulating, managing and disciplining bodies, which Foucault (as quoted in Wilmer & Žukauskaite, 2016) relates directly to the development of capitalism. Instead of managing death, biopolitics manages lives

(bodies) by questioning the right of, and conditions under which, every living body should exist. Means (2022) specifies that it is human life that is managed as a political problem in biopolitical practices. However, my cartographical journey intersects repeatedly with how non-human life forms are also affected by the governance of disposable plastic, so perhaps human life is noted as problematic only because, from an anthropocentric perspective, non-human life is easily disregarded as a life form that does not need be disciplined because it can simply be eliminated where needed. Means (2022) also indicates that biopolitics is a concept that originated in the west, implying that it is not the western lives that are problematic and needing to be managed politically, but the lives of others, notably anyone who is not western, educated, affluent, white or male. According to Wilmer and Žukauskaite, (2016) Foucault also related biopolitics directly to racism, because racism changes a political relationship into a biological one, and becomes the means by which excess capital production can be withheld from some bodies based on their biology. This can be seen in the structure of disposable plastic governance where the excesses of capitalistic production, in terms of goods, money, inventions and research, are all concentrated in the western, developed and predominantly white regions of the world, while the bulk of the rubbish, or discards, including disposable plastic, make their way to the predominately non-white, underdeveloped regions. From a new materialist perspective, however, the concept of biopolitics should include the lives of all bodies in the ambit of disposable plastic governance because they are also biopolitically managed, even if it goes unrecognised.

Insidious, systemic violence embedded in the biopolitics of disposable plastic

Biopolitics, as a form of power over other life forms, may entail obvious or subtle violence, even if it is with the purpose of protecting life or optimising life. This

is because, since biopolitics is about managing lives and bodies, only some lives benefit from the aims of protection or optimising, while others do not. These others experience the attempts to protect or optimise life instead as a form of violence.

The surreptitious violence from disposable plastic biopolitics is differently experienced (Emerson, 2022) by the various life forms, including humans. For instance, starting with the violence of extracting the raw materials that disposable plastic requires for its body to be manufactured and shaped into a valuable commodity in the first place, to the destructiveness of landfills and the global waste trade, it is kept, for the most part, hidden from western consumers.

Harmful biopolitics of disposable plastic in landfills

Landfills exemplify the surreptitious brutality inherent in disposable plastic governance, which is not immediately obvious from the anthropocentric ideology that underpins their creation. As the most likely destination of disposable plastic (Wojnowska-Baryta et al, 2022), landfills are not only commonly hidden (Sosna, 2023), but the mere act of clearing a large tract of land, opening it up, filling it with rubbish and then closing it again, is an act of violence, an invasion of the body of land (Reno, 2016). Reno (2016) also describes a landfill as a body with skin of soil and grass, and a landfill accident as a bleeding wound. This skin sags and eventually tears when the gut microbes of the landfill are overstressed from not taking the balance of microbes (more living bodies) into consideration when caring for the body of the landfill.

As an agential material, disposable plastic draws other bodies to the landfills, to scavenge the plastic as valuable resource, but these other bodies enter into dangerous relations with the plastic as the plastic releases noxious, toxic gases (Zhang et al, 2024). Landfills are also places where disposable plastics break down

into microplastics, which then intrude into the bodies of all life forms, including humans, without providing these life forms with a choice. Disposable plastic stealthily invades bodies, encroaching on the line that separates the living from the non-living, and thus far, only harmful consequences have been documented from this forced entry into bodies.

Plastic, as a large part of our waste and pollution, is described as a form of slow violence (Reno & Halvorson, 2022) and slow death (Berlant, 2007) against the bodies of life forms that suffer from the global uneven distribution of plastic waste. This asymmetrical distribution is enabled most noticeably by the disposable plastic waste trade and landfills that are situated disproportionally in low socio-economic and politically disadvantaged areas, creating a disproportionate distribution of disease, sickness, suffering and death amongst the recipients of the waste.

Harmful biopolitics in the CE

The violent biopolitics of disposable plastic governance is noticeable in the circular economy as well, but in this location, it is even more surreptitious. While my cartography unearthed the figuration of the ethically questionable, privileged circular consumer, the figuration of the marginalised, socio-economically and politically disempowered consumer of plastic has been concealed and silenced in the background. The CE relies predominantly, and sometimes exclusively, on one manifestation of this figuration, that of the informal waste picker. The informal waste workers recover plastic from landfills and other places of dumping (Velis, 2017), which explains why Reno and Halvorson (2022), position ongoing environmental injustice as a source of devalued, or cheap, labour. This work is not limited to landfills, because in underdeveloped nations especially, there are also urban street waste pickers whose bodies are responsible for collecting and hauling large loads of

disposable plastic waste (amongst other kinds) to recycling centres. The bodies of urban waste pickers suffer from attritional decay, wearing out and wasting away, from the hard physical labour that they engage in within their contexts of urban poverty and what Goeieman (2026, p 339) refers to as “slow infrastructural violence”. This form of violence describes a cumulative and gradual process of harm that results from being neglected and from the unequal provision of infrastructural resources, which disproportionality affects marginalised and impoverished bodies.

The bodies that constitute the informal waste recovery sector are largely ignored by dominant CE discourses, as is the agency of disposable plastic. For instance, disposable plastic, because it is non-biodegradable, remouldable and recyclable, resists its label and classification as waste, and positions itself instead as *valuable* because *t*he CE, as an industry embedded within and inseparable from, capitalism, *requires* materials, like disposable plastic, to continue producing consumer goods. There is an opposing relationship between the agency of disposable plastic and that of the informal waste picker. Where the waste picker is classified as cheap or undervalued, even though waste pickers play a very valuable role in the CE, disposable plastic, by contrast, exercises its agency and *resists* becoming classified as worthless to society.

Moreover, for disposable plastic to remain valuable to the CE, the plastic itself should not only be accessible to the waste pickers to retrieve it, but an impoverished, socially marginalised population, or group of bodies, is *essential* (Velis, 2017). Because disposable plastic, and the places where it comes to rest, such as landfills or informal waste collection sites, has been tarnished with what Spelman (2011) referred to as the scent of rejection, the marginalised population needs to be impoverished enough to be willing to engage their bodies in the work required to

retrieve the plastic, work that is regarded as unpleasant, socially undesirable, violent and dangerous.

Pit-stop

It is with an embodied sensation, a feeling of shock, that I come to this realisation. Thinking back to my companion who accompanied me on this cartographic journey, I imagine us being forced to sit on a rock to contemplate the horrors of what we've just discovered before being able to move on. Maybe this is how the people who discovered evidence of genocide felt upon their discoveries. Marginalised and impoverished people, and also other life forms that are magnetised together by their strangeness and unwantedness (Sosna, 2023) such as the animals and plants and pieces of earth that are all sacrificed for the management of waste, are *essential* for the ongoing maintenance of the privileged life that I live, along with everyone else who is encapsulated in the privileged consumer figuration. I have to digest the idea that living bodies of all kinds are not merely unfortunate casualties caught forced to eke out an existence within the colonialist, capitalist, neoliberalist economic system that they happen to find themselves living in. They are an indispensable element of this system, their marginalisation and sacrifice is a pre-requisite for us, the privileged consumers, to continue living our privileges. Present tense, large scale ecocide (Bender, 2003), where the eco part of this term includes all life forms, inclusive of human life, is integral to our continued disposable plastic relations.

End of pit-stop

My cartography, however, has charted how much of the CE discourse is centred on the bodies of the privileged *circular consumer*, and not the bodies of the informal waste recoverer. This indicates to me the agency of disposable plastic to

mediate discourses about itself and its usefulness by reproducing the privileged circular consumer as a focal point in the discourses about disposable plastic waste and the consequences thereof. The attention then remains on the western developed, figuration of the economically privileged, circular consumer, and away from the plastic itself as a problematic material. This strategy also functions to keep awareness of any other problematic, harmful aspects of the disposable plastic economy, which includes the bodies of the informal waste pickers and other non-human bodies that are being harmed, to a minimum. Through constructing the figuration of the privileged circular consumer, the work that is required by disposable plastic to continue its life after being disposed of, can happen consistently in a way that appears to be non-harmful and non-violent. All the privileged circular consumer has to do, after all, is separate their waste, and dump it in the clean recycling bin provided. The circular consumer discourses completely mask not only the amount of consumption and disposal labour that the privileged consumer really has to engage in, but, more importantly, it also masks the violent and harmful aspects of disposable plastic governance, as there is very little acknowledgement of the informal waste collector and the harms that they experience. These harms include suffering, disease, mental distress and dangerous working conditions, while functioning as an *essential* body in the circular economy. Thus the privileged circular consumer is positioned as the one who does the work, through consumption and (relatively clean) disposal labour, and as such it is the socio-economically and politically empowered western circular consumer who is positioned as integral to the success of the CE, and not the informal waste picker who is also essential, as both Goeieman (2026) and Velis (2017) emphasise.

Material semiotics: A site for harmful biopolitics

The material semiotics of disposable plastic packaging, as traversed in the cartography, such as transparency, and the ontological origins of disposable plastic *as disposable* (Hawkins, 2017), serve to uphold the power of disposable plastic, guiding narratives and the attention, away from violent biopolitics by focusing consumer attention on either the harmless product inside, which is kept safe and clean by the body of the plastic, or by presenting its body as easily and cleanly disposable. Such material semiotics discourages further examination of the stealth violence of the entire lifecycle of disposable plastic, from brutal extraction processes to the harms experienced by various bodies involved in disposal. Material semiotics serves to keep the lives of western, socio-cultural consumers optimised and protected, safe and clean, at the expense of less privileged humans, animals, plants, and the environment

Anthropocentrism upholds harmful biopolitical practices in disposable plastic governance

The surreptitious nature of the violence of biopolitics in disposable plastic governance, whether at the landfills or in the CE, is perpetuated by the continued anthropocentric worldview inherent in the plastics economy and in the neoliberal capitalist economy that underpins the plastics industry. This worldview makes it possible to disregard the non-human bodies being violently impacted through the lifecycle demands of disposable plastic, for instance the body of the earth, and also that of animals and plants, much like it disregards the bodies of the informal waste collectors. I can only infer from this that informal waste collectors are not included under the prefix “Anthropos”, a point which has also been made by Braidotti (2020) in her observations that only certain bodies are “Anthropos” or “man”, and that other bodies, notably that of women, children, non-white people and socio-economically

and politically marginalised people are not included and these bodies are as disposable as plastic.

Material semiotics, the CE and discourses about individual consumer ethics, as sites of governance, might seem to be about an empowered consumer, but if plastic is everywhere, all the time, mundane and largely unavoidable, especially if we are becoming plastic (Mbembe, 2019a), how much of a choice does any of the 'bios' have – either the privileged, circular consumers, who are disciplined into compliance, or those being affected by the disposal of this material? The constant, relentless and increasing manufacture and sale of disposable plastic products, tells a story of a biopolitics where power is, as Malabou and Shread (2016) point out, asymmetrical, one-sided and unreciprocated. The psychological subject then, in the context of either academic psychological research into environmental concerns and the effect of climate change on the people being studied, is therefore not an empowered subject, not even in the WEIRD countries where most of this psychological research is concentrated, and of course, much less so in the non-WEIRD countries where psychological research as a western discipline, is sparse.

Biopolitics also relates back to Hetherington (2004), who recognised socio-cultural practices of disposal of all things strange as a classificatory practice that reinforces social categories of ingroups and outgroups, inclusion and exclusion. Hetherington (2004) referred to the exclusions as the placing of absences, in acknowledgement of the fact that these absences always take up space in a place elsewhere. Plastic never really goes away, even though we refer to it as disposable, and it continues to take up space elsewhere. It is this elsewhereness that forms part of the governability of plastic. In taking up space elsewhere, disposable plastic is exercising a form of biopolitics of its own as it displaces and invades other life forms

and places, including our bodies – hence plastic and our asymmetrical and violent relationship with it impacts on us all differently as we go about our daily lives as embedded within our histories and contexts. Plastic is indeed a wicked problem.

Chapter 5 - Reflections on a long and arduous journey

When I began my research journey, I could not have imagined the extent of the wickedness of plastic and where it would ultimately lead me. As a consumer that has constantly been embroiled in the ethical choices of non-plastic-coated goods versus problems of availability, nutrition and convenience, I initiated my research from my own standpoint and that of my family. My daughter, who suffered from severe climate change anxiety as a young, impressionable teenager, also accompanied me on my thinking through this cartography. The fact that plastic has the ability (or agency) to induce troublesome and problematic psychological states should be enough to render this material relevant to psychology studies. Yet although, psychological research is already addressing climate change anxiety and stress caused by plastic pollution (amongst other factors), these projects are addressed from the anthropocentric, androcentric, Eurocentric and individualistic perspective that formed the basis of my critique of western psychology, which ideologically excludes many human and 'non-human bodies', based on worth.

While I began my reading as a beginning literature review and the plastic, through the literature, led me down many pathways and complex transdisciplinary, economic and political trails, my process became a transdisciplinary, nomadic cartography aimed at mapping out the governing ability of disposable plastic. I approached my cartography using a new materialist methodology that enabled me to decentre the anthropogenic perspective, so prevalent in the literature, to enable the inclusion of not only the 'non-human bodies' that are excluded from research in mainstream psychology, but also the agency of the disposable plastic itself. For me, it became nomadic as we followed the trails left by plastic through the isolating histories, borders and boundaries of academic disciplines.

My cartography began by exploring and getting a sense of the lay of the land, by mapping out the problem of general anthropogenic waste, within which plastic in contemporary times is becoming increasingly embedded, and indeed, embodied, permeating all aspects of our lives and those of animals, plants, land and water environments. Earth-bound landfills, and the global trade in waste, reveal avalanches of rubbish that has been accumulated based on these same values that underpin the grouping and classifying practices that shape our relations with wasted living and non-living surplus. The global waste trade exemplifies the deeply engrained asymmetrical power relations between the developed parts of the world and the underdeveloped parts, fuelled by anthropocentric, androcentric, extractionist and colonialist ideologies stemming from the developed west.

When I set out to explore waste and plastic, I did not anticipate having to account for capitalism as well. In hindsight, it seems like an obvious connection – it is, after all, our consumer goods, purchased and disposed of within the context of a capitalist economy, that constitutes the waste problem. But prior to this cartography, I did not link capitalism, as an economic and political matter, to my personal consumption and disposal behaviours. The notion of capitalism, however, emerged as inextricable from every aspect of my cartographic journey. I mapped the cultural history of plastic as a material that arose out of socio-cultural processes in the context of capitalism. Even my understanding of capitalism had to change to accommodate the new knowledge that capitalism is a planned economy that *relies* on subtle processes of coercion and force in order to succeed (Oksala, 2011). Capitalism emerged as a steady enabler of plastic governance in asymmetrical power relations, and throughout the cartography, I wondered about questions of

personal responsibility as I continued to participate in my consumer behaviours within the capitalist economy in which I live.

The importance of all living bodies also became increasingly clear to me throughout this journey. Having to think with, and include, all living bodies in my mapping process, proved to be a challenge in itself as I got caught up in unexpected default binaries (human and non-human, us-them), and having to remain cognisant of the assumptions that I might bring with me about the experiences of certain bodies, such as the presupposition that underprivileged people are by default also disempowered.

Another factor that I never linked with my plastic consumption and disposal behaviours is violence. Previously, I equated disposable plastic with ease and convenience, but now, I am aware of the violence that is inherent in every stage of the plastics economy, from extraction of raw materials to disposal and afterwards, as plastic continues its agential life. The violence of plastic might be more obvious in the ongoing systemic injustices that enable disposable plastic to asymmetrically affect marginalised, socio-economically and politically underprivileged bodies. The obvious forms of violence, such as land degradation, were familiar to me before embarking on this journey, and yet, it seemed far removed from my own, personal plastic use. Even after this cartographic journey, the violence associated with the global waste trade, for instance, still feels like an abstract notion that happens to other bodies, in other places, and one that has little to do with me. And yet, after having mapped the systemic structures that enable this brutality to continue and, equally importantly, enable it to remain invisible and to feel distanced from me, the privileged western consumer, I can no longer pretend that I am not entangled in this violence. I wonder if this tension that I feel, knowing that I am contributing to the ferocity of the plastic

waste disposal system, while simultaneously being unable to extricate myself from the capitalist, neoliberal consumerist economy that I live in, can be made sense of through psychological research.

There is violence in microplastic as well, and this violence is indiscriminate, as it enters every living body. I struggle to make sense of the relentless avalanche of plastic available to me, most of which I cannot refuse, while knowing that this will one day become part of a plasticised body. Since microplastics can travel, I wonder whose body will be invaded by my plastic consumption and disposal, and, conversely, whose plastics am I breathing in, or consuming? Microplastics have come to represent, for me, the invisible network of relations between all the actors in the disposable plastic economy globally, from the producers and manufacturers, to the consumers and the other life forms who ingest/inhale the microplastic. Just like we cannot see microplastic, we also remain largely unaware of the other actors that we are in constant relations with as we continue to engage with disposable plastic.

From the perspective of the privileged consumer, I no longer feel empowered, but rather disempowered as I wonder how the systems, such as capitalism and neoliberalism, and ideologies like anthropocentrism and extractionism, can be dismantled for the benefit of all living beings? I also question the effect of microplastics on the mental and emotional wellbeing of all the human and non-human animals that are forced to inhale and ingest this material. How might the discipline of psychology take cognisance of the plasticisation of our embodied experiences, and including those who are differently governed by plastic, such as the marginalised and impoverished bodies who are sacrificed for the privileged, circular consumer to enact their disciplined lives.

As I engaged with the concept of mundane governance by Woolgar and Neyland (2014) to help me explore the governance capacity of disposable plastic, I understood why disposable plastic in particular had to be is problematised. This species of plastic, probably more so than any other, normalises the socio-economic structure that encourages waste by design, which is then absorbed into a cultural mindset of easy disposability of lightweight and worthless things. Mundane governance theorises the governing potential of ubiquitous and everyday objects and technologies, such as disposable plastic. Disposable plastic, as an agential material, was mapped as the governing power itself, rather than as a tool used by an external agency to govern the behaviour of bodies.

The figuration of the privileged consumer began to emerge through my exploration of the governance of disposable plastic. This figuration is startlingly present and at the forefront of every site of disposable plastic governance, and I recognised myself in this figuration. In the circular economy, the figuration evolves to become the privileged, *circular* consumer, immersed in the circular consumption and disposal behaviours related to unavoidable and relentless disposable plastic availability, and imposed on it by the disciplinary actions of the CE. The privileged circular consumer evolves yet again into one that is positioned as having questionable ethics as within the CE as the one who needs to make better ethical choices with regards to their shopping privilege. The *ethically questionable*, *privileged, circular consumer*, who is a distinctly western figuration that has access to disposable plastic alternatives as well as municipal recycling services, is mapped out and plotted as the foreground in CE discourses. Disposable plastic, however, manages to keep most of its bodies in the background and out of the CE loop

altogether, since only a small amount of disposable plastic is ever recycled. Since the agency of the other actors in the disposable plastic economy is also ignored in CE discourses and thus the structures and systems that reproduce the figuration of the privileged, circular consumer with questionable ethics, remain unquestioned and hidden in the background. I found it a startling realisation that disposable plastic might be more empowered than I am, when I am the socio-economically and politically privileged consumer with a certain amount of assumed power. I also acknowledge that even in my own cartography, it was the figure of the privileged, circular consumer that emerged, and whose tensions were explored within the context of enforced plastic relations, while other extremely important bodies were once again in the background, such as the informal waste pickers, who emerged as *essential* to the disposable plastic network, but who go largely unrecognised.

Disposable plastic was recognised as a colonial power in the global waste trade, and the figuration of the ethically questionable, privileged circular consumer (in which I recognise myself) emerges here as being deeply embedded in and inseparable from the global asymmetrical power relations that upholds disposable plastic consumption. As with the violence that is present in every aspect of disposable plastic, from inception to its long afterlife, I find it disturbing to recognise myself (and my daily plastic consumption behaviours, which sometimes also supports accepted socio-cultural behaviours like a take-away coffee or meal) as being embedded in these unequal power relations. How do I negotiate these socio-cultural practices that support what is considered normal behaviour in my western culture, with the knowledge that my behaviours are contributing to the global asymmetrical power relations, even though my individual responsibility is limited in a context where disposable plastic is so ubiquitous?

With disposable plastic mapped as an agential material, the continued demands for land, space and bodies, including human bodies, that it requires for its long lifespan, caused me the most discomfort as it became clear to me that without these marginalised bodies and lands, it would be impossible for disposable plastic to even exist, as there would be nowhere to dispose of it. The ability to dispose is enabled by the underdeveloped regions in the world and the marginalised, disposable bodies that populate these regions. The global asymmetrical waste trade ensures that the impoverished communities that are willing to collect the scattered bodies of disposable plastic from landfills or urban streets or other dumping sites, and deliver it to the places that will remould it into a new product, remain in constant supply. The agency of the bodies affected by waste colonisation, from the land to the plants and animals and people, are located as disposable and unvalued. Disposable plastic, however, displays its agency by positioning itself as an empowered subject who demands space and other resources, notably other bodies, to enable it to continue presenting itself as a *valuable* resource.

In my cartographic, multi-disciplinary and nomadic exploration of disposable plastic, I travelled with this species of plastic as it shifted roles, times, places and spaces, crossing boundaries as it silently governs its subjects. Psychology can no longer ignore plastic, or the governance of this material over our lives where we are becoming increasingly disciplined within the complexities of capitalism, neo-liberalism and plastic production, ‘disposal’ and its ongoing ecological immersion and becoming.

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