Alma Mater Studiorum - Università di Bologna

DOTTORATO DI RICERCA IN

TRADUZIONE, INTERPRETAZIONE E INTERCULTURALITA'

Ciclo 34

FEMINIST ENVIRONMENTAL HUMANITIES: INTERTWINING THEORY AND SPECULATIVE FICTION

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Esame finale anno 2022

Science describes accurately from outside; poetry describes accurately from inside. Science explicates; poetry implicates. Both celebrate what they describe. We need the languages of both science and poetry to save us from merely stockpiling endless "information" that fails to inform our ignorance or our irresponsibility.

Ursula K. Le Guin, *Deep in Admiration* (2017)

We-are-(all)-in-this-together-but-we-are-not-one-and-the-same.

Rosi Braidotti, *Posthuman Knowledge* (2019)

Acknowledgments

I dedicate this dissertation to my grandmothers and my grandfathers.

Abstract

This dissertation explores the entanglement between the visionary, creative, and militant capacity of feminist theory to shape sustainable futures and the active contribution of feminist speculative fiction to the conceptual debate about the climate crisis. Over the last few years, increasing critical attention has been paid to ecofeminist perspectives on climate change, which see as a core cause of the climate crisis the patriarchal domination of nature, considered to go hand in hand with the oppression of women. What remains to be thoroughly scrutinised is the linkage between ecofeminist theories and other ethical stances capable of countering colonising epistemologies of mastery and dominion over nature. This dissertation intervenes in the debate about the master narrative of the Anthropocene – and about the one-dimensional perspective that often characterises its literary representations – from a feminist perspective that also aims at decolonising the imagination. The ecofeminist and ecological feminist stance of this dissertation is therefore highly informed by intersectionality, black feminist thought, and decolonial feminism, and looks at literary texts that consider patriarchal domination of nature in its intersections with other injustices that play out within the Anthropocene, with a particular focus on race, colonialism, and capitalism. After an overview of the linkages between gender and climate change and between feminism and environmental humanities, it introduces the genre of climate fiction, examining its central tropes. In an attempt to find alternatives to the mainstream narrative of the Anthropocene (namely to its gender-neutrality, colour-blindness, anthropocentrism, and spectacularization of the climate crisis), it focuses on contemporary works of speculative fiction by four Anglophone women authors that particularly address the inequitable impacts of climate

change experienced not only by women, but also by sexualised, racialised, and naturalised Others. These texts were chosen because of their specific engagement with the relationship between climate change, global capitalism, and a flat trust in techno-fixes on the one hand, and structural inequalities generated by patriarchy, racism, and intersecting systems of oppression on the other. My readings seek to answer the following question: how is the notion of the Anthropocene challenged and reimagined by contemporary feminist and decolonial speculative fiction? In conclusion, my analyses demonstrate that feminist speculative fiction on the Anthropocene not only treats climate justice as a central issue and explores the unequal impacts of climate change along lines of social power, but it also makes an insightful critical intervention capable of imagining a rupture from master – and mainstream – narratives of linear progress, being informed by the radical imagination of feminist environmental humanities

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1. Introduction

The Environmental Humanities and the Challenges of the Anthropocene

The Anthropocene Epoch

In February 2000, the Dutch atmospheric chemist and Nobel Prize laureate Paul J. Crutzen attended a meeting of the International Geosphere-Biosphere Programme in Cuernavaca, Mexico. After listening to one lecture after the next in which the present was referenced as the Holocene, he finally interrupted one of the speakers: "Stop using the word Holocene. We're not in the Holocene anymore. We're in the … the … the Anthropocene!" As Horn and Bergthaller note (2020), by the following coffee break, the scientists talked of nothing else but the new geochronological epoch in which human impact on the planet has become pervasive enough to constitute a distinct geological change.

The concept of the Anthropocene came as a radical break from the Holocene: throughout the twentieth century, geology dismissed human impact on the environment as barely significant on the scale of Earth history, let alone the phase of industrialisation that only came at the very end of the few tens of thousands of years of human civilisation (Berry 1925). Furthermore, the impact of some of the great forces of nature on the functioning of the Earth system was regarded as far more significant than the ephemeral hallmarks of human behaviour (Zalasiewicz *et al*. 2020). This changed when Crutzen, shortly after the meeting, published a programmatic paper with the American biologist Eugene F. Stoermer, who had first introduced the term in 1980 but never formalised it (Crutzen and

Stoermer 2000). Two years later, Crutzen published "The Geology of Mankind" in *Nature* (Crutzen 2002), and the term gained public attention.

Despite the widespread usage of the term, the Anthropocene is yet to be formalised as the new official epoch of the Quaternary Period, the current geological time period – and the most recent of the three periods of the Cenozoic Era – that encompasses the last 2.6 million years. In order to complete the formalisation process, which is still in a very incipient phase, stratigraphic markers must be found to demonstrate that anthropogenic impact on the environment can be clearly distinguished in a range of locations around the planet at the same time. For these reasons, the Anthropocene Working Group (AWG) was established in 2009 under the direction of British geologist Jan Zalasiewicz: the interdisciplinary research group is charged with the task of investigating, evaluating, and critically analyzing the still informal geological time unit. Once the stratigraphic markers for the Anthropocene are found, the AWG will submit the proposal for a new geological epoch to the International Commission on Stratigraphy (ICS) for approval. Subsequently, the proposal will be sent to the International Union of Geological Sciences (IUGS) for ratification.

The idea of the Anthropocene originates from the natural sciences, more specifically Earth System Science (ESS), a transdisciplinary and holistic perspective aimed at understanding the structure, functioning, and interaction of the various spheres of the Earth system (atmosphere, lithosphere, pedosphere, biosphere, hydrosphere, and cryosphere). It also explores the destabilising influence of human activity on the system over the last two centuries. As it was argued in the Amsterdam Declaration on Earth System Science of 2001,

> The Earth System behaves as a single, self-regulating system comprised of physical, chemical, biological and human components. The interactions and feedbacks between the component parts are complex and exhibit multi-scale

temporal and spatial variability. The understanding of the natural dynamics of the Earth System has advanced greatly in recent years and provides a sound basis for evaluating the effects and consequences of human-driven change. Human activities are significantly influencing Earth's environment in many ways in addition to greenhouse gas emissions and climate change. Anthropogenic changes to Earth's land surface, oceans, coasts and atmosphere and to biological diversity, the water cycle and biogeochemical cycles are clearly identifiable beyond natural variability. They are equal to some of the great forces of nature in their extent and impact. Many are accelerating. Global change is real and is happening now. (Moore *et al*. 2001)

This perspective of current human pressure over the environment is expressed in two diagrams that have rapidly entered popular usage. The former (Fig. 1 and 2) is taken from the study of the 12 planetary boundaries (Steffen *et al*. 2015). Twelve indicators show human activity and socioeconomic trends like human population, real GDP (Gross Domestic Product), foreign direct investment, urban population, primary energy use, fertilizer consumption, large dams, water use, paper production, transportation, telecommunications, and international tourism (Fig. 1). Other twelve indicators track global ecological effects – atmospheric composition, stratospheric ozone, the climate system, the water and nitrogen cycles, marine ecosystems, land systems, tropical forests, and terrestrial biosphere degradation (Fig. 2). These diagrams imply that the Anthropocene is treated as a systemic crisis composed of multiple coalescing indicators that have risen at a steady pace during the second half of the eighteenth century and grown sharply after the Second World War. The period of steep surge between 1945 and 2000 has been termed the "Great Acceleration" (Steffen *et al*. 2015).
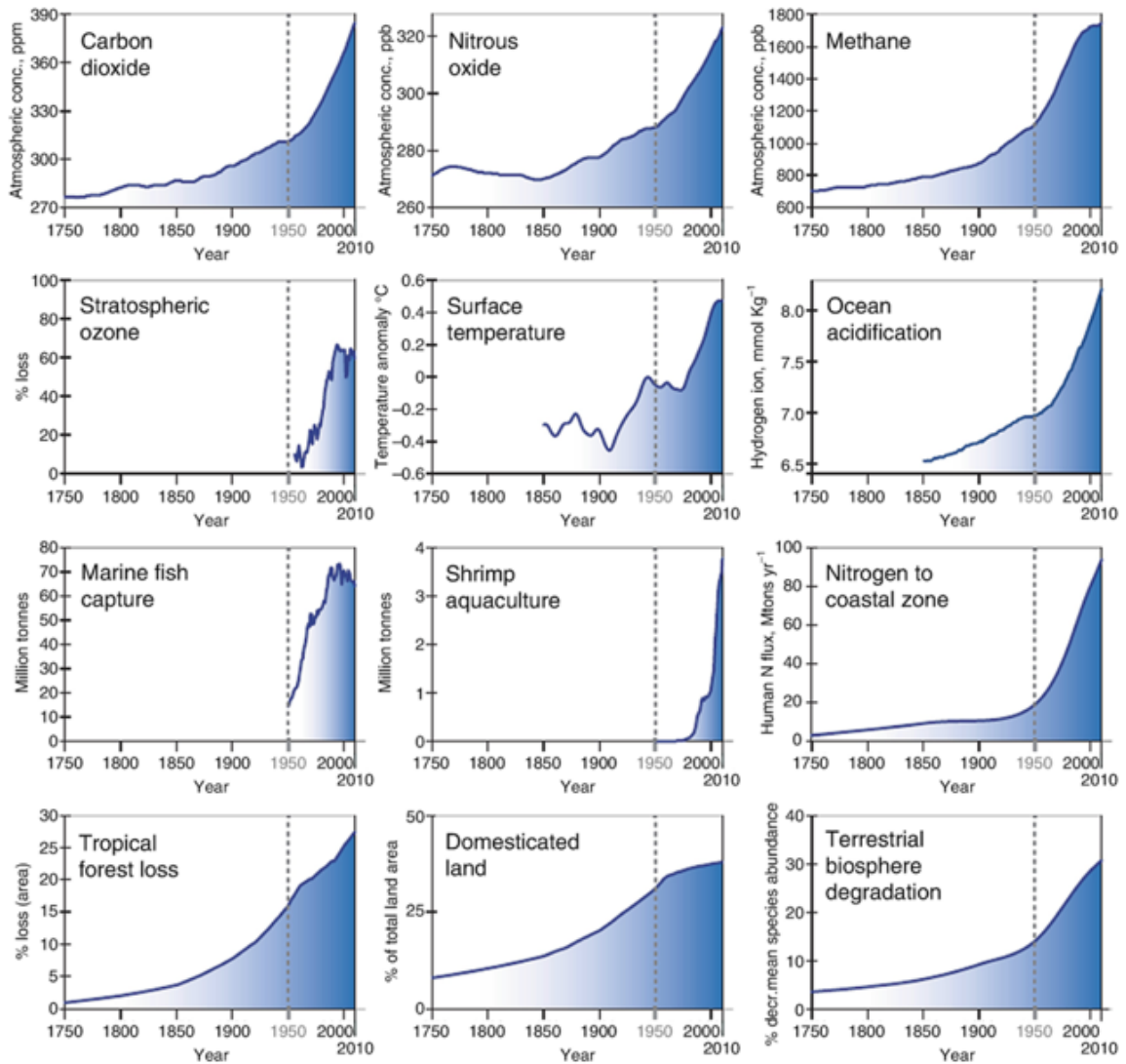
Fig. 1: Steffen Will *et al*. (2011). "The Anthropocene. Conceptual and historical perspectives." *Philosophical Transactions of the Royal Society* A, 369 (1938), 842–67.
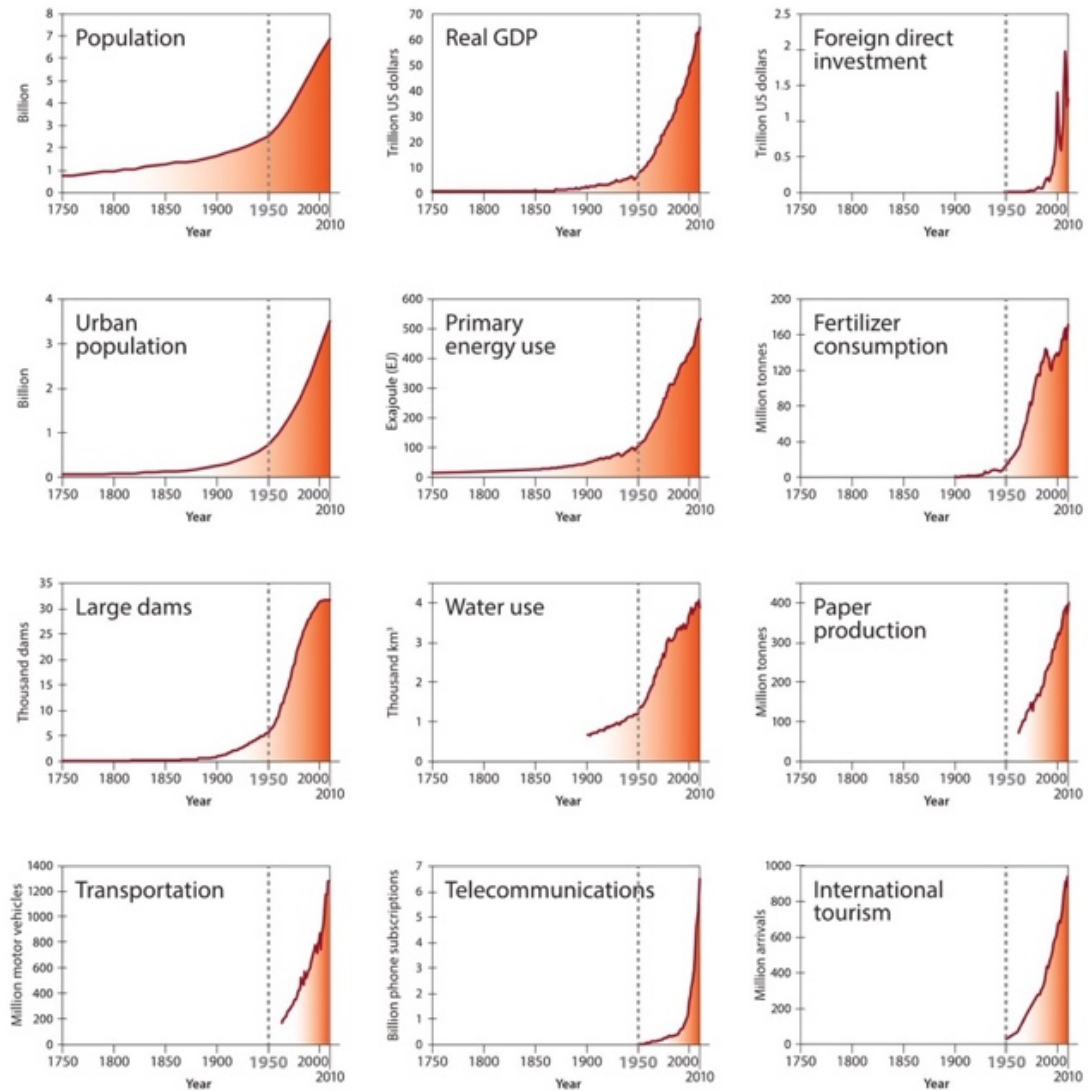
Fig. 2: Steffen Will *et al*. (2011). "The Anthropocene. Conceptual and historical perspectives." *Philosophical Transactions of the Royal Society* A, 369 (1938), 842–67.
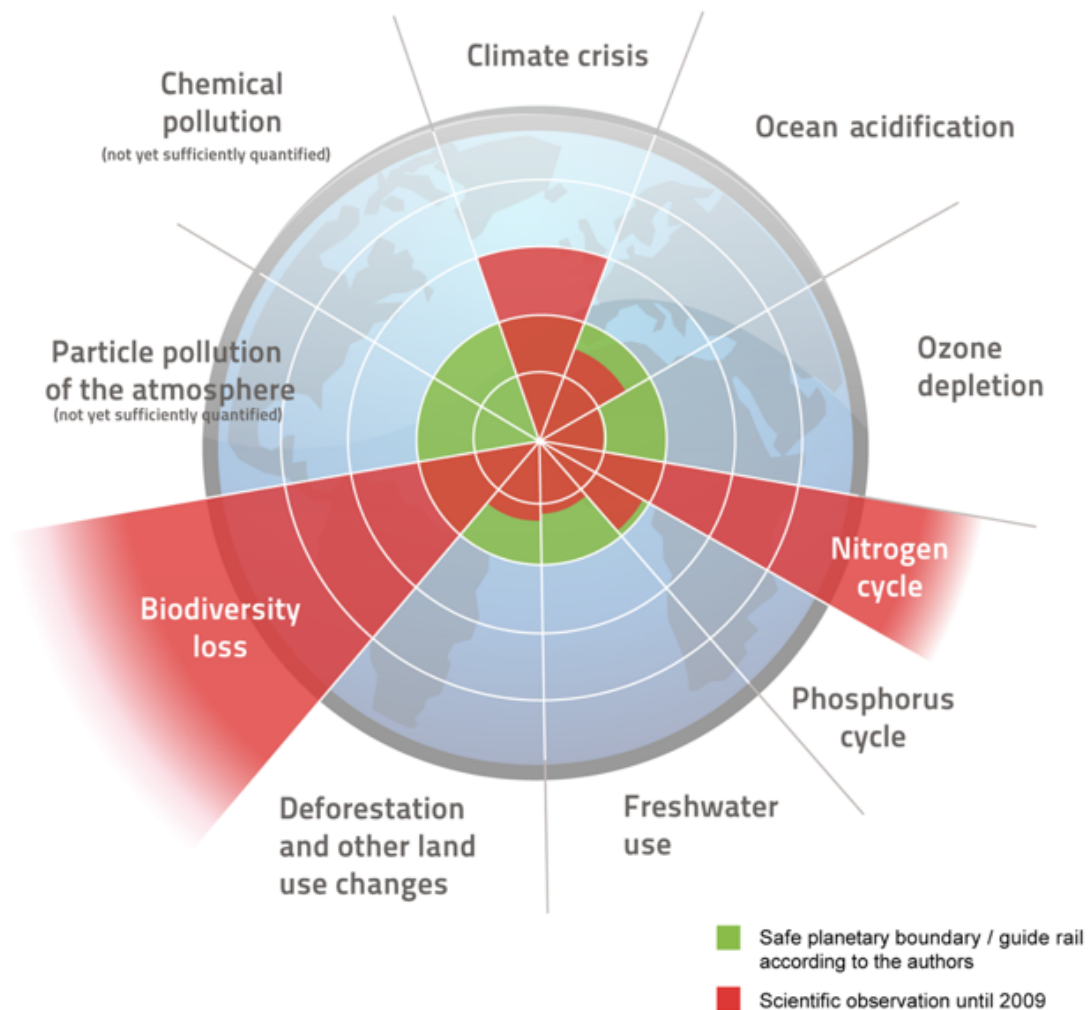
Fig. 3: Rockström Johan *et al*. (2009). "Planetary Boundaries. Exploring the Safe Operating Space for the Humanity." *Ecology and Society*, 14(2), Art. 32.

The second diagram was proposed in 2009 by a group of 28 Earth system and environmental scientists led by Swedish scholar Johan Rockström from the Stockholm Resilience Centre (Fig. 3). The scientists identify a set of nine fundamental planetary boundaries within which humanity can continue to develop: stratospheric ozone depletion; loss of biosphere integrity (biodiversity loss and extinctions); chemical pollution and the release of novel entities; climate change, ocean acidification; freshwater consumption and the global hydrological cycle, land system change; nitrogen and phosphorus flows to the biosphere and oceans; and atmospheric aerosol loading.

Crossing these boundaries increases the risk of reaching an ecological breaking point for the planet. At the time of writing, three of these boundaries have already been exceeded (biodiversity, climate change, and nitrogen cycle). As noted by Horn and Bergthaller (2020), Rockström's diagram "signals a paradigm shift from the current mainstream of environmental thought, which tends to fixate on climate change" (24) and presents the Anthropocene as a multi-focal crisis.

Disputed Start Dates for the Anthropocene

These diagrams, specifically the graphs proposed by Steffen *et al*., clearly demonstrate that specific socioeconomic trends and their global ecological effects began to change sharply and dramatically around the middle of the twentieth century. The 35 members of the Anthropocene Working Group have identified July 16, 1945, the time of the world's first nuclear bomb explosion at Alamogordo, New Mexico, as the possible beginning of the Anthropocene (Zalasiewicz et al, 2014). The proposal of the "Great Acceleration" as a starting date offers a clear GSSP (Global Boundary Stratotype Section and Point, colloquially known as a "golden spike"). Traces of radioactive isotopes used in post-1945 above-ground nuclear weapons tests, like plutonium 239, first appeared in sedimentary sequences in the early 1950s and are global enough to be considered a GPPS (Waters *et al*. 2016; McNeill and Engelke 2016).

A different perspective on the start date of the Anthropocene is proposed by Crutzen and Stoermer, who are not geologists by training: in their early articles, they argue that the Anthropocene started with the Industrial Revolution in the late eighteenth century (Crutzen and Stoermer 2000: 17-8; Crutzen 2002: 23). They expressly point to 1784, when James Watt invented the steam engine. Although it does not offer a clear GSSP, Crutzen and Stoermer's proposal is particularly relevant because it links the Anthropocene to the social-historical origins of modernity (hence it is primarily relevant

for the humanities, as it will be stressed over the ensuing chapters). According to this perspective, the Anthropocene not only emerged alongside the Enlightenment and the beginning of modern industrial capitalism, but it also converged with a distinctively ecological form of reflexivity that rose during the late 1800s in Europe and among settlers in the New World (Bonneuil and Fressoz 2016; Locher and Fressoz 2012). As Horn and Bergthalle underscore (2020), this "ecological history of modernity is not just the dark side of technological and social revolution," but it also links the Anthropocene to a

> massive production of inequality: while a swift social, environmental and economic transformation took place in industrialized countries, other parts of the world did not partake in the prosperity generated by industrialization, the social and environmental costs of which were increasingly 'outsourced' to more impoverished parts of the world. (27)

Other suggestions have included the "Columbian Exchange" of species across continents between the New and Old Worlds following the 1492 arrival of Europeans in the Americas. Drawing upon multiple Indigenous scholars who posit that the Anthropocene is a continuation of practices of extraction, dispossession, and environmental transformation that started five hundred years ago and are still ongoing, rather than a new event, Heather Davis and Zoe Todd argue that the question of when the Anthropocene began is of the utmost importance and opens up diverse political implications. To begin the project of decolonising the Anthropocene, they advance a dating of the Anthropocene that goes beyond its current universalising framing and places the "golden spike" that might mark the advent of the epoch in 1610. Before them, geographers Simon L. Lewis and Mark A. Maslim (2015) had suggested that, among the various proposed dates, two might be described as "golden spikes": 1610 and 1964. While the authors refer to the latter approach as the "bomb peak," what is more important for the present discussion is that the former is named the "Orbis" hypothesis, from the Latin for world, to indicate the beginning of the modern world system and the

globalisation of trade that followed the intensive European colonisation of the Americas. This period of considerable decline in human numbers (stirred up by diseases carried by Europeans, war, enslavement, and famine) led to the near cessation of farming and reduction in fire use, which vastly increased carbon sequestration: such decline in atmospheric carbon dioxide reached its minimum in 1610. According to the authors, what makes 1610 a suitable marker for the Anthropocene is also the "mixing of previously separate biotas, known as the Colombian Exchange" (174) and the subsequent "geologically unprecedented homogenization of Earth's biota" (174-75).[1]

One of the most notable contributions of Lewis and Maslim's approach is that it introduces the violent legacies of colonialism into the Anthropocene debate and foregrounds colonialism as a central factor in global environmental history. Similarly, Davis and Todd (2017) underscore that proposing a 1610 start date or placing the "golden spike" at the beginning of the colonial period allows us to trace the origins of the current ecological crises in a "proto-capitalist logic based on extraction and accumulation through dispossession" (Davis and Todd 2017: 764), that continues to shape our current epoch.[2]

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[1] It should be stressed, though, that members of the AWG have questioned this proposed dating of the Anthropocene: they claim that "1610 is not an ideal stratigraphic marker for an epoch-scale boundary. It is one small dip of several in the Holocene epoch" and that "by the time of the authors' other suggested date of 1964, the 'great acceleration' in human activity was well under way" (Zalasiewicz *et al*. 2015: 436).

[2] Not only colonialism, particularly settler colonialism, was always about processes of terraforming, but it can also be read as an anticipation of the conditions of the Anthropocene: "the forced displacement that many tribal communities suffered involved adaptation to entirely new environments, to new climates, new ecosystems, new plants and animals. These processes of environmental transformation and forced displacement can be understood as climate change, or more broadly, a preview of what it is like to live under the conditions of the Anthropocene" (Davis and Todd 2017: 771).

The Anthropocene and the Emergence of the Environmental Humanities

Scholars in the humanities have enthusiastically embraced the proposed new geological epoch. The Anthropocene's theoretical insights bridge the science and the humanities, forcing them both out of their comfort zones: as noted by Horn and Bergthalle, "the sciences have to accept and embrace the fact that their findings […] can become eminently contentious, and thus political. The humanities, meanwhile, need to acknowledge the ecological and material foundations of cultures, societies and cultural artifacts" (2020: 7). Less interested in finding stratigraphic markers for an epochal boundary than in reconceptualising planetary change – and its causes and drivers – for the human imagination, the humanities have recently taken a step toward interdisciplinarity under the banner of the environmental humanities. Although the origins of the field can be traced back more than a century, this new interdisciplinary matrix consolidated through the confluence of steady developments of the 1980s and 1990s in humanities and social science fields such as literature, philosophy, history, geography, gender studies, and anthropology. The institutionalisation of the environmental humanities over the last few decades parallels that of the Anthropocene, as the discipline marks its point of origin in 2001, when Debora Bird Rose and Libby Robin published a manifesto for the "ecological humanities" ("The Ecological Humanities in Action: An Invitation") in the *Australian Humanities Review*. Eight years later, Rose and others founded the journal *Environmental Humanities* and paved the way to the emergence of new journals, conferences, research initiatives and academic programs across Australia, North America, and Europe. The environmental humanities do not propose a new object of study or a set of new methods; instead, they combine theories and methods that have already been developed in a range of humanistic disciplines in the last decades. In her introduction to the *Routledge Companion to the Environmental Humanities*, Ursula K. Heise argues that

they constitute a fundamental challenge to the understanding of environmental crises as basically techno-scientific, with history and culture added on as secondary complications. The environmental humanities, by contrast, envision ecological crises fundamentally as questions of socioeconomic inequality, cultural difference, and divergent histories, values, and ethical frameworks. (2017: 2)

As such, they are driven by an ethical imperative for social change, they are based on the idea that all forms of knowledge are situated – they reflect the particular conditions in which they are produced – and they aim at breaking the damaging dichotomies between 'hard' sciences and 'soft' sciences as well as between nature and culture. Therefore, the environmental humanities are tasked with the formulation of an environmental ethic and, most importantly, an epochal consciousness, whether or not they embrace the Anthropocene. The concept of the Anthropocene has indeed received quite harsh criticism from many humanities scholars, who believe that the very name runs the risk of glorifying human domination of the planet (promoting a master narrative in which the *Anthropos* is simultaneously the cause of the crisis and its remedy), or, conversely, prevents action on climate change by spreading a sense of loss of agency. Furthermore, as new materialist ecocritics have underscored, it might be misleading to recognise an exceptional and lonely responsibility, since we are embedded in webs of dependence with numerous non-human creatures. However, Jamieson (2017) notes that

we are living in the Anthropocene and will do so for the foreseeable future even if we desire to exit. Whether we embrace the Anthropocene or want to exit from it, we need to develop ways of life that will allow humanity to flourish in this period. We need an ethics of the Anthropocene. (16)

An ethics of the Anthropocene is first and foremost concerned with the daunting consequences of divisive epistemologies that create binary (read: hierarchical) oppositions between human and non-human, nature and culture, ecology and economy – but also man and woman, Global North and Global South. This dissociative thinking lies at the roots of all ecological crises (global climate change but also other ecological

effects of human-driven change), as it allows the subjugation of everything that is exploitable and sets humans against nature itself; ecofeminists thinkers such as Karen Warren and Val Plumwood have framed this anthropocentric and dualistic worldview within the so-called "logic of Othering." The crucial task of the environmental humanities, according to Oppermann and Iovino (2017), is to rethink and transform "the hyper-Cartesian dream of mastery into a disanthropocentric alliance of entangled subjects that ostensibly work with, through, and across material agencies that comprise the world" (12). This also entails a project of "collaborative survival," as feminist anthropologist Anna Lowenhaupt Tsing underlines.

Moreover, the environmental humanities offer an intervention over the myriad challenges created by the nonlinear interrelation between the scales of the Anthropocene. Ecocritic Timothy Clark (2015) calls these interrelations "derangements of scales" (71-137), pointing to the mismatch between the micro and macro perspective of climate change – human environmental impact is "either too small or too big" (Kerridge 2017: xiv) – the global extent of environmental transformation vs. the short time it has taken, the "sense of place" vs. the consciousness of ecological crisis on a planetary scale (Heise 2008: 21), and the temporality of the Great Acceleration vs the "slow violence" of climate change which is "neither spectacular nor instantaneous, but rather incremental" and "occurs gradually and out of sight" (Nixon 2011: 2).

This clash of scales encompasses the spatial and temporal dimensions of climate change and the distinction between *homo* and *Anthropos*: humans have never experienced themselves as a species nor thought of human agency over multiple scales at once (Chakrabarty 2009; Horn and Bergthalle 2020). The environmental humanities conceptually challenge the depoliticising universalism intrinsic in the term Anthropocene and in the geological layer of the human. The *Anthropos* after which geologists have named the current epoch does not seem to have a class, a race, a gender and, by inviting

us to think at undifferentiated species level, runs the risk of erasing power hierarchies.

As such, this universalising logic has led many scholars to prefer more revealing terms – such as Capitalocene (Haraway 2015; Malm 2013; Moore 2015)[3], Eurocene (Grove 2016), Wasteocene (Armiero 2021), or White Supremacy Scene (Mirzoeff 2016)[4] – over Anthropocene. As postcolonial ecocritic Rob Nixon (2011) suggests, both human responsibility for climate change and vulnerability to environmental harm are "unevenly universal." Postcolonial, decolonial and critical race studies join hands with ecofeminism(s) to posit that the dichotomy between humans and non-humans is developed alongside racial and gendered hierarchies of difference (Gergan *et al*. 2018) and to challenge the "racial blindness" (Yusoff 2018) and gender blindness of the universal human subject implied in the concept of the Anthropocene.[5]

One of the most productive alternatives to the Anthropocene is the concept of the Chthulucene proposed by Donna Haraway: the time of the "thick" now, when what is urgently needed is that we need to learn how to "live and die well with each other" (2016: 1). The Chthulucene is a more chthonic[6] version of Cthulhu, the octopoid monster of H.P. Lovecraft's stories: the spelling difference, however, reveals that it is not named after Lovecraft's "misogynist racial-nightmare monster," but rather after "diverse earth-wide

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[3] According to Jason Moore, "the rise of capitalism cannot be reduced to economics. Capitalocene names capitalism as a system of power, profit, and re/production in the web of life. It thinks capitalism as if human relations form through the geographies of life. Far from refusing the problem of political economy, however, it highlights capitalism as a history in which islands of commodity production and exchange operate within oceans of Cheap – or potentially Cheap – Natures" (2017: 13).

[4] "Given that the Anthropos in Anthropocene turns out to be our old friend the (imperialist) white male, my mantra has become, it's not the Anthropocene, it's the white supremacy scene" (Mirzoeff 2016: 123).

[5] Similarly, Gaia Giuliani stresses that "when threats experienced by the 'we' are depicted as global and solutions are peddled as universal, they are more likely to be seen as coming from an objective, neutral source standpoint and as generalisable to humankind as a whole, despite the 'we' being the expression a specific positionality in the Global North. The impact of catastrophes, however, is not as colour-blind and gender-neutral as the 'we' would like to think, overlooking the fact that not only race and gender but also poverty, sexuality and nationality are key factors in determining who gets to be saved and who is left behind" (2021: 2).

[6] Where chthonic refers to the beings of the Earth, "both ancient and up-to-the-minute" (Haraway 2016: 2).

tentacular powers and forces and collected things with names like Naga, Gaia, Tangaroa (burst from water-full Papa), Terra, Haniyasu-hime, Spider Woman, Pachamama, Oya, Gorgo, Raven, A'akuluujjusi, and many many more" (Haraway 2015: 160). The Chtulucene entangles a multitude of temporalities and spatialities, but also "entities-inassemblages" such as the "more-than-human, other-than-human, inhuman, and human-ashumus" (160). Using the Chthulucene as a framework, she claims, may help up to "stay with the trouble of living and dying in response-ability on a damaged earth" (2016: 2), and to resist the dictates of both *Anthropos* and the Capital. She adds, indeed, that

> [t]he unfinished Chthulucene must collect up the trash of the Anthropocene, the exterminism of the Capitalocene, and chipping and shredding and layering like a mad gardener, make a much hotter compost pile for still possible pasts, presents, and futures. (57)

For the reasons mentioned above and for its feminist underpinnings, it provides a better framework for this dissertation than the Anthropocene. Notwithstanding, given the popularity and the currency of the concept of the Anthropocene and the trans-disciplinary scientific consensus regarding human pressure on the biosphere, this dissertation does not reject the term formalised by Crutzen and Stoermer in its entirety. This work, therefore, situates its critical stance as a partial departure from the concept of the Anthropocene: while it acknowledges that the unprecedented human impact on the Earth system and its dynamics requires new ways of thinking, that climate change is only one element of this system, and that the Anthropocene provides relevant insights to tackle such a multi-dimensional challenge, it also attempts to make a thought-provoking intervention in critical debates about the master narrative of the Anthropocene, putting in conversation environmental humanities and feminist studies. In particular, it critiques the universal "we" of the Anthropocene, its gender-neutral and colour-blind approach, and its anthropocentric foundations, drawing on several subfields in the environmental

humanities – such as ecofeminism(s), postcolonial environmental humanities, queer ecologies, posthuman feminism, and feminist new materialism– based on the premises that the current ecological crisis is a consequence of an anthropocentric and dualistic worldview. An ethic of the Anthropocene, to summarise, would systematically zoom in and out, as Ursula Heise suggests. If the Anthropocene is a contested and problematic but necessary term, then the environmental humanities must propose a cartography of these fault lines and provide an account of the

> productive conceptual tension between humans' agency as a species and the inequalities that shape and constrain the agencies of different kinds of humans, on one hand, and between human and nonhuman forms of agency, on the other. (Heise 2017: 6)

My humanities-based, feminist, and decolonial approach to the concept of the Anthropocene finally aims at calling attention to the ways in which its stories are told, narrated, and visualised, and to how literary imagination can be complicit in producing hegemonic strands of the Anthropocene that determine which kind of stories are canonised and which kinds are instead silenced and marginalised.

Objects of Research and Chapters Overview

In titling this dissertation *Feminist Environmental Humanities: Intertwining Theory and Speculative Fiction*, I attempt to entangle the visionary, creative, and militant capacity of feminist theory to shape sustainable futures with the active contribution of feminist speculative fiction to the conceptual debate about the climate crisis. To put it otherwise, I will explore the intra-actions[7] between the radical imagination and the theoretical intervention provided by feminist theories on the one hand and feminist speculative

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[7] I draw on feminist philosopher and quantum physicist scholar Karen Barad's proposal to replace the term interaction – with its reference to pre-existing and distinct entities that participate in action with one another – with intra-action, that understands agency as a dynamism of forces constantly exchanging with and influencing one another (2007).

fiction on the other. As such, the theoretical chapters of this dissertations are not conceived as a theoretical framework or a literature review: following the practice of diffractive reading, a neologism elaborated by Karen Barad from the physical phenomenon of diffraction that happens when waves encounter an obstacle upon their path (Barad 2007), this dissertation does not create a distance from the literature, nor foregrounds any texts as foundational, but aims at creating new insights by reading theoretical and speculative texts through one another.[8]

Over the last few years, increasing critical attention has been paid to ecofeminist perspectives on climate change and its literary representations.[9] The relevance of feminist perspectives in the imagination of new strategies to sustain our global ecosystems is becoming more and more evident (and especially in times of the Covid-19 pandemic). Ecofeminist perspectives on the environment see as a core cause of the climate crisis the patriarchal domination of nature, which is considered to go hand in hand with the oppression of women. Ecofeminist science fiction, states Douglas Vakoch in one of his most recent edited collections on this topic, "helps us conjure utopias that promote environmental sustainability based on more egalitarian human relationships" (2021b: 3). However, what remains to be thoroughly scrutinised is the linkage between ecofeminist theories and other ethical stances capable of countering colonising epistemologies of mastery and dominion over nature. This dissertation intervenes in the debate about the master narrative of the Anthropocene, and about the one-dimensional perspective that often characterises its literary representations, from a feminist perspective that also aims at decolonising the imagination. The ecofeminist and ecological feminist stance of this dissertation is therefore highly informed by intersectionality, black feminist thought, and decolonial feminism, and looks at literary

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[8] On the practice of diffractive reading, see Geerts and van der Tuin 2016, and van der Tuin 2016.
[9] See, for example, Vakoch 2012, 2021a, 2021b, Vakoch and Mickey 2018, MacGregor 2017, and many others.

texts that consider patriarchal domination of nature in its intersections with other injustices that play out within the Anthropocene, with a particular focus on race, colonialism, and capitalism.

After an overview of the linkages between gender and climate change and between feminism and environmental humanities, this dissertation introduces the genre of climate fiction examining its main tropes. In an attempt to find alternatives to the mainstream narrative of the Anthropocene (namely to its gender-neutrality, colour-blindness, anthropocentrism, and spectacularization of the climate crisis), it focuses on contemporary works of speculative fiction by four Anglophone women authors that particularly address the inequitable impacts of climate change experienced not only by women but also by sexualised, racialised, and naturalised Others. This is not to say that women's writing of the end of the world is intrinsically different from men's, but rather that "women writers' fictional engagement with apocalyptic ideas and forms is inevitably related to their specific subject positions in the contemporary moment," as suggested by Susan Watkins (2020: 2).

The texts I have selected can be categorised under the banner of speculative fiction, which is chosen in this dissertation as a broader frame that encompasses science fiction but is less defined by a focus on science and technology, and, including several works authored by women and people of colour, articulates the concerns of a diverse range of people (Lucas 2011; Streeby 2018). A cartography of feminist and decolonial climate change futurisms in chapter 4 – travelling from the Canadian Arctic to Kenya, from New Zealand to the floodplains of the Ganges – sets the scene for four close readings: the texts in question are two novels by Australian and Indigenous Waanyi author Alexis Wright, *Carpentaria* (2006) and *The Swan Book* (2013), Nigerian-American author Nnedi Okorafor's 2014 novel *Lagoon*, *The Broken Earth* Trilogy by American author N. K. Jemisin (*The Fifth Season* [2015], *The Obelisk Gate* [2016], and *The Stone Sky* [2017]),

and Chinese-Canadian author Larissa Lai's novel *The Tiger Flu* (2018). I have chosen novels with publication dates ranging from the first years of the new century to the contemporary moment, with a particular focus on the 2010s decade. This is indeed when a new canon of climate change fiction has started to be framed, after Dan Bloom coined the term in 2007. Within this canon, novels by Maggie Gee, Margaret Atwood, Kim Stanley Robinson, Barbara Kingsolver, and Ian McEwan stand as key texts, constructing an image of Europe and North America as the white epicentres of climate-related discourse. The specific texts analysed in this dissertation attempt to decolonise the centre-periphery dichotomy of this canon by proposing a diverse corpus of female BIPOC[10] global literary voices. According to Italian feminist scholar Rachele Borghi, in order to decolonise the imagination it is necessary to interpret the world from multiple viewpoints and create the conditions that allow different perspectives on the climate crisis to emerge from different (and marginalised) locations around the world (2020). These texts were chosen because of their specific engagement with the relationship between climate change, global capitalism, and a flat trust in techno-fixes on the one hand, and structural inequalities generated by patriarchy, racism, and intersecting systems of oppression on the other. My analysis seeks to answer the following questions: how is the notion of the Anthropocene challenged and reimagined by contemporary feminist and decolonial speculative fiction? How do contemporary BIPOC women authors respond to the main tropes of contemporary climate fiction, such as the othering of nature, the prioritising of spectacular scenarios over the "slow violence" of climate change (Nixon 2011), the universalised white maleness and the one-dimensional portrayal of women and people of colour, the tension toward conservatism, and the optimistic neoliberal orientation? The chosen texts will be read through a critical approach that draws from feminist ecologies examined in chapters 2 and 3, an approach

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[10] Black, Indigenous and people of colour.

that does not necessarily take gender as a category per se but promotes ecological thinking through feminist situated (Haraway 1986) and trans-corporeal (Alaimo 2016) epistemologies.

Chapter 2, *Feminist Environmental Humanities*, starts with an overview of gender equality and sustainable development, with a particular focus on the gendered nature of climate change, the concept of socially constructed vulnerability, and a critique of the eco gender gap. It then moves to explore the tensions and contradictions between feminism and environmentalism, analysing ecofeminism(s), feminist epistemologies, and feminist new materialism, and proposing a cartography of feminist environmental humanities.

Chapter 3, *Climate Change in Literature and Literary Studies: from Ecocriticism to the Climate Change Novel*, introduces ecocriticism and the concept of literature as cultural ecology from a feminist and postcolonial point of view. Giving an account of the emergence of climate change criticism alongside ecocriticism, it claims that a new canon of climate change fiction has been developing in the last two decades and explores its main features. In its conclusion, I suggest that the absence of climate justice from several novels that are considered to be part of this canon, and their one-dimensional representation of gender, race, and the other-than-human, require alternative ways of responding to the climate change crisis.

Chapter 4, *Decolonising the Imagination: A Roadmap for Reading "Visionary Fiction" on the Climate Crisis*, sets the scene for the four close readings provided in the following chapters by exploring speculative and visionary novels, stories, and films on the environmental crisis that diverge from dominant narratives of power and privilege. With a focus on speculative fiction that centres on the interconnections of gender, race, and environmentalism, I introduce postcolonial, Afrodiasporic, African, and Indigenous

futurisms: to put it otherwise, work that is all too often excluded from the canon of climate fiction. The central claim of this chapter, which will be further explored in the following ones, is that "it matters what stories we tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what descriptions describe descriptions, what ties tie ties" (Haraway 2016: 12). As suggested in the previous paragraphs of this first chapter, indeed, my approach to the Anthropocene aims to call attention to how its stories are narrated or rather silenced.

Chapter 5, *A Crisis of Imagination: Alexis Wright's* Carpentaria *and* The Swan Book, analyses the representation of environmental climate crises in *Carpentaria* (2006) and *The Swan Book* (2013) by Indigenous Australian writer Alexis Wright. Building upon the work of environmental humanities scholars such as Heise (2008), Clark (2015), Trexler (2015) and Ghosh (2016), who have emphasised the main challenges faced by authors of climate fiction, it considers Wright's novels as an entry point to address the climate-related crisis of culture – while acknowledging the problematic aspects of reading Indigenous texts as antidotes to the "great derangement" – and the danger of a singular Anthropocene narrative that silences the "unevenly universal" (Nixon 2011) responsibilities and vulnerabilities to environmental harm. Exploring themes such as environmental racism, ecological imperialism, and the slow violence of climate change, it suggests that Alexis Wright's novels are of utmost importance for global conversations about the Anthropocene and its literary representations, as they bring the unevenness of environmental and climate crisis to visibility.

Chapter 6, *"A Queer Family of Companion Species": Nnedi Okorafor's* Lagoon, analyses *Lagoon*, published in 2014 by the award-winning author of African-based science fiction Nnedi Okorafor. It mainly focuses on its representation of the tragic impact of oil culture on Nigerian communities and marine ecosystems, of the consequences of neo-colonial developmentalism, and of multiple sites of othering (resulting from gender, racial, and

species differences) that intersect with one another. I argue that *Lagoon* explores the possibility of a rupture with fossil capitalism and human exceptionalism, structures of othering, and mutually reinforcing dualisms that prevent us from acknowledging the interdependent agency of humans and nature.

Chapter 7, *"Some things are too broken to be fixed": Climate disaster and social justice in N.K. Jemisin's* Broken Earth *Trilogy*, begins by examining the links between the Trilogy and the concept of the Anthropocene; it then explores Jemisin's complication of the concepts of oppression, enslavement, and freedom, and, by connecting these themes to the climate crisis, it suggests that *The Broken Earth* Trilogy is one of the few cli-fi works treating climate justice as a central issue, and perhaps the core theme of the three novels. Finally, it proposes a feminist new materialist reading of the Trilogy and a feminist and decolonial critique of the concept of sustainability.

Chapter 8, *Feminist Ecologies in Pandemic Times*, explores the responses elaborated by feminist ecologies to the current crisis generated by the spread of the Covid-19 pandemic. It goes without saying that Covid-19, having framed half of my journey through this PhD, has had an undoubted influence on this dissertation. My reading of Larissa Lai's novel draws on feminist scholars who have powerfully argued that human exceptionalism has pushed us to the edge and determined a global landscape where infectious diseases are becoming increasingly common occurrences. *The Tiger Flu*, I claim, provides a framework for understanding human/non-human entanglements and imagines new forms of coexistence that extend care beyond the human world.

In conclusion, my analyses demonstrate that feminist speculative fiction on the Anthropocene not only treats climate justice as a central issue and explores the unequal impacts of climate change along lines of social power, but it also makes an insightful critical intervention capable of imagining a rupture from master – and mainstream –

narratives of linear progress, being informed by the radical imagination of feminist environmental humanities.

2. Feminist Environmental Humanities

Setting the Scene: Gender Equality and Sustainable Development

Efforts to achieve a sustainable future cannot ignore the rights and capabilities of half the world's population: therefore, linking gender equality with sustainable development is not only an ethical imperative, but it is also undeniably crucial. Sustainable development has been defined in 1987 by the World Commission on Environment and Development's Brundtland report *Our Common Future* as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Several dimensions have been defined in the concept of sustainable development: the economic, the social and the environmental. A further step in the process of achieving sustainable development was defined in September 2000, when leaders from 189 countries gathered at the United Nations headquarters and signed the Millennium Declaration, from which the United Nations Millennium Development Goals (MDGs) – 8 goals[11] that UN member states committed to achieving by the target date of 2015 – were derived. More recently, galvanised by the 2012 Rio+20 conference (the United Nations Conference on Sustainable Development) in Rio de Janeiro, the United Nations defined 17 Sustainable Development Goals (SDGs),[12] framing the MDGs into a

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[11] Goal 1: Eradicate extreme poverty and hunger; Goal 2: Achieve universal primary education; Goal 3: Promote gender equality and empower women; Goal 4: Reduce child mortality; Goal 5: Improve maternal health; Goal 6: Combating HIV/AIDs, malaria, and other diseases; Goal 7: Ensure environmental sustainability; Goal 8: Develop a global partnership for development. See: https://www.un.org/millenniumgoals/ (accessed: April 26, 2022).

[12] Goal 1: End poverty in all its forms everywhere; Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture; Goal 3: Ensure healthy lives and promote well-being for all at all ages; Goal 4: Ensure inclusive and equitable quality education and promote life-long learning opportunities for all; Goal 5: Achieve gender equality and empower all women

global development framework that extends beyond 2015. The SDGs are at the heart of the *2030 Agenda for Sustainable Development*, adopted by all United Nations Member States in 2015; each goal has several targets to be achieved by 2030.

The threefold approach of sustainable development – social inclusion, economic growth, and environmental protection – has taken on a richer meaning with the adoption of the 2030 Agenda, which aims at stimulating action in five areas of critical importance for both humanity and the planet: people, prosperity, planet, partnership, and peace, also known as the 5Ps. The core of the Agenda, furthermore, encompasses some fundamental principles: universality (the Agenda commits and is applicable to all countries, at all times), leaving no one behind (building upon disaggregated data, it targets different challenges and vulnerabilities), interconnectedness and indivisibility (the 17 SDGs are not just individual Goals, but they are all deeply interconnected), inclusiveness (it calls for the participation of all segments of society), and multi-stakeholder partnership (to support the achievement of SDGs, it calls for the co-participation of governments, businesses, and civil society).

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and girls; Goal 6: Ensure availability and sustainable management of water and sanitation for all; Goal 7: Ensure access to affordable, reliable, sustainable, and modern energy for all; Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all; Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation; Goal 10: Reduce inequality within and among countries; Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable; Goal 12: Ensure sustainable consumption and production patterns; Goal 13: Take urgent action to combat climate change and its impacts; Goal 14: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development; Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss; Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable and inclusive institutions at all levels; Goal 17: Strengthen the means of implementation and revitalise the global partnership for sustainable development. See: https://www.un.org/sustainabledevelopment/development-agenda/ (accessed: April 26, 2022).

Goal 5 of the 2030 Agenda is dedicated to gender equality and the empowerment of all women and girls, a necessary foundation for a sustainable world. UN Women's 2019 report on progress toward gender equality across all the SDGs, titled *Progress on the Sustainable Development Goals: The gender snapshot 2019*, illustrates that gender equality is linked to the entire development agenda: Goal 5 is not just a stand-alone goal, but a lens through which to scrutinise all the other SDGs, a cross-cutting feature of the 2030 Agenda. In the SDG indicator framework, a total of 53 indicators are gender-specific, as they call for disaggregation by sex or refer to gender equality as the underlying objective. Gender equality is therefore integrated across other goals, drawing attention to the gender dimension of poverty, hunger, health, education, water, employment, climate change, environmental degradation, urbanisation, and so on. Furthermore, to ensure that marginalised women are not left behind, the UN report stresses the need to address the intersecting forms of discrimination based on age, class, ability, "race," ethnicity, sexual orientation, and migration status as the factors that contribute to girls and women's disadvantage do not operate in isolation. The "leaving no one behind" approach of the 2030 Agenda is central in relation to Goal 5, as the women and girls who are further behind are the ones who often experience multiple inequalities and intersecting forms of discrimination.[13] Finally, the report highlights that descriptive statistics should be paired with qualitative analysis of the root causes of inequality, as the most vulnerable groups are all too often invisible in official statistics: national averages, indeed, mask inequalities among social groups, and women and girls who experience multiple forms of discrimination far worse than the average across multiple SDGs-related indicators.

Over the ensuing paragraphs, I will address the nexus between gender equality and climate change, underexplored in the 2030 Agenda. Indeed, while in the SDGs indicator

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[13] The concept of intersectionality will be further developed throughout this chapter.

framework a total of 53 indicators are gender-specific, there is only one gender-specific indicator for addressing the gender-environment relation (Goals 12, 13, 14 and 15). This chapter will mainly discuss the environmental humanities' perspective as complementary to both international climate policy and the techno-science approach in defining this nexus. After a brief introduction to the gendered nature of climate change and environmental sustainability, it will provide an overview of the transdisciplinary field of feminist environmental humanities. I claim that this field can help to lay bare structural inequalities and the social constructedness of vulnerability to climate change. Through a dialogue with postcolonial approaches to the Anthropocene, the perspective of feminist environmental humanities will be further developed in chapter 3 (*Climate Change and the Contemporary Novel*) to address the truncated narratives of climate change that overlook the raced, classed, and gendered perspectives of eco-catastrophes, as well as to analyse feminist, intersectional, and postcolonial fiction confronting climate change and creating alternative ecological futures.

The Gendered Nature of Climate Change and Eco-catastrophes: an Overview

According to the United Nations Development Programme (UNDP), 80% of people displaced by climate change are women. A growing body of research, based on the analysis of 130 peer-reviewed studies, suggests that women – and especially poor and rural women in the Global South and impoverished areas of the Global North – are generally more vulnerable than men to the negative impacts of climate change, mainly because they represent the majority of the world's economically poor,[14] they are often

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[14] According to statistics that are widely cited by international NGOs (such as UNICEF and UN Women), women and girls make up 70% of the .1.3 billion people living in conditions of poverty. To visualise an interactive map displaying how climate change disproportionately affects women's health, see Dunne 2020 (https://www.carbonbrief.org/mapped-how-climate-change-disproportionately-affects-womens-health, accessed: April 26, 2022).

the primary caregivers of the family, and they are more dependent on natural resources that are threatened by climate change (UN Women Watch 2009; Terry 2009; Mitchell *et al*. 2007). Out of the 140,000 people who died in the 1991 cyclone disaster in Bangladesh, 90% were women. In the 2004 Indian Ocean earthquake and tsunami, women and girls were more than 70% of the victims. Similarly, the 2003 European heatwave hit women harder than men, and Hurricane Katrina (2005) predominantly affected poor African American women (Aguilar *et al*. 2007). These data reveal that the adverse impacts of climate change overly burden women and girls. Furthermore, women are more heavily impacted by environmental hazards not necessarily linked to climate change: the risk of dying prematurely due to illness caused by indoor air pollution is higher for women due to their role in food preparation and their consequent exposure to smoke produced by solid fuels (UNDP 2016). Lorena Aguilar has estimated that women and children are fourteen times more likely to die in eco-catastrophes than men (Aguilar 2007; Aguilar *et al*. 2007).

This does not mean that climate change is a women's issue: men are also vulnerable to climate change, but they are often affected in different ways. It follows that disaggregated data and a gendered analysis of climate change are getting more and more crucial. For instance, several research papers have found that men face a higher risk of suicide than women in the aftermath of extreme weather events: data from India and Australia show that in times of drought the rate of suicide amongst male farmers is significantly higher than rural women, urban men, or urban women, possibly due to the challenge of climate transformation for farmers (see Ho and Dong-Sik 2011; Alston 2012; Kennedy and King 2014; Yoonhee).

As with natural disasters, climate change is therefore likely to exacerbate existing gender disparities that render women more vulnerable to fatalities than men (Brody *et al*. 2008; IPCC 2007). A 2007 study that has examined the effects of natural disasters in 141

countries over the period 1981 to 2002 has revealed that the gender gap in life expectancy – which favours women in almost all countries around the world – becomes narrower due to women's vulnerability to eco-disasters (Neumayer and Plümper 2007).[15] Such vulnerability to climate change and environmental hazards is not innate: it is instead the result of intersecting social processes that result in inequalities, discrimination and poverty. In other words, it is a socially constructed vulnerability. Gender roles influence women's mobility, and burden them with tasks associated with caregiving, fodder and fuel collection, and water fetching responsibilities: for example, due to increasingly frequent droughts, women have to walk long distances to search for water.

At the same time, gender roles narrow women's access to land rights and simultaneously exclude them from decision-making and technical activities associated with climate change. Land degradation, which has been accelerating over the past 20 years, is not a gender-neutral phenomenon. Women have the same legal rights as men to own and access land in no more than 28 countries worldwide; more often, they have access to land through their relationship with a male relative. Land degradation, resulting in less land for agriculture, exacerbates poverty and social inequalities; consequent food shortages determine an increase in domestic responsibility to manage the scarcity of resources. What is also important for the present discussion is that this situation makes women more vulnerable and dependent on those who control the land. Since women and men have access to and use resources differently, it follows that biodiversity loss and changes in management practices affect them differently (Gaard 2017).

In most societies, women disproportionately undertake childcare responsibilities and predominate among caregivers of the elderly and the ill: gender differences in caregiving burden can make it difficult for women to seek safety and shelter during extreme events

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[15] See Neumayer and Plümper 2008.

such as droughts, heatwaves, and large storms. Women often need their husbands'
permission – or consent from elderly men in their families or communities – to evacuate
their homes. Moreover, due to their traditional role, they can be discouraged from
learning – or are not taught – lifesaving strategies such as swimming and climbing trees.
Cultural codes of dress, pregnancy, and fear of sexual assaults are among other gender
constraints to mobility in a changing climate. On the other hand, ecological hardships in
rural areas might prompt a higher male out-migration to urban centres searching for
alternative livelihoods and economic gains, often leaving women with additional burdens
of looking after the household. When women manage to escape, they experience
migration differently from men, facing higher vulnerability along the migration route,
exposure to sexual or physical abuse and exploitation, and severe health threats due to
lack of services and poor access to sanitary products.

During climate-related disasters, women and girls are frequently subjected to sexual
harassment, rape, gender-based violence, and organised trafficking for sex trade and
forced labour: for example, the aftermath of Hurricane Katrina was characterised by
extensive reporting of rape in New Orleans.[16] As highlighted by Hawker in the context of
Nepal and Cambodia, gender-based violence and sexual assault skyrocket after a
natural disaster: "the grief and loss caused by disaster, coupled with the financial and
bureaucratic demands of the recovery and reconstruction phase are partially responsible
for the increase," she claims. Gender-based violence is often a way of resuming some
semblance of control and reasserting masculinity, which tends to become more fragile

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[16] As Greta Gaard has highlighted, despite rapes being widely reported by survivors, rescue
teams did not include rape support teams. Moreover, "the likely assaults on gay, lesbian, bisexual,
transgendered queer (GLBTQ) persons went unreported (Gaard 2017: 124). Hurricane Katrina
revealed "climate change homophobia" not only through this media blackout of LGBTQIA people
but also through its alleged linkages to the annual queer festival in New Orleans, "Southern
Decadence," that was supposed to take place days after the arrival of the hurricane. The religious
right has rallied against the festival, blaming the destruction of New Orleans on the "sins of
homosexuality" (124) and waving signs stating "Thank God for Katrina."

in times of crisis and uncertainty, as men are unable to fulfil their 'roles' of 'protectors' and 'savers' of women. Furthermore, "the community spaces and ties that would have normally provided a semblance of stability and safety are disrupted and dismantled" (Hawker 2015: online). The death of so many mothers can also lead to a drastic increase in infant mortality, child marriage (see Chamberlain 2017), neglect and denial of girls' education, and child prostitution.

Women as Sustainability Saviours

Not just victims, women have played and can play an essential role in achieving environmental sustainability. The market research firm Mintel has termed "eco gender gap" the disparity between the ethical choices made by men and women: research has corroborated that men are less likely than women to maintain good environmental habits (Mintel Press Office 2018). Consequently, most eco-friendly products – from solid shampoo to reusable pads, from bio vegan cosmetics to menstrual cups, from green shopper bags to laundry detergent – are marketed to women, and "green branding might as well be pink" (Hunt 2020: online). The apparent reason for this gender-biased marketing is that women are still the ones responsible for the domestic sphere: chores such as cleaning, laundry, and recycling are disproportionally still considered women's work. Not only "angels of domestic hearth": women, due to their role as caregivers and their close association with nature, are the new "sustainability saviours."

Elle Hunt notes that research from the mid-90s to early 2000s attributed women's tendency to pursue more environmentally friendly behaviours than men to their alleged stronger ethics of care and empathy and their future-focused perspective arising from their maternal role, suggesting that women are born caring about the planet. As Hunt points out,

> Whether women are born caring about the planet or learn to do so, there is evidence to suggest that femininity and "greenness" have come to be cognitively linked (by men and women) – and that this, as absurd as it may sound, is partly what puts off men from doing their bit. (2020: online)

A research published in 2019 in the journal *Sex Roles* demonstrates that men could be discouraged from carrying a reusable shopping bag, recycle, or pursue environmentally-friendly behaviours that are gendered as feminine, feeling that caring for the environment would undermine their masculinity and fearing of being perceived as effeminate (Swim, Gillis and Amaty). Furthermore, men seem to be less interested than women in adopting vegetarian, plant-based or vegan diets, which have far lower carbon, water, and ecological footprints than the carnivore one: a survey released in May 2016 by the Vegan Society shows that in the UK, 63% of vegans are female while 37% are men,[17] and a higher gender divide can be observed in the US. Previous research noted that women make up the overwhelming majority of those working in grassroots animal activism and protection. As noted by Carol J. Adams in the *Sexual Politics of Meat: A Feminist-vegetarian Critical Theory* (1990), this difference is partly related to the cultural association between eating meat and strength, masculinity, and muscularity. However, such reluctance to adopt a vegan diet for environmental reasons is also due to the aforementioned green-feminine stereotypes and the desire to preserve a macho image. According to the Urban Dictionary, a "soy boy" is defined as a "person who has no masculine traits whatsoever,"[18] because of the erroneous assumption that soy products increase men's estrogen levels. Some men, thus, fear that caring for the environment might jeopardise their gender identity.

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[17] See: The Vegan Society (2016).

[18] See: https://www.urbandictionary.com/define.php?term=soy%20boy. Accessed: April 26, 2022.

Recent studies have also linked misogyny to climate denialism: researchers at the Sweden's Chalmers University of Technology, where the world's first global research network looking into climate change denial has been established, have examined the link between climate sceptics and the anti-feminist far right, which has increased exponentially in the past few years. The rise of young female activists such as Greta Thunberg and Alexandria Ocasio-Cortez has generated a backlash among conservative men, who have mocked, criticised, and attacked the new global faces of climate activism. Having analysed the language of a focus group of climate deniers, Jonas Anshelm and Martin Hultman of Chalmers conclude that "for climate sceptics […] it was not the environment that was threatened, it was a certain kind of modern industrial society built and dominated by their form of masculinity" (2014: 85). This form of masculinity, defined by the authors as "industrial breadwinner masculinity," sees nature as something that is possible to exploit and destroy; climate science, instead, is seen as feminised and thus rejected. Anshelm and Hultman further add that similar findings published in the United States suggest that individuals carrying a reusable canvas bag are described as more feminine than those using a plastic bag.

Governance Feminism

As described in the previous paragraphs, gender is a relevant category both for the examination of vulnerabilities but also adaptive capacities to the effects of climate change. Notwithstanding, Fröhlich and Gioli have claimed that this understanding "has yet to be translated into a comprehensive research framework that integrates gender as an analytical category into environmental […] research" (2015: 137). They also suggest that the stream of research known as ecofeminism – which will be explored at length over the ensuing paragraphs – has first incorporated gender into the environmental scholarship. Insights into the connections between gender and environment coming from

ecofeminist scholars were crucial in building scholarships such as *Women, Environment and Development* (WED), *Women in Development* (WID), *Women, Environment and Development* (WED), and *Gender and Development* (GAD). However, some strands of ecofeminism have been harshly critiqued as essentialist in their assumption that there is a supposedly innate connection between women and nature. According to Fröhlich and Gioli, feminist political ecology represents a step ahead in its rejection of such essentialisation; its focus, nonetheless, "has largely remained on women" and "gender is employed as a synonymous with women" (140). In other words, feminist political ecology has not yet rejected an essentialist understanding of gender, and the issue of intersectionality is yet to be brought to the forefront of scholarship on the connection between gender and the environment.

Fröhlich and Gioli identify five myth complexes that hinder the research on the gender-environment nexus: the synonym fallacy, which considers gender as synonymous with women; the essentialist fallacy, which considers women's "nurturing disposition" as deriving from their "innate" relationship with nature; the neoliberal fallacy, a view that places the empowerment of poor grassroots women as "a sound economic and political investment" (144) but fails to take into account the exploitative structure underpinning this discourse and resulting in further oppression and marginalisation of women's agency; the monolithic fallacy, referring to women as a homogeneous group; and finally the victimisation fallacy, assuming that women are mainly the victims of global environmental and climate change – which means that they are denied agency in this complex phenomena and that the stereotype assuming that the "weak" gender is helpless is reified.

Similarly, Djoudi *et al*. (2016) have claimed that such feminisation of vulnerability runs the risk of reinforcing a victimisation discourse. Having reviewed how gender is framed in 41 papers on climate change adaptation through the lens of intersectionality, they

argue that "in climate change studies, gender is mostly handled in a men-versus-women dichotomy and little or no attention has been paid to power and social and political relations" (S248) and to other factors that intersect to create different modes of discrimination, such as age, "race," class, wealth, sexuality, disability, religion, and so on. While they agree that it has been necessary for scholars and international women's organisations to assess differential impacts of environmental hazards and to recognise the ways women may be more vulnerable to the effects of climate change, they also build on authors like Cannon (2008) and Weisser (2014) to underscore that the very concept of vulnerability may generate a restricted idea of a passive, innocent, female victimhood.[19] Their analysis indicates that none of the papers selected for the study considers the power relations that produce inequality, and very few identified their focus as intersectional, concluding that this framework might be entirely absent from the scientific literature on climate change.

If, following MacGregor (2010), feminist research on climate change should counter the "scientizing and securizing" (128) debate on climate change, a domain dominated by men at the levels of research, policy, implementation, and advocacy, a feminist response to global environmental change "must also question the tendency to reinforce gendered polarities, which work to maintain the status quo" (Arora-Jonsson 2011: 750). Whilst some strands of gender and environmental research have managed to decentre the male subject of environmental science and policy, they have also been criticised for treating women as a distinct, homogeneous, and monolithic group to whom essentialist attributes were assigned on the bases of shared oppression and experience.

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[19] As noted by material feminist Stacy Alaimo, the "emphasis on female vulnerability may have detrimental consequences, in that: (1) it results in a gendered ontology of feminine corporeal vulnerability as opposed to the scientific (or masculinist) imperviousness; (2) it may provoke a model of agency that poses nature as mere resource; and (3) it reinforces, even essentializes, gender dualisms in a way that undermines gender and sexual diversity" (2016: 103).

What is also important for the present discussion is that the feminisation of climate change vulnerability has reinforced the category of the victimised woman of the Global South. As suggested by Chandra Talpade Mohanty and other postcolonial feminists, the political project of white Western feminism has contributed to the creation of the category of the oppressed and victimised "third world woman" that Western feminists must save (from male violence, from the colonial process, from religious ideologies, and so on). In *Under Western Eyes: Feminist Scholarship and Colonial Discourses*, Mohanty (1988) posits that "while the category of 'oppressed woman' is generated through an exclusive focus on gender difference 'the oppressed third-world woman' category has an additional attribute – the 'third-world difference'" (80).

Shifting from the focus from women's vulnerability to environmental hazards to the emphasis on women's agency and adaptive capacity to climate change challenges does not effectively respond to the restricted idea of a monolithic female subject, nor does it emphasise that "gender relations do not precede or succeed environmental issues but that gender and power are intrinsic to these issues" (Arora-Jonsson 2014: 299). Indeed, as pointed out by Melissa Leach, ecofeminists' analyses of women's close relationship to nature have been co-opted by policymakers and bureaucrats since the 1990s to make use of female labour in conservation and climate policy (Leach 2007), resulting in a "feminization of responsibility" (Chant 2008) that adds environmental care to the already long list of caregiving responsibilities and livelihood activities. What has been described as an approach of "governance feminism" (Halley *et al.*, 2006) runs the risk of depoliticising gender into a descriptive category and a mere problem of women's inclusion, having little in common with the feminist goal of theorising gender as a relationship of power and removing structural discrimination. In other words, whilst in feminist research the analytical lens of gender is about asking questions (Scott 2012:

20), the use of gender in environmental contexts has become a "bureauratic exercise that limits substantive change" (Arora-Jonsson 2014: 305).

Feminist Ecologies

As suggested in the previous paragraphs, it is partly thanks to the stream of research known as ecofeminism that the issue of gender has been brought into the environment scholarship. Not all feminist theories, however, are environmentalists at heart. Over the ensuing paragraphs, I will dwell on feminist theories, texts and scholars that have explored the alliances, tensions, and contradictions between women and nature, as well as between feminism and environmentalism.

In *Undomesticated Ground: Recasting Nature as a Feminist Space* (2000), Stacy Alaimo – an important voice in the environmental humanities, new materialism, and material feminism – refers to the so-called feminist flight from the troublesome terrain of nature as one of the most unfortunate legacies of post-structuralist and postmodern feminism. Since the origins of modern Western science, as put brilliantly by Carolyn Merchant in *The Death of Nature* (1980), nature has been a feminine noun and has been associated with alleged feminine qualities (e.g. nurturing motherhood but also chaos, unpredictability, cruelty); on the other hand, women have been defined as those who are mired in nature and are therefore denied subjectivity, agency, and rationality. Both woman and nature are thus fixed "in a vortex of circular arguments" (Alaimo 2000, 3).

A foundational tenet of feminist theory is that genders are socially constructed, countering the claim that women are inferior because nature has made them so; on the other hand, the women's supposed proximity to nature has been identified by feminists as a root cause of misogyny, as it has legitimised women's exclusion from the public sphere and their confinement to the domestic space of mere reproductive work. As a

consequence, most feminist theory – from Simone de Beauvoir to Monique Wittig – has worked to disentangle women from nature and to transport the category of women into the realm of culture, failing to counter predominant dualisms and a sharp opposition between nature and culture: "if woman's perceived proximity to nature is responsible for her oppression, then her liberation, it would seem, is contingent on her distance from nature" (Alaimo 2000: 3-4). Most feminist theory has sought to evade women's association with nature, with only a few exceptions such as Luce Irigaray's mimesis process, which urges women to inhabit the feminine space in discourse in order to call the stereotypical view of women into question; radical feminists like Adrienne Rich or Mary Daly have also stepped into nature "as a realm untouched by the stalwart reach of patriarchal culture" (2000: 8).

Ecofeminism

The link between women and nature has been made even more explicit by ecofeminist theory. As documented in chapter 1, the environmental humanities conceptually challenge the depoliticising universalism intrinsic in the term Anthropocene, which might imply that all humanity is equally responsible for climate change. Conversely, ecofeminist knowledge reminds us that environmental injustice is tightly linked to social as well as gender injustice. What was also underscored in the previous paragraphs is that the history of feminism has necessarily been anthropocentric at heart, whilst ecology, quite on the contrary, urges us to pay attention to the more-than-human world. And yet, despite these contradictions, "the frictions between feminism's anthropocentrism […] and ecofeminism's attentiveness to the non-human might also provide productive sites for critically rethinking patriarchal relations and attitudes to women and the natural world" (Stevens *et al* 2018: 11).

The contemporary linkage between feminism and environmentalism is attributed to radical French feminist Françoise d'Eaubonne, who coined the term *écofeminisme* in 1974. In her article "A Time for Ecofeminism," d'Eaubonne argues that patriarchal domination of women is the source of a double threat to human beings: overpopulation and overproduction. As of today, what distinguishes ecofeminism from other feminist approaches to environmentalism is ecofeminism's claim that there is a structural and close connection between the domination of women and the over-exploitation of natural resources. Such connection is framed in many different ways, but all ecofeminists "necessarily reaffirm, to some extent, that link between women and nature which liberal and socialist feminists from Simone de Beauvoir onwards have been at pains to sever" (Rigby 2018: 58).

Environmental humanities scholar Kate Rigby points out that it has become a commonplace practice in discussions regarding ecofeminism to distinguish between cultural/spiritual ecofeminism, a branch allegedly grounded in an "essentialist" view of the close connection between woman and nature – hence women have a special connection to nature that men do not have, and such a connection should be celebrated – and constructivist ecofeminism, which posits that this link is a social construction based on the sexual division of labour that sustains capitalist patriarchal societies. It is precisely due to such reaffirmation of the link between woman and nature that ecofeminism has been summarily dismissed by many feminist theorists.

Evaluating and comparing some major publications in the mid-1990s (particularly the work of Carolyn Merchant, Mary Mellor, and Ariel Salleh, among the most prominent social ecofeminist in the anglophone world), though, Rigby displays that we are, in fact, presented with a false choice between radical social constructivism and essentialism. In *Earthcare: Women and the Environment* (1996), Carolyn Merchant sheds light on the dangers of the ethics of care advocated by many ecofeminists, observing that not only

this approach risks reinforcing the assumption that "women's nature is to nurture" (8) but it also implies that our relationship with non-human nature is one of domination – in which nature is constructed as a patient to be healed – rather than interdependence. She proposes instead a "partnership ethics" based on the re-conception of human/nature relation as well as on a balance of mutual life-giving among humans and with nature.

Similarly, in *Feminism and Ecology* (1997), Mary Mellor distances herself from the opposition between essentialism and social constructivism and argues for an "ecological holism" which recognises that "all human existence, however socially mediated and culturally framed, grows out of and is enfolded by natural processes" (Rigby 2018: 74). Even though she places sexual difference among such natural processes, she rejects the view that the standpoint of women has an epistemic advantage deriving from her embodiment as female; instead, she urges women to build out alliances with other groups and peoples that are exploited and marginalised in different ways, and whose socially constituted connection with nature can become a source of alternative knowledge. In other words,

> [e]cofeminist critique is not about naively celebrating women's proclaimed corporeality, connectedness, and closeness to nature. For the aim of ecofeminist transformation is not to reify existing gender differences, but rather to facilitate the relocation of women (and other subordinated groups) into culture as well as nature, and of men into nature as well as culture, while simultaneously contributing to the redefinition and mutual reattunement of culture and nature. (Rigby 2018: 76)

As Australian philosopher Val Plumwood puts it, the task of ecofeminism is to situate the human in ecological terms and the more-than-human in ethical and cultural terms. In her influential work *Feminism and the Mastery of Nature* (1993), she argues for a "critical ecofeminism" that responds to women's confinement in the sphere of nature and to the exclusion of the ideal human from the sphere of ecology, positing instead that both men and women are embedded in both nature and culture. Critical ecofeminism challenges

the dualism of human and nature – as well as culture and nature – that conceives the human as different from and superior to the non-human, which exists as a mere resource to be exploited from the higher human sphere and is subjected to structures of Othering. Plumwood's work is a far more extensive critique of "mutually reinforcing dualisms" (1993: 42), encompassing civilised/savage, white/black, human/animal, mind/body, and reason/emotion. For the Western tradition, she claims, these oppositions are gendered, as the lower spheres are always associated with women. She therefore spent her academic life arguing against what she has labelled "hyper-separation," which "creates dangerous illusions in denying embeddedness in and dependency on nature" (Plumwood 2018: 98), and, not unlike Merchant's model of partnership, she proposes an "ethics of mutuality" that acknowledges the interdependent agency of humans and nature.[20]

What emerges from these key texts of ecofeminist knowledge is a rejection of the alleged essentialist view of the woman-nature nexus, which has led to the dismissal of ecofeminism by many feminist scholars. As Rigby puts it, though, "an even graver danger is presented by the failure to acknowledge the community of fate that exists between humanity and the earth" (2018: 60). However, cultural ecofeminism's frequent tendency to universalise and overlook the differences separating women in terms of class, ability, location, "race," ethnicity and so on certainly appears more problematic from a contemporary perspective. Grounding the development of ecological feminist thought in

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[20] Plumwood's rejection of an ethics of care in favour of an ethics of mutuality arises from a transformational event in her life and thinking during a visit to Kakadu National Park in 1985, when she survived an attack from a saltwater crocodile in the East Alligator Lagoon. The encounter redirected her to thinking about humans as food for others, to acknowledge the interdependent agency of non-human others and the fact that their interests might differ from ours: "I glimpsed a shockingly indifferent world in which I had no more significance than any other edible being. The thought, 'This can't be happening to me, I'm a human being. I am more than just food!' was one component of my terminal incredulity. It was a shocking reduction, from a complex human being to a mere piece of meat" (Plumwood 2000, 61).

the history of women's environmental activism, Rigby notes that throughout the world the majority of activists in the grassroots movement against nuclear energy, weaponry, uranium mining and chemical toxins are women and that in the US many of them have a working-class, African American, Hispanic American and Native American background. These movements have helped raise awareness of the linkages between environmental degradation and issues of gender, 'race', and class, as well as of the interstructuration of global capitalism, a flat trust in techno-fixes, destructive models of development and neo-colonisation on the one hand, and structural inequalities generated by patriarchy, racism, and intersecting systems of oppression on the other. Instead, "[b]y contrast with the geographical, socio-economic, and 'racial' diversity of women's grassroots environmentalism […] the elaboration of ecofeminist theory has, until relatively recently, been dominated by the perspectives of white, middle-class women, above all from the English-speaking world" (Rigby 2018: 64).

If ecofeminism is a primarily white feminist movement, ecowomanism functions as a kind of counternarrative that has emerged to interlace race, gender, class, and intersectional analysis in the examination of environmental injustices around the world (Harris 2016), grounded in the womanist tradition inaugurated by Alice Walker in her text *In Search of Our Mothers' Gardens* (1983). Ecowomanism emerged from Afrocentric thought and black feminism to underscore the necessity for race-class-gender intersectional analysis to examine the structural connection between the domination of women and the domination of nature. Using the words of Melanie Harris,

> just as women of color have often survived multiple forms of oppression when confronting racism, classism, sexism, and heterosexism, androcentric attitudes devaluing the earth and privileging (particular) humans over the earth's well being has resulted in the environmental crisis in which we all find ourselves. (2016: 1)

Ecowomanism, therefore, takes the perspectives of women of African descent as a starting point to link Earth justice and social justice. There is indeed an eerie similarity between the exploitation of natural resources and structural forms of violence faced by black women during slavery, when their bodies were a property of the white slave owner and their status as fully human was brought into question. Harris also highlights the paradoxical relationship that black women have historically had with the Earth – in the words of Kimberly K. Ruffin, it has been a relationship of "beauty and burden" (2010: 2) – characterised by reflections on the beauty of nature that can be observed, for instance, in the poetry of Alice Walker, but also by "the horrors of the lynching tree, and other forms of racial violence in which the Earth herself, or aspects of nature (trees, cotton fields, sharecroppers' harvest) become complicit in a system of white supremacy (Harris 2016: 7-8).

As noted by A. E. Kings, it is only recently that ecofeminists have come to label their analyses as explicitly intersectional. However, she also claims that earlier ecofeminists have been "doing intersectionality" (2017: 70) long before American lawyer and civil rights activist Kimberlé Crenshaw coined the term in 1981 to explain how 'race', class, gender, and other systems of oppression intersect with one another and overlap to create distinct modes of discrimination for people with multiple identity categories. For instance, Mary Daly has taken into account the interconnected nature of women's experiences of discrimination and class (1978); Val Plumwood's critique of mutually reinforcing dualisms has intertwined gender, race, class, and nature (1993); Carol J. Adams' ecofeminism deals with the issue of animals, linking patriarchy and meat eating (1990). Nonetheless, this does not mean that early exponents of ecofeminism have adopted intersectionality "as the conceptual tool we currently understand it to be" (71). It is only in more recent times that ecofeminists have explicitly adopted an intersectional methodology: some of the most prominent examples are Deborah Slicer (2015), Carol J. Adams and Lori Gruen

(2015), Richiard Twine (2010), Greta Gaard (2015), and Sherilyn MacGregor (2010). This dissertation draws primarily on this growing body of intersectional ecofeminist approaches towards climate change, exploring the contributions of speculative fiction to this debate.

Queer Ecologies

As stressed in the previous paragraphs, ecofeminisms have noted that the naturalisation of women has often been paired with the feminisation of nature; in a similar way, the naturalisation of heterosexuality is intertwined with the heterosexualisation of nature (Sandilands 2001). In their introduction to the volume *Queer Ecologies: Sex, Nature, Politics, Desire* (2010), Catriona Mortimer-Sandilands and Bruce Erickson explore queer ecological connections providing an overview of the ways in which "understandings of nature inform discourses of sexuality" and "understandings of sex inform discourses of nature" (2-3). Following the rise of evolutionary and sexological thought in the early twentieth century, heterosexual sex acts were naturalised, whereas non-heterosexual experiences were demonised as not natural. The naturalisation of individual sexual practices, they claim, generally coincides with its link with reproductive biology: being the form of sexual activity that leads directly to the continuation of a species over generations, heterosexual reproduction "came to be understood as a natural way of being" (10).

Likewise, heteronormativity has influenced the organisation of the natural space: one of the most important sites that is often designed to regulate sexual activity is the park, both wilderness and urban (12). In the mid- to late-nineteenth century, parks emerged as a public institution and a curative response to the decline and contamination observed in the city. With specific regard to white European masculinity, Mortimer-Sandilands and Erickson suggest that the "perceived proliferation of deviant sexual types and

expression" and the "increased visibility of homosexual activity in cities" (13) created social anxiety about the state of heteromasculinity, whose privilege had already been undermined by women's increasing economic independence and by the changing racial politics of urban centres. This supposed urban degeneration came to be considered a result of the environmental conditions of the city: expanding the focus to North America, Peter Boag maintains that "pollution, tainted foods, and even the fast-paced nature of urban life" (2003: 49) were believed to induce homosexuality. In this context, parks were conceived as a curative response to urban degeneracy, and wilderness became a site for the cultivation of heterosexuality: in other words, "places where new ideals of whiteness, masculinity, and virility could be explored away from the influences of emancipated women, immigrants, and degenerate homosexuals" (Mortimer-Sandilands and Erickson 2010: 14). The emergence of parks as public institutions was accompanied by the rise of a conservation movement in North America, with wilderness spaces deemed as sites to be preserved against the corrupting influences of modern urbanisation and industrialisation.

The emergent field of queer ecologies counters the ongoing discursive and political relationship between sex and nature, proposing an "articulation of sexuality and nature as a form of eco-sexual resistance" that attempts to transform "the kind of ecologically implicated heteronormativity" (21). Performance artists Beth Stephens and Annie Sprinkle, for example, interweave queer sexuality with an erotic love for the Earth to help communities in West Virginia's Appalachian Mountains save the region from mountaintop removal destruction, a destructive form of extracting coal that literally blows up mountain tops to access seals of coal below. Through their documentary "Goodbye Gauley Mountain" (2013), they address the devastating impact of mountaintop removal destruction on the region's ecology and communities by proposing a queer ecofeminist form of resistance that shifts the paradigm from Earth as mother to Earth as lover: the

metaphor "lover Earth" denotes indeed a reciprocal relationship rather than one of domination in which humans exploit the Earth's resources without nourishing the land in return.[21] Their answer to destructive coal mining and to forms of intersectional oppression exacerbated in times of crisis takes as a point of departure the erotic pleasure that can be taken from nature and encompasses ecosexual walking tours, theatre pieces, visual art, performance art, and ecosexual weddings. Their strategies of resistance, suggests Greta Gaard, are embodied in feminist relational ontology, which

> suggests we are born and come into being through relationships, and these relationships are not only human-to-human but also human to more-than-human, including relations with other animals, plants, waterbodies, rocks, soils, and seasons. (Gaard 2017: 175)

Besides challenging the heteronormativity of mainstream environmental thought, queer ecologies propose forward-looking theorisations of human/more-than-human relationships. Coming from a viewpoint that has never been deemed as properly human – as discourses of sexuality can regulate hierarchies of humanness – queer perspectives do have something crucial to contribute to the rising critical interest in the non-human. In their provocative article "Has the Queer Ever Been Human?", Dana Luciano and Mel Chen analyse the work of Laura Aguilar, a Chicana lesbian photographer from California whose lens mainly focuses on non-normative bodies that often align themselves with features of the landscape, as if they "enter the very non-human fold where some would place [them]" (Luciano and Chen 2015: 184).[22] The bodies she represents conceal gender, sex, race, and even their human status; in other words, Aguilar resists the possible appropriation of the female body by a male gaze that would objectify it, "not by intensifying her apparent status as subject […] but by turning away from the demand for

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[21] See the trailer here: https://www.youtube.com/watch?v=FToQ6fNt7jY (accessed: April 26, 2022).
[22] See, in particular, the Nature Self-Portrait series:
https://www.getty.edu/art/collection/person/105QJY (accessed: April 26, 2022).

recognition within the circle of humanity" (184). Similarly, queer ecologies understand

the natural world as a complex system of interdependency that is not set apart from the

human.[23] With regards to speculative fiction, chapters 6 and 8 of this dissertation will

explore queer posthumanist imaginings of possible worlds that attempt to confront the

current climate and pandemic crises going beyond a normative and masculinised sense

of the human.

Composting Feminism and Environmental Humanities

As underscored in the previous paragraphs, ecofeminism and queer ecofeminism have

emerged as distinctly ecological branches of feminist thought. However, they are by no

means the only feminist praxes influencing the environmental humanities. In the

aftermath of George Floyd's death on 25 May 2020, as activists and protesters took to

the streets with a grassroots effort to denounce racialised police brutality,

environmentalist Leah Thomas went viral after posting on her Instagram a graphic that

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[23] A less productive way of queering the environment looks at the sexual practices of animals to draw arguments from the natural about human sexuality. Noël Sturgeon takes into consideration the peculiar case of penguins, which have simultaneously become a symbol of monogamy and traditional Christian family values on the one hand and an example of the naturalness of gay marriage on the other. Following the release of *The March of the Penguins*, a French-made documentary about emperor penguins in Antarctica (2005), right-wing fundamentalist Christian evangelicals praised the heroic representations of the male ("daddies suffering collectively to protect their young against the brutal cold and blinding snowstorms" [Sturgeon 2010: 110]) as well as the connection of penguins' romance and love life with the goal of having children. In their view, both concur to create in nature a paradigm for human heteronormative romance and nuclear family. At the same time, penguins were made into a symbol of the naturalness of queer activity. To give an example, Sturgeon mentions the well-known children's book *And Tango Makes Three* (2005), which narrates the true story of Roy and Silo, a couple of male penguins who lived at the Central Park Zoo and were deeply bonded to one another. However, Sturgeon notes that penguin sexuality is quite variable, with "breeding behaviors based on both homosexual and heterosexual pairs, trios, quartets, and single parents" (113). It follows that "arguments from the natural about sexuality, of whatever kind, especially when one uses penguins as one's touchstone, turn out to be pretty slippery […]. In general, the sexual practices of animals are so variable that little can be proved about human sexuality using animal examples, though it is a common narrative in popular culture" (113).

read "Environmentalists for Black Lives Matter."[24] Thomas defines intersectional environmentalism[25] as

> [a]n inclusive version of environmentalism that advocates for both the protection of people and the planet. It identifies the ways in which injustices happening to marginalized communities and the earth are interconnected. It brings injustices done to the most vulnerable communities, and the earth, to the forefront and does not minimize or silence social inequality. Intersectional environmentalism advocates for justice for people + the planet.[26] (Thomas 2020: online)

Low-income Black and Brown communities, writes Thomas, are the most exposed to environmental conditions, proximity to toxic waste sites, and poor air and water quality – the Flint water crisis that started in 2014 is one of the best-known examples of environmental injustice in recent US history.[27] It follows that Black Lives Matter protests and environmental struggles are closely intertwined.

A couple of months later, environmental humanities scholars Lauren LaFauci and Cecilia Åsberg, applauding Thomas' message and pointing out that it had reached the broader public in a way that previous academic scholarship could not, proposed that "intersectional environmentalism" is environmental humanities – "or at least is environmental humanities as it is now, in the field's stage of maturity, understood" (LaFauci and Åsberg 2020: online). In other words, all environmental humanities are, in

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[24] See: https://www.instagram.com/p/CAvaxdRJRxu/?utm_source=ig_web_copy_link. Accessed: April 26, 2022.

[25] As highlighted by LaFauci and Åsberg (2020), the term intersectional environmentalism was first used by environmental humanities scholar Rob Nixon in his 2013 book *Slow Violence and the Environmentalism of the Poor*.

[26] See the website "Intersectional Environmentalist Council," co-created by Thomas and other 21 people from various ethnic backgrounds: https://landscouncil.org/news/intersectional-environmentalism (accessed April 26, 2022).

[27] The water crisis in Flint, which has a predominantly African American population living below the poverty line, began when the city switched its drinking water supply from Detroit's system to a cheaper alternative, the Flint River. Lead from ageing pipes, however, leached into the water. Despite protests by residents, the problem was covered up as officials declared that the water was safe. Reports have then acknowledged the presence of racial bias, systemic racism, and environmental injustice in the Flint water crisis. See: Almasy and Ly (2017).

fact, feminist environmental humanities and align closely with feminist genealogies and epistemologies. That does not mean that all feminist theory is environmentalist at heart, as the previous paragraphs have attempted to clarify; however, if we create a cartography[28] of some of the field's origin stories, we realise that specific feminist theories have shaped the environmental humanities soil in multiple ways.

Quite unexpectedly, though, feminism is an unacknowledged presence in the field, "referenced implicitly but not named" (Hamilton and Neimanis 2018: 506-7).[29] As an example, Rose and Robin's "ecological humanities" manifesto, discussed in the first chapter of this dissertation, gives credit to Carolyn Merchant's *The Death of Nature* for inaugurating a key direction in the environmental humanities scholarship; however, the subtitle of her book – *Women, Ecology, and the Scientific Revolution* – is left unsignalled, as is the specific feminist perspective of her work. Moreover, what is also revealed by this cartographic work is that "key feminist figures within contemporary environmental humanities mirror the field's general whiteness," as Hamilton and Neimanis write in *Composting Feminisms and Environmental Humanities*. Building on Donna Haraway's work, the two authors explore the ways in which feminist offerings are composted in and through the environmental humanities, positing that "it matters what compostables make compost" (501).[30]

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[28] According to Braidotti, cartographic methods are "theoretically based and politically informed reading[s] of the present" aiming at "epistemic and ethical accountability by unveiling the power locations which structure our subject-position. As such, they account for one's locations in terms of both space (geo-political or ecological dimension) and time (historical and genealogical dimension). This stresses the situated structure of critical theory and it implies the partial or limited nature of all claims to knowledge." (2013, 164).

[29] The erosion of the feminist foundation of many other disciplines is defined as "abstract masculinity" by Nancy Hartsock, and as a "politics of citation" by Sara Ahmed (2013).

[30] The practice of composting, developed by the authors as a material metaphor, refers to the transformation of old scraps into nutrient-rich new soil. The use of this metaphor is indebted to Donna Haraway, who, following her partner Rusten Hogness' suggestion, describes herself as a compost-ist, not a posthuman-ist: "we are all compost, not posthuman" (2015: 161). We are "humus, not Homo, not anthropos" (2016: 55), and therefore she inhabits the humusities, not the

To start with, in the inaugural essay for the journal *Environmental Humanities*, "Thinking through the Environment, Unsettling the Humanities," Deborah Bird Rose, Thom van Dooren, Matthew Chrulew, Stuart Cooke, Matthew Kearnes, and Emily O'Gorman theorise the emergence of the new field throwing light on its elaboration of a "thicker" notion of humanity that rejects humanist ideas of an autonomous, rational, and self-contained subject in favour of humans' entangled participation in lively ecologies. The classical ideal of "Man," Protagora's "measure of all things," the universal model visually captured in Leonardo Da Vinci's Vitruvian Man, has long been questioned by feminist scholars who have claimed that the universal standard by which all humans are judges is, in fact, male, European, white, heterosexual and able-bodied. Feminist theory has offered multiple antidotes to such androcentric, exclusionary and hierarchical 'measure of all things'.[31] However, although the essay published by Rose and her colleagues includes citations from some of the feminist protagonists of the post-anthropocentric turn – e.g. Donna Haraway, Myra Hird, Vicki Kirby, Annmarie Mol, Val Plumwood, Maria Puig de la Bellacasa, and Anna Tsing – feminism is not taken up as a foundational influence in the elaboration of an entangled version of humanity.

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humanities. Haraway refuses human exceptionalism without invoking posthumanisim: "[c]ritters – human and not – become-with each other, compose and decompose each other, in every scale and register of time and stuff in sympoietic tangling, in ecological evolutionary developmental earthly worlding and unworlding" (97).

Hamilton and Neimanis describe the process of composting as follows: "Matters break down and re-emerge as new matters. In the spirit of a feminist politics of citation, we are attuned to the ways in which new ideas are always indebted to writings and readings that have come before. Sometimes these inheritances are deliberate up-takes and extensions of influential texts we have encountered; sometimes they are accidental – inhaled in the air that we breathe, or transmitted to our guts through the soil and the water. […] What and how are feminist offerings composted in and through the environmental humanities? What concepts are especially fruitful, and why? In what forms do these ideas re-emerge? How are these genealogies acknowledged? What ideas are yet to be added to the Environmental Humanities compost pile?" See: Hamilton and Neimanis 2018.

[31] For a comprehensive analysis of posthuman feminist theory, see Braidotti 2016.

Val Plumwood's challenge to the nature/culture dualism is also cited as a critical influential concept within the field of the environmental humanities. Citations of her work, however, often fail to underscore her more expansive critique of mutually reinforcing dualisms and the gendered nature of the Master model. As suggested by Hamilton and Neimanis,

> [t]o focus on the nature/culture dualism without acknowledging its connection to gender, race, and other structures […] evacuates from Plumwood's work its central insight. The way she brings contemporary feminist questions to bear on environmental concerns makes it impossible to address environmental harms without also addressing social ones. (513)

Another interesting example made by Hamilton and Neimanis is feminist investigation of the role of science. The environmental humanities build bridges between disciplines, adding a specific concern with social justice to the natural or 'hard' sciences. As Ursula K. Heise writes in her introduction to *The Routledge Companion to the Environmental Humanities*, the emergent field "envision[s] ecological crises fundamentally as questions of socioeconomic inequality, cultural difference, and divergent histories, values, and ethical frameworks" (2017: 3). Joni Adamson, William A. Gleeson, and David N. Pellow's introduction for *Keywords for Environmental Studies* illustrates how the environmental humanities, building on the influential work of feminist and science and technology studies (STS) scholars such as Sandra Harding, Donna Haraway, and Val Plumwood, blur the lines separating nature and culture, and the humanities and the sciences. What is also important for the present discussion, however, is that "Harding, Haraway, and Plumwood also make explicitly feminist claims about social politics and justice as integral to this blurring" (Hamilton and Neimanis 2018: 510). What Hamilton and Neimanis' cartographic work reveals is that:

> the specific originality or ontoepistemological value of the [environmental humanities] field is compromised when a stated openness to intellectual

inheritances of all kinds does not adequately engage with the rich history of feminisms (again, among other key fields, such as anticolonial and black studies) wherein the category of the human has already been tirelessly debated, questioned, expanded, torqued, and rejected; wherein the role of science has been rigorously investigated; and wherein both of these are already inextricable from questions of justice. (511)

Haraway's influential essay on situated knowledges, moreover, has been widely taken up within the field of the environmental humanities. Her text originated as a response to Sandra Harding's book *The Science Question in Feminism* (1986) and offers a critique of feminist conceptions of objectivity as well as feminist philosophies of science which sought to redeem the practice of science by uncovering its bias. Haraway goes beyond feminist empiricism – "feminists don't need a doctrine of objectivity that promises transcendence" (Haraway 1988: 579) – and feminist standpoint theories, to advocate a feminist epistemology that does not merely show bias in science but recognises that knowledge is always situated, and therefore limited. Science is not neutral, nor it is impartial, and what counts as knowledge is "policed by philosophers codifying cognitive canon law," that is to say, "masculinist scientists and philosophers replete with grants and laboratories" (575). As opposed to the dispassionate and detached scientist that defines modern science, we, "the feminists in the debates about science and technology," the embodied others who are "not allowed not to have a body, a finite point of view," are special-interest groups with a limited and disqualifying perspective. Feminist science, thus, has a greater goal than promoting a debiased version of objectivity:

Feminists have to insist on a better account of the world; it is not enough to show radical historical contingency and modes of construction for everything. […] Feminists have stakes in a successor science project that offers a more adequate, richer, better account of a world, in order to live in it well and in critical, reflexive relation to our own as well as others' practices of domination and the unequal parts of privilege and oppression that make up all positions. (579)

The notion of situated knowledges is then developed through a metaphor of vision. Haraway describes the gaze of the unmarked positions of Man and White as a "conquering gaze from nowhere," having the "power to see and not be seen, to represent while escaping representation" (581): as such, it is defined as a god trick. Haraway further underscores the violence implicit in these visualising practices: the Western eye is a wandering and conquering eye that "fucks the world" (581). According to Haraway, feminist epistemologies should instead unmask doctrines of objective vision and insist on the situatedness, partiality, commitment, positioning from which we articulate our beliefs and claims, and the "politics of location" (Rich 1986)[32] that entails taking responsibility:

> I would like a doctrine of embodied objectivity that accommodates paradoxical and critical feminist science projects: feminist objectivity means quite simply situated knowledges. (581)

And again: "only partial perspective promises objective vision" (583), and "the only way to find a larger vision is to be somewhere in particular" (590). Another key feature of

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[32] In *Blood Bread and Poetry*, Adrienne Rich coins the phrase "a politics of location," marking a point of departure from hegemonic Western feminism and universalising theories of 'woman' that speak in terms of 'we' – "isn't there a difficulty of saying 'we'? You cannot speak for me. I cannot speak for us" (Rich 1986, 224) –, and stressing the importance of recognising and taking responsibility for our location. The essay was first presented as a speech in 1984 at the *International Conference of Women, Feminist Identity, and Society* in Utrecht, Netherlands, and formulates a plea for a feminist politics of location that means more than separating herself from the bloody and violent history of her country, as Virginia Woolf did in *Three Guineas* (1938), where she stated three times "as a woman my country is the whole world" (197). Feminists need to become accountable for their own location on the map. For Rich, this means experiencing the meaning of her whiteness as a point of location for which she needs to take responsibility: "to locate myself in my body means more than understanding what it has meant to me to have a vulva and clitoris and uterus and breasts. It means recognizing this white skin, the places it has taken me, the places it has not let me go" (215-16). Some passages of Rich's texts resonate closely with feminist situated knowledges: "to come to terms with the circumscribing nature of (our) whiteness. Marginalized though we have been as women, as white and Western makers of theory, we also marginalize others because our lived experience is thoughtlessly white, because even our 'women's cultures' are rooted in some Western tradition. Recognizing our location, having to name the ground we're coming from, the conditions we have taken for granted – there is a confusion between our claims to the white and Western eye the woman – seeing eye, fear of losing the centrality of the one even as we claim the other" (219).

feminist epistemologies of scientific knowledge, according to Haraway, is the split and contradictory self: heterogeneous multiplicities are the ones who can be accountable for their positionings. "Subjectivity is multidimensional; so, therefore, is vision" (586), and the splitting-knowing subject is therefore partial in many different ways. Whilst she invites her readers to see from the peripheries and the depths, she also warns against the dangers of romanticising the vision from below by claiming to see from the position of the less powerful: "to see from below is neither easily learned nor unproblematic, even if 'we' 'naturally' inhabit the great underground terrain of subjugated knowledges" (584).

Once again, however, Haraway's feminist perspective has been downplayed. Her influential essay was taken up within the field of the environmental humanities and within debates on the Anthropocene. Under the guise of the *Anthropos*, indeed, we are witnessing a paradoxical return of the vision of nowhere and of the universal position that wipes away troublesome differences between humans and hides intimate connections between human, non-human animals, matter, and technology. It follows that the need to enact situated knowledges is more urgent than ever. However, it is essential to remember that Haraway's original articulation of the concept was not an invitation to include all perspectives in order to achieve a neutral epistemological expansion. Haraway's critique encompasses the devaluation of feminist knowledge and the disproportionate impact of the "conquering eye" on the lives of women, colonised people, and non-human animals. If, quoting Haraway, "it matters what stories tell stories, it matters which concepts think concepts" (2015, 160), then the feminist perspective of situated knowledges should not be left unacknowledged.

Haraway's theorization of situated knowledges continues to have far-reaching theoretical consequences for recent feminist debates. For feminist new materialism, specifically, Haraway's 1988 essay almost says it all: "it shows the interrelations between epistemology, ontology, ethics, and politics, the agentic capabilities of 'objects' and

methodologies, human and non-human, the impossibility of clear-cut disconnections, and so on" (Rogowska-Stangret 2018: online). Furthermore, her critique of the objectivity of science and the alleged impartial view from above is a pivotal element of her ongoing dialogue with feminist posthuman and new materialist scholars such as Rosi Braidotti and Karen Barad. Iris Van Der Tuin, one of the prominent voices in the emergent field of feminist new materialism, has stressed that Haraway "planted the seed of what are nowadays called 'feminist new materialisms'" (2015: 21).

As explained by Stacy Alaimo and Susan Hekman in their introduction to *Material Feminisms*, a collection of essays on feminism and materiality including work by Elizabeth Grosz, Vicky Kirby, and Claire Colebrook, the advent of postmodernism and poststructuralism has led many feminists to turn their attention to social constructionist models. Postmodern feminism has laid bare the gendered dichotomies that have structured Western thought, such as culture/nature, subject/object, mind/body, and so on. Regarding the dichotomy language/reality, however, postmodern feminism seems to embrace it almost without question and to be quite uncomfortable with the concept of the material: "far from deconstructing the dichotomies of language/reality or culture/nature, they have rejected one side and embraced the other" (2008: 2-3).

Conversely, feminist ecologies have long underscored the necessity to take the materiality of the more-than-human-world seriously. As explored at length in this chapter, ecofeminism has often been relegated to the margins by the mainstream of feminist theory: feminist "flight from nature" (Alaimo 2000) has charged the alliance between feminism and environmentalism of proposing a "naïve, romantic account of reality" (2008: 4). Because of its association with feminine qualities, nature – and, more generally, the material world – has become a treacherous terrain for feminist theory, a concept to be approached with caution, resisting positions that see natural alliances

between feminist theory and multispecies perspectives. And yet, writes Alaimo in her most recent book,

> the theories, perspectives, texts, artworks, practices, and modes of being fabricated by those who have not been deemed as properly human do have something invaluable to contribute to posthumanism, inhumanism, the nonhuman turn, new materialism, critical animal studies, science studies, reflections on the anthropocene, and the environmental humanities. (2016: 11)

As such, the tensions and contradictions between feminism and environmentalism may be more generative than their overlapping territories. The field of feminist new materialism, she posits, has created new possibilities for productive alliances between them, reconceptualising nature – but also gender essentialism and heteronormativity. Nature is more than a passive social construction: it is instead an agentic force that is perpetually interconnected and "interacting" with the flow of substances and agencies of the environment. Its actions, therefore, have consequences for all the other elements in the mix, for the human as well as the non-human world. Following Karen Barad, we might replace the term interaction – which necessitates pre-existing and distinct entities that participate in action with one another – with intra-action: agency, in the Baradian term, is understood as a dynamism of forces constantly exchanging with and influencing one another. Such "co-constitutive materiality of human corporeality and nonhuman natures" (Alaimo 2016: 9) can offer multiple possibilities for transforming environmentalism itself and has long represented one of the key elements of environmental justice movements in that they locate the environment not in a separate and distant place but "within homes, schools, workplaces, and neighborhoods" (Alaimo 2008: 9). These movements, moreover, "reveal that lower-class peoples, Indigenous peoples, and people of color carry a disproportionate toxic load" (9).

A productive lens through which to scrutinise such intra-actions is the concept of trans-corporeality developed by Alaimo in *Undomesticated Ground* (2000) and then explored

at length in *Exposed: Environmental Politics and Pleasures in Posthuman Times* (2016): in Alaimo's words, trans-corporeality "traces the material interchanges across human bodies, animal bodies, and the wider material world" (2016: 112). As declared by the author, her conception of trans-corporeality was influenced by Donna Haraway's feminist epistemology, in that it originates with a solid location of the self that is never separated from the world that s/he seeks to know. Elevated perspectives and partial visions from nowhere, indeed, are problematic not only for feminism but also for environmentalism. The Western human subject is no longer impermeable but exposed to worldly entanglements: "to dramatize oneself in place in this way is to critique the rational, disembodied Western subject's presumption of mastery or at least objectivity that is, supposedly, granted by detachment from the world" (2016: 5).

Alaimo's theorisation of a complete breakdown of boundaries may help to counter and reconceptualise dominant portrayals of the Anthropocene that tend to abstract the human species from the material realm:

> [t]o think of the human species as having had a colossal impact, an impact that will have been unthinkably vast in duration, on something we externalize as "the planet," removes us from the scene and ignores the extent to which human agencies are entangled with those of nonhuman creatures and inhuman substances and systems. […] The epistemological position of the "God's-eye view" that Donna Haraway critiqued in "Situated Knowledges" dominates many of the theoretical, scientific, and artistic portrayals of the anthropocene. Ironically, at the very moment that the catastrophes of the anthropocene should make it clear that what used to be known as nature is never somewhere else (even the bottom of the sea has been altered by human practices), the "conquering gaze from nowhere," the "view of infinite vision," the "God trick" of an unmarked, disembodied perspective reasserts itself. (2016: 144)

Prevalent visual depictions of the Anthropocene invite the viewer to zoom out of the planet – for example, through recurring satellite images that map the human influence

on Earth. The viewer enjoys a comfortable and disembodied perspective, outside the nature s/he has altered; moreover, through such scaling up, the agency and liveliness of all the more-than-human creatures vanish, and differentials of responsibility and harm are obscured. Alaimo, instead, proposes that we think of the Anthropocene subject as "immersed and enmeshed in the world" (2016: 157). To do so, she looks at oceanic depths, as they usually resist this flat mapping of the globe where the surface of the seas is merely revealed. Submerging into the depths of the ocean may provoke recognition of human life as always entangled with the more-than-human world. Due to human-driven increased levels of carbon dioxide in the atmosphere, more CO_2 is dissolving into the ocean, causing a decrease in the ocean's pH, and leading to a suite of changes known as ocean acidification – one of the nine planetary boundaries, as explained in chapter 1. One of the side effects of increasingly acidic seas is that the shells of sea animals is dissolving. Descending in the anthropogenically acidified seas, rather than rising above "the perfect, ethereal expanses of the cosmos" (166) may help us to think of the Anthropocene subject as enmeshed in the world: "contemplating your shell on acid dissolves individualist, consumerist subjectivity in which the world consists primarily of externalized entities, objects for human consumption. It means dwelling in the dissolve" (168). In addition, Alaimo suggests that the figuration of the dissolve might be helpful in terms of social justice and climate justice: as a "vivid image of slow violence, it could be taken up as a mode of dis/identification and alliance for particular groups of people who are contending with other sorts of invisible environmental harm" (166).

Finally, Alaimo proposes a radical departure from the concept of sustainability, considered by the author a far more technocratic and apolitical domain than environmentalism as a social movement from which the former has been developed in the last several decades. As for the concept of the Anthropocene, the epistemological stance of sustainability is one of "hyperseparation" linked to systems management and

technological fixes that will get things under control and project the problem out there, detached from the disembodied spectator. Again, sustainability "evokes an environmentalism without an environment, an ecology devoid of other living creatures" (176). One key example is the anthropocentric formulation of the 2030 Agenda's 17 SDGs.[33] The concept of "just sustainability," promoted by Julian Agyeman to integrate social and environmental justice into the sustainable development discourse, still ignores multispecies claims and sidelines nature as a static resource. While distancing epistemologies render the world as a human resource and offer a comforting sense of objectivity, "trans-corporeal subjects are often forced to recognize that their own material selves are the very stuff of the agential world they seek to understand" (174). Feminist situated epistemologies, therefore, can help to promote ecological thinking through a feminist critical analysis that does not necessarily take gender as a category per se – and this is one of the most innovative features of feminist new materialism.

Some of the concerns of feminist new materialism are shared by posthuman feminism, which critiques the universalising notion of the human subject – the idea of "Man" as the alleged "measure of all things" – and proposes a critical posthumanism that pays special attention to subjectivity, embodiment, and relationality. In her latest book *Posthuman Feminism*, Rosi Braidotti unravels the deep imbrications between feminism and posthumanism, a philosophical perspective developed over the late twentieth century seeking to rewrite the very definition of being human. Once again, what emerges from her critical cartography is that "mainstream posthuman scholarship has neglected feminist theory, while in fact feminism theory is one of the precursors of the posthuman turn" (2022: 2) – as this whole chapter on feminist environmental humanities has attempted to elucidate: that the human is not neutral nor universal had already been voiced by feminist (but also postcolonial and race) thinkers. Braidotti is well aware that

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[33] See Torpman Röcklinsberg 2021.

embracing the posthuman predicament might be difficult for those who have never been considered fully human – women, LGBTQ+ people, the colonised, Indigenous peoples, people of colour and a multitude of non-Europeans who have had to fight for the basic right to be considered and treated as human" (6) – but she also claims that what is countered by critical posthumanism is precisely this exclusionary notion of the human.[34] Moreover, the critical perspectives of those who have always been deemed less than human are of the utmost importance in what she defines as the "posthuman convergence" (3), the present historical condition of the Anthropocene that challenges the status of the human at the social, environmental, and technological level. The emblem of this posthuman convergence is the current Covid-19 pandemic, which has not only exposed increasing structural injustices, but has also foregrounded "the importance of human/non-human interaction and its destructive, as well as generative, potential" (4). This "extraordinary period" (5) we are going through, she adds, sees the proliferation of voices and perspectives of numerous others: the agency of non-human forces and the idea of a living planet have become more and more manifest, and global revolts and mass mobilisations against patriarchy and structural racism – such as the #MeToo and #NiUnaMenos movements and Black Lives Matter – continue to fight at a global level. The current climate, political, social, and pandemic crises have undoubtedly made visible a profound planetary rupture; however, "[a]s these multiple crises unfold,

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[34] Starting from the premise that Indigenous people live across 90 countries and therefore "one cannot generalise about their epistemological and ethical approach" (91), Braidotti suggests that there is a theoretical point of encounter between ecofeminism and Indigenous thought, as they both position humanity as entangled with the living environment. It should be stressed, however, that Indigenous scholars (such as Zoe Todd) have stressed that the "trendy and dominant Ontological Turn (and/or post-humanism, and/or cosmopolitics)" (2016: 7) is yet another Euro-Western academic narrative that is discovering "what many an Indigenous thinker around the world could have told you for millennia: the climate is a common organizing force!" (9). Whilst Todd acknowledges that some elements of posthumanism might be promising tools in the decolonial project, the Métis anthropologist and scholar posits that Indigenous bodies are erased within lecture halls in Europe and that Indigenous cosmologies and knowledge systems are used in the European and North American academy "while ignoring the contemporary realities of Indigenous peoples vis-à-vis colonial nation-states, or the many Indigenous thinkers who are themselves writing about these issues" (15-16).

the politics of sexualised, racialised, naturalised minorities – the 'others' – are moving centre stage, pushing dominant 'man' (or *Anthropos*) off-centre" (5). The following chapters of this dissertation will draw on the radical and subversive spark of feminist environmental humanities – or, using Nancy Tuana's words, "ecologically informed intersectionality" (2019: 3) – to propose a reading of several examples of anglophone literary expressions that make this time of crisis the object of writing, attempting to shape alternative futures based on a more egalitarian planetary consciousness.

3. Climate Change in Literature and Literary Studies: from Ecocriticism to the Climate Change Novel

Ecocriticism: Feminist and Postcolonial Perspectives

This chapter introduces ecocriticism and the concept of literature as cultural ecology from a feminist and postcolonial point of view. Giving an account of the emergence of climate change criticism alongside ecocriticism, it claims that a new canon of climate change fiction has been developing in the last two decades and explore its main features. In its conclusion, I suggest that the absence of climate justice from several novels that are considered to be part of this canon and their one-dimensional representation of gender, race, and the other-than-human, require alternative ways of responding to the climate change crisis.

Introduction to Ecocriticism

Ecocriticism emerged in the late 1980s and early 1990s as a crucial part of the mission of the environmental humanities and a new subfield of literary and cultural enquiry investigating the global ecological crisis: as such, it examines the ways in which we interact with and construct the environment. Also known as environmental criticism, it is devoted to the investigation of the relations between literature and the environment from an interdisciplinary point of view. After more than two decades since it emerged as an academic field, ecocriticism has moved from the margins to the mainstream of literary studies, turning into one of the most promising paradigms in the humanities. The Association for the Study of Literature and Environment (ASLE) was founded in the US

in 1992, followed by several international affiliate organisations in the UK and Ireland, Canada, India, Japan, Korea, Taiwan, Australia and New Zealand, and Europe.

As for the term literary ecology, which will be examined alongside ecocriticism in the following pages, it was first introduced by Joseph W. Meeker in *The Comedy of Survival: Studies in Literary Ecology* (1972) as "the study of biological themes and relationships which appear in literary works. It is […] an attempt to discover what roles have been played by literature in the ecology of the human species" (9). Following Meeker, William Rueckert coined the term ecocriticism as early as 1978 in his article "Literature and Ecology: An Experiment in Ecocriticism," denoting it as "the application of ecology and ecological concepts to the study of literature" (107). It was only in the 1990s that ecocriticism achieved visibility as an academic field and expanded as a literary and cultural theory, largely due to the publications of American literature scholars such as Cheryll Burgess Glotfelty, Scott Slovic, Glen Love, Patrick Murphy, and Lawrence Buell. Taking an ecocritical approach meant asking questions regarding tools and methods in humanities research on ecological issues, in order to promote an ecological education that was not confined to the techno-scientific sphere: to what extent can the study of culture and cultural products foster an ecological awareness of the interconnections of living things with each other and with the environment? Such questions involved a rethinking of the purposes of teaching literature: ecocriticism, indeed, redefines literature as an ethical criticism and pedagogy – paralleling other forms of literary and cultural theory that emerged a few decades before, e.g. feminism, postcolonialism, and critical race studies. In fact, one of the most famous definitions of ecocriticism, given by Glotfelty, compares it with feminism and Marxist criticism, denoting the field as

> the study of the relationship between literature and the physical environment. Just as feminist criticism examines language and literature from a gender-conscious perspective, and Marxist criticism brings an awareness of modes of production and

economic class to its reading texts, ecocriticism takes an earth-centered approach
to literary studies. (1996: xviii)

A partial overlapping between ecocriticism and feminism is also suggested by Lawrence Buell to underscore how both fields should be understood as a "concourse of discrepant practices" (2005: 11) and lack a universal definition:

It lacks the kind of paradigm-defining statement that, for example, Edward Said's *Orientalism* (1978) supplied for colonial discourse studies. More like (say) feminism in this respect, ecocriticism gathers itself around a commitment to environmentality from whatever critical vantage point. A map of feminism must recognize fault lines dividing historical from poststructuralist feminisms, western traditions of women's studies from 'womanist' approaches to the study of dispriviledged women of color; and must recognize how these differences interact with other critical genealogies, such as postcolonial theory in the case of womanist revisionism. Broadly speaking, this is the kind of direction in which literary ecotheory has been evolving, toward increasing acknowledgement of ecocultural complexity after an initial (though by no means universally) thought to have been too narrowly focused. (11)

Despite this initial absence of a unifying definition, its origins have a distinct root in the American nature writing tradition – defined as fiction (prose or poetry) about the natural environment – identifiable with Henry David Thoreau and John Muir, among others, in wilderness narratives, and in romantic nature poetry. Compared to its regional and limiting beginnings and to the initial Anglo-American dominance (Garrard 2014: 4), ecocriticism has undergone significant transformations in the past few decades, and its existing canon has been challenged by more and more counter-voices. Today, as Scott Slovic has pointed out, "there is not a single literary work anywhere that utterly defies ecocritical interpretation" (2000: 160). Multiple theoretical challenges have fostered an extension and diversification of genres and epistemic scopes, opening the field to conversations with both non-Western ecological knowledge cultures and theoretical perspectives that emerged in continental Europe. The addition of 'culture' to the name of the European branch EASCLE (European Association for the Study of Literature,

Culture and Environment), to give one example, indicates a "more general transatlantic difference of emphasis on the cultural, textual, and semiotic *mediation* rather than the immediate accessibility of ecological issues" of its American counterpart (Zapf 2016: 4). Furthermore, gender, race, and class have become important ecocritical categories, and some of the emerging directions in ecocriticism give an account of embodiment, materiality, queerness, hybridity, technology, and many more interrogations of the human (Garrard 2014: X). These developments testify that ecocriticism may help "return a much-needed sense of the indispensable role and importance of the humanities" to counter the "economic utilitarianism" and the "empirical-quantitative models of science" of the neoliberal university (Zapf 2016: 1).

Conceptualising the Field through Metaphors: the Wave and the Rhizome

To define the evolution of ecocriticism two metaphors have been employed: the wave and the rhizome. Lawrence Buell first used the wave metaphor in *The Future of Environmental Criticism* (2005), where he identifies two waves of ecocriticism. The first wave, dominating the 1990s, focused on nature writing, nature poetry, and wilderness fiction, on place as a central category of analysis, on non-fictional writing, preferred over fictional, on the authority of ecological science, and on a canon of Anglo-American texts. Speaking for nature, as well as celebrating nature, rather than querying the very concept, were among its primary concerns.

Second wave ecocriticism, emerged at the turn of the twenty-first century, was deeply influenced by various directions of cultural studies and by social-ecological movement and is characterised by a more sceptical relationship with the natural sciences, a resignification of the term 'environment', whose meaning has been expanded to include both nature and the urban, an extension of its corpus of relevant texts from nature writing to multiple other genres and media, and a revision of the canon from multiple critical

perspectives such as ecofeminism and environmental justice. The emphasis on environmental justice issues, as well as on environmental justice literary criticism – which considers literature as a tool to multiply perspectives and to underscore the inextricable link between environmental degradation and social issues – is significant here: as suggested by Mohammad Ataullah Nuri, "the attention to the writings of the nonwhite writers and concern for 'the flight of racial minorities' of the second wave ecocriticism gradually led itself to a fusion between ecocriticism and postcolonialism" (2020: 8). This socio-centric approach to environmental literary studies, moreover, paves the way for the intersectional feminist analysis that characterises this dissertation.

In the summer 2009 special issue of *MELUS: Multiethnic Literature of the United States*, Joni Adamson and Scott Slovic talked for the first time about the possibility of a third way of ecocriticism, which "recognizes ethnic and national particularities and yet transcends ethnic and national boundaries; this third wave explores all facets of human experience from an environmental viewpoint" (6-7); environmental justice and ecocriticism's alliances with postcolonialism, material feminism, queer studies, and science studies became more visible trends in the field; a new emphasis was placed on material ecocriticism and post-anthropocentric thought; finally, as the focus on national literatures opened up to a trans-cultural and comparative framework, the scale of the ecocritical project widened from the local and regional to the planetary, as "epitomized by global challenges such as climate change and the Anthropocene" (Zapf 2016: 6).

The metaphor of the waves, however, has been deemed problematic by both feminist and postcolonial scholars. As noted by Greta Gaard, important contributions such as ecofeminism are missing from Buell's conceptualisation of the waves of ecocriticism. Not only feminist theories have shaped the environmental humanities' soil in multiple ways, as suggested in chapter 2, but ecofeminisms and feminisms of colour have predated the origin of ecocriticism as an academic field: notwithstanding, the wave metaphor erases

them from the history of criticism. The erosion of the feminist foundation of a discipline, once again, is more an intentional marginalisation of feminist and ecofeminist literary perspectives than a mere matter of citation:

> These omissions in ecocritical scholarship are not merely a bibliographic matter of failing to *cite* feminist scholarship, but signify a more profound conceptual failure to *grapple with the issues* being raised by that scholarship as *feminist*, a failure made more egregious when the same ideas are later celebrated when presented via non-feminist sources. (Gaard 2010: 3)[35]

On a similar note, Elizabeth DeLoughrey and George Handley, in their introduction to *Postcolonial Ecologies* (2011), warn against "an implicit production of a singular American ecocritical genealogy" and propose instead to reconfigure ecocriticism in "broader, more rhizomatic, terms" (15). The rhizome is, in fact, another metaphor through which the genealogy of ecocriticism has been traced, particularly in the contexts of postcolonial and postmodern ecocriticism (Oppermann 2010). Stemming from the theories of Gilles Deleuze and Felix Guattari, the rhizome is an evolving term used to describe a non-hierarchical, a-centred web of interrelated agencies. As opposed to an arborescent conception of knowledge, such a model is not based on the ability to relate all knowledge to a single set of influences, nor to offer transcendental truths, but gives account to a number of connections which offer multiple opportunities for the creation of

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[35] Gaard further suggests that the 'wave' narrative proposed by Buell "inadvertently appropriates at the same time as it erases feminist narratives of feminist theoretical and historical developments" (2010, 3). The metaphor of the waves, indeed, has been widely used to distinguish between liberal feminism – described as feminism's first wave – the feminisms that emerged from the social movements of the 1960s – the second wave – and the post-1990s intersectional feminisms of hybridity – the third wave. There have been multiple objections, however, to these summarising accounts of the history of feminism: a first one critiquing the definition of feminist history exclusively in terms of white women's philosophies, erasing the activities and histories of African American, Chicana, Indigenous, and Asian-American women; and a second one pertaining the erasure of ecological feminism from the history of feminism. As Gaard writes, "like feminisms developed by women of color, ecological feminism is neither a second- nor a third-wave feminism; it has been present in various forms from the start of feminism in the nineteenth century, articulated through the work of women gardeners, botanists, illustrators, animal rights and animal welfare advocates, outdoors-women, scientists, and writers" (4).

new ideas. In other words, it prefers stems and flows over trees and roots. As such, it provides a better explanation than that of the wave narrative for the multiple trajectories of ecocriticism and for its multi-faceted, transnational, and transdisciplinary discursive formation.

Postcolonial and Feminist Ecocritical Approaches

As fields concerned with the ways in which literature and cultural criticism can have an impact on the social reality, ecocritical, feminist, and postcolonial literary criticism have much in common. The emergence of all these fields was indeed characterised by a necessity to moor the humanities in the material world and to counter flawed views of social and political realities. Ecocriticism came out to investigate the relationship of human beings to their environment, to expose the anthropocentrism of many of these depictions, and to propose alternative ways of being in and representing the world (Banerjee 2016: 195). Feminist literary criticism, contending that there is no such thing as an objective and neutral approach to literature, has pointed out a need for a different approach and methodology aimed at resisting the displacement felt by women in viewing images of themselves in male literature; on a similar note, postcolonial literary criticism emerged to translate political independence from former European colonies into a cultural and literary practice, "writing back" to the literary canon of the colonial centre (Rushdie 1982; Ashcroft *et al*. 1989).

As for the alliance between environmental and postcolonial studies, Pablo Mukherjee has stated that it should be rather obvious, as

> any field purporting to theorise the global conditions of colonialism and imperialism (let us call it postcolonial studies) cannot but consider the complex interplay of environmental categories such as water, land, energy, habitat, migration with political or cultural categories such as state, society, conflict, literature, theatre, visual arts. Equally, any field purporting to attach interpretative importance to

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environment (let us call it eco/environmental studies) must be able to trace the social, historical and material co-ordinates of categories such as forests, rivers, bio-regions and species. (2006: 144)

Such overlapping and interacting positions, however, have remained submerged until recently: if postcolonialism, on the one hand, has often neglected the anthropocentric articulation of some of its key concerns, ecocriticism, on the other, has privileged in its origins the white male Western subject. At worst, ecocriticism has faulted non-Western societies for slowing down the academic narrative – led by Western ecocritics – about a planetary balancing of ecosystems. This narrative of non-Western neglect of the ecological dimension has been termed "Green Orientalism" by Larry Lohmann (1993), who draws from Edward Said's formulation of Orientalism, a concept describing a pervasive Western attitude to view Eastern societies as exotic, primitive, and inferior. Lohmann ascribes such green Orientalism to some deep ecologists, field biologists, and US preservationists, who have been said to deem nature "as non-resource or as access-controlled wilderness preserve patrolled by properly-credentialled park rangers" (203) and to privilege the preservation of 'pristine' wilderness over the concerns of Indigenous people inhabiting protected areas around the world. On a similar note, Sawyer and Agrawal have defined "Environmental Orientalism" the trend in conservation discourses that views Third World overpopulation as one of the primary threats to global ecological stability (2000: 71). In other words, what is outside the normative subject of ecocriticism is accused of being ecoprimitivist. This same concept has acquired yet another meaning, freezing Native Americans in the primitivist stereotype of the 'savage' but inherently ecological Indigenous dwelling in harmony with nature.

What emerges here is a fundamental difference – or "a degree of philosophical antagonism" (Ross and Hunt 2010: 4) – between ecocriticism and postcolonialism, with the former assuming the latter to be suspicious of ecological discourse and the latter blaming the former for furthering the colonialist project. In 2005, Rob Nixon outlined four

major zones of friction between the two disciplines: postcolonial scholars emphasise hybridity, displacement, cosmopolitanism, and work to recover history; ecocriticism, on the other hand, focuses on purity, place, nationalism, and aims at sublimating or transcending history (235). Furthermore, ecocriticism's primary interest lies in wild or rural settings, as opposed to the urban and metropolitan ones examined by postcolonialism – even though so-called second wave ecocriticism has expanded its focus to include both the natural and the urban environment, as outlined before. Finally, the ecocritical project tends to imagine a much more harmonious relationship between the local and the global if compared to the disruptive one stressed by postcolonial perspectives (O'Brien 2001: 143).

It is only recently that a possible convergence between ecocriticism and postcolonialism has been addressed by a number of works, including the highly cited up to now *Postcolonial Ecocriticism: Literature, Animals, Environment*, co-authored by Graham Huggan and Helen Tiffin (2010), and *Postcolonial Ecologies: Literatures of the Environment*, co-edited by Elizabeth DeLoughrey and George Handley (2011). Huggan and Tiffin find a starting place for these alliances in Alfred Crosby's work on ecological imperialism (1973; 1886), in which the British environmental historian argues that a major aspect of European imperialism has been the introduction of animals, plants, and diseases that have starved the local flora and fauna out of existence, causing a catastrophic environmental impact. Among the forms of ecological imperialism, Huggan and Tiffin include biocolonisation (namely the control of genetic and agricultural resources) environmental racism (the exposure of marginalised minority ethnic groups to environmental injustices), and Val Plumwood's broad understanding of "hegemonic centrism," stressing that in the very ideology of colonisation Eurocentrism and Anthropocentrism are inseparable. While Plumwood 's critique of mutually reinforcing

dualisms has been widely discussed in chapter 2, the concepts of ecological imperialism and environmental racism will be further explored over the ensuing chapters.

While acknowledging the scholarship like that of Huggan and Tiffin and the undoubted influence of Crosby's work on ecological imperialism, Ross and Hunt identify the term 'justice' as that which "provides a space for theoretical work bridging and merging ecocriticism and postcolonialism" (2010: 3). In their view, postcolonial green – or postcolonial ecocriticism – develops from the recent ecocriticism's emphasis on environmental justice and the inextricable links between social issues and environmental degradation.[36]

To sum up, what really brings together ecocriticism and postcolonialism is the ethical and political concern at the centre of their enquiries; to use Buell's words, their being "deeply polemical" (2005: 97). Similarly, the crossover field of postcolonial ecocriticism involves an "aesthetics committed to politics" (Cilano and DeLoughrey 2007: 84), where commitment is expressed not only through a physical struggle but also through epistemic decolonisation. Finally, as proposed by Huggan and Tiffin, this dissertation conceives postcolonial ecocriticism "as a particular *way of reading*, rather than a specific corpus of literary and other cultural texts" (2010: 13).

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[36] Banerjee further claims that the work of Nigerian writer and activist Ken Saro-Wiwa stands as a blueprint and precursor for environmental justice ecocriticism and postcolonial ecocriticism, in its exposure of the ecological genocide perpetrated by the Nigerian government and Shell and Chevron oil companies. It is also worth noticing that Rob Nixon has suggested a connection between the (initial) hegemony of Anglo-American perspectives in the field of ecocriticism and the failure of the same Western ecocriticism to intervene in Saro-Wiwa's execution: as reported by DeLoughrey and Handley, "while this ecocritical turn in literary studies has produced an innovative body of scholarship, including an international conference association and multiple journals, 11 scholars have lamented that the dominant discourse of the field continues to be marked by an Anglo-American and a national framework rather than engaging broader contexts. In fact, in commenting on this celebratory *New York Times* article, Rob Nixon points out that all of the two dozen or so 'green' authors cited are American. He finds this to be a peculiar emphasis since it was written precisely at the moment when the international community was mobilising to prevent Ken Saro-Wiwa and his Nigerian colleagues from being sentenced to death for their resistance to what the Ogoni leader called 'ecological genocide' perpetuated by oil companies in the Niger Delta" (2011: 9-10).

Coming to the possible convergence between ecocriticism and feminist literary criticism – or, again, the crossover discipline of feminist ecocriticism, it is considered to be a prominent feature of second wave ecocriticism. As argued throughout this chapter and in the previous one, however, feminist theories have shaped environmental humanities' and ecocriticism's soils in multiple ways, predating the emergence of both disciplines. Feminist ecocriticism investigates the relationship between literature and the environment shedding light on the linkages between the oppression of women and the exploitation of the environment. Coming together with postcolonial ecocriticism, it would emphasise that the culture/nature dualism that aligns women with nature is also interwoven with notions of race, class, caste, colonialism and neo-colonialism. This multifocal lens often encompasses an intersectional analysis, broadening the woman/nature connection to focus on gender as a social structure causing inequalities: as noted by Kings, indeed, in recent times, ecofeminists have "explicitly invoked intersectionality throughout their work and used it to promote inclusivity and to explore the ways in which intersectional analysis can improve upon ecofeminist thought" (2017: 72). Following Bedford (2018), I further suggest that feminist ecocriticism aligns itself with postcolonial and anti-capitalist readings to suggest alternatives and resistance to paradigms of individualism and instrumentalism, proposing a vision of the self that is interconnected with the web of life; besides, it makes the category of gender central to its analysis in ways postcolonialism and anti-capitalism are not always committed to.

Literature as Cultural Ecology

This dissertation, finally, draws on Hubert Zapf's work on ecocriticism and cultural ecology (2016), which considers literature itself as a potent form of cultural ecology. What distinguishes his ground-breaking *Handbook of Ecocriticism and Cultural Ecology* from other survey volumes on ecocriticism is its assertion that it is not enough for ecocriticism

to deal with the relations between literature and external natural ecosystems: what this burgeoning field needs to explore is also – and most importantly – the "cultural ecosystems of language, literature, and other art" (4). Natural and cultural ecologies, the external landscapes and the inner ones produced by modern culture, need to be thought of together, without reducing them to each other. As noted by Zapf, contemporary ecocriticism encompasses multiple dimensions, among them the sociopolitical, the anthropological or ecopsychological, the epistemological, and the aesthetic ones. Besides considering the sociopolitical dimension of ecocriticism, that which examines literary texts in terms of their ability to raise ecological awareness and change social and political practices – including gender, class, and environmental justice issues – of the utmost importance, this dissertation also pays special attention to the aesthetic dimension, exploring the ways in which fictional texts can be "of relevance to an ecologically redefined model of humanity and of human culture" (135). This means overcoming ecocriticism's initial resistance to theory and highlighting instead "the mutual illumination of texts by theoretical models and of theories by textual analysis." In this way, he adds, "both the ecocritical potential of theory and the ecocultural potential of texts can be more succinctly validated" (5). Such increasing importance of literary and cultural theory in contemporary ecocriticism has rendered the field one of the most prominent sources of theoretical development in the humanities.

Literature as a source of ecological knowledge "breaks up ossified forms of language, communication, and ideology, symbolically empowers the marginalised, and reconnects what is culturally separated" (Zapt 2016: 147), adopting both a deconstructive and a reconstructive perspective. It operates through a combination of three discursive modes: a culture-critical metadiscourse, deconstructing hegemonic ideologies and dominant systems of power, an imaginative counter-discourse, which gives voice to excluded and

marginalised perspectives,[37] and a reintegrative interdiscourse, bringing together the dominant system and its exclusions in a "new, both conflictive and transformative way," and therefore contributing to the "constant renewal of the cultural center from its margins" (Zapf 2016: 148).

Climate Change and the Contemporary Novel

From Ecocriticism to Climate Change Criticism

In 2011, Adam Trexler and Adeline Johns-Putra published an article providing an overview of climate change in literature, with a focus on Anglophone fiction: what emerged from their review was a lack of engagement with climate change literature in the field of ecocriticism. Ecocriticism, indeed, does not necessarily subsume all literary criticism about climate change, but it is rather "a set of attitudes toward the physical environment" and, therefore, "a somewhat more specific grouping of literary critics" (2011: 189). A significant step taken by ecocriticism in addressing climate change has been determined by the publication of the ground-breaking text *Sense of Place and Sense of Planet* by Ursula Heise in 2008, which emphasises that what is crucial for environmental ethics is a sense of planet, more than a sense of place.

In more recent years, Johns-Putra (2016) has acknowledged that climate change is no longer a marginal topic in literature, but a subfield of literary studies and a genre of fiction in its own right; a genre, though, that is fluid in nature. Anthropogenic climate change, indeed, can be found in different genres, among them fantasy, thriller, novels that are not identifiable with a given genre and can be set in the present, and so on. Most of these novels, however, are characterised as dystopian or post-apocalyptic (two genres given

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[37] Zapf provides multiple examples, among others the white whale of *Moby Dick* as a non-human voice countering the anthropocentric dominance of the novel, and the child in McCarthy's *The Road*, "whose instinctual altruism and ethical sensibility represent an almost utopian counterpoint to an infernal death-in-life world of biophobia and omnipresent destruction" (148).

to much cross-fertilisation) with climate change as part of a futuristic (again, both dystopian and/or post-apocalyptic) setting.

At the same time, states Johns-Putra, analyses of climate change in literature have proliferated, with the topic appearing as "a major strand in the regular meetings of ecocritical scholarly societies" (272), such as the already mentioned ASLE and EASCLE, and the Association for the Study of Literature and Environment in the UK and Ireland (ASLE-UKI). Furthermore, a new canon of climate change fiction appears to be developing, with novels by Maggie Gee, Barbara Kingsolver, Cormac McCarthy, Ian McEwan, and Kim Stanley Robinson standing as key texts (272). Surveys on climate change novels and their overriding themes are appearing more and more often, like Adam Trexler's *Anthropocene Fictions* (2015) and Timothy Clark's *Ecocriticism on the Edge: The Anthropocene as a Threshold Concept* (2015). While these texts will be explored at length over the ensuing chapters, it is worth noting here that both Trexler and Clark call, respectively, for an adaptation of the existing formal conventions of the contemporary novel to the transformations brought by climate change and for a new way of critiquing these novels. Other ecocritical analyses posit that climate change novels – as well as ecocritical scholars – can play an active and activist role in educating readers on how to cope with climate change (Murphy 2014; Rigby 2014, 2015; Adamson 2014;); others stress the pedagogical stance of ecocriticism, a field that can invite students to ethical reflections about the complexities of climate change (Gabriel and Garrard 2012; Sitter 2014). Johns-Putra further suggests that climate change novels can contribute to a deeper understanding of the environmental crisis by throwing into relief marginalised points of view, such as gender and postcolonial perspectives.

In a separate development, while early ecocritics often dealt with literary texts at the expense of literary theory, the field of literary or critical theory has started to come to terms with climate change, developing a new field termed climate change criticism or

critical climate change. Drawing from 20th- and early 21st-century continental philosophy, it makes use of approaches like deconstruction and analysis of discourse to emphasise the "contingent, shifting, and slippery quality" of climate change.[38] Moreover, it suggests that "the contingency and slipperiness that many literary theorists have long argued are part of a profound but unrecognized condition of our existence are now an unavoidable and undeniable part of our day-to-day lives, thanks to climate change" (Johns-Putra 2016: 275), and therefore uses climate change to scrutinise contemporary cultures.

Defining Climate Change Fiction

As stressed in the previous paragraph, the growing body of ecocritical analysis of climate change literature is framing a new canon of climate change fiction. The term climate fiction, often abbreviated as cli-fi in analogy with sci-fi (science fiction), is credited to journalist Dan Bloom, who coined the term in 2007. Growing up as a kid in the 1950s and 1960s in America, he remembers reading *On the Beach*, Nevil Shute's 1957 Cold War classic about a post-nuclear apocalypse and being shocked into awareness. What was needed, he pointed out, was a cli-fi equivalent to counter a lack of attention on climate change in popular consciousness.

Climate fiction is an – unsurprisingly – transcultural phenomenon, even though the majority of these works seem to originate in North America, Britain and Australia. What distinguishes it from other fictions exploring the aftermath of both natural and human-induced climate change is that it takes as a point of departure anthropogenic global warming. As such, these works are inscribed into an Anthropocene framework that

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[38] These theoretical examinations of climate change, she adds, "should not be confused with the kind of cultural relativism that would claim that anthropogenic climate change does not exist; rather, they usually argue that how climate change is understood is a result of a host of interlinked psychological, sociocultural, political, and linguistic factors (Johns-Putra 2016: 275).

emphasises the geological dimension of humanity's emissions of greenhouse gases (Andersen 2020: 5). Defining climate fiction as a literary genre is not an easy task, as it lacks the stylistic conventions and the plot formulas that characterise other types of genre fiction. Including both novels and films that borrow from different genres, it can be defined as "a distinctive body of cultural work which engages with anthropogenic climate change, exploring the phenomenon not just in terms of setting, but with regard to psychological and social issues" (Goodbody and Johns-Putra 2019: 2). Goodbody and Johns-Putra further suggest that the influences of genre fiction played an extremely important role in popularising early cli-fi and in making it marketable, as generic expectations of plot and character helped readers to explore the complexity of climate change; at the same time, however, these strategies might "distort or distract from the issue of climate change" (4). Representing climate change, indeed, can bring about several difficulties resulting from the vastness of its scale and the complexity of its causes and manifestations. Associated with these questions is the clash between the open-endedness of climate change and human tendency to "drive towards closure" (11); as suggested by Goodbody and Johns-Putra, indeed, the result can

> be that the depiction of the human drama takes precedence over that of ecological process, that the latter becomes a mere symbolic representation of a turning point in the protagonist's life, and the intractability of climate change is subordinated to the requirement for resolution of the conflict in order to satisfy the reader. For example, disaster narratives almost inevitably involve master plots of guilt and punishment, the quest for redemption, or romance, implying a degree of resolution which sits ill with the open-endedness of climate change. (11)

Climate change is perhaps the most dramatic example of what Timothy Morton calls "hyperobjects," "things that are massively distributed in time and space relative to human" (2013: 1). According to the eco-philosopher, hyperobjects are identified by a number of characteristics that presents remarkable challenges in terms of understanding: they are "viscous" (they adhere to any other object they touch), "non-

local" (they do not exist in a single place but they are rather distributed in time and place and they cannot be visualised in their entireties; therefore, a particular manifestation of the hyperobjects is not the hyperobjects itself), "phased" (they exist in a higher-dimensional space that exceeds the limited confines of human perception), and defined by "interobjectivity" (they are not experienced directly, but through the relationship they have among other objects). Climate change is an hyperobjects in so far as it exists on a scale that is too large for human perception: it is not possible to see it or touch it (we can experience meteorological conditions as they cause damage in specific places, but we cannot experience climate change). How do we represent – let alone fix – something that we cannot fully understand? As suggested by Amitav Ghosh in *The Great Derangement: Climate Change and the Unthinkable* (2016), if the scale of climate change makes it difficult to grasp, it follows that global warming might be challenging to capture in literary language as well: "Let us make no mistake: the climate crisis is also a crisis of culture, and thus of the imagination," he writes at the beginning of the book (19). Drawing from Dipesh Chakrabarty's essay "The Climate of History," which observes that humanities scholars must revise many of their fundamental assumptions in this epoch of anthropogenic climate change, Ghosh points out that, in order to represent the "unthinkable", contemporary literature will need new genres, structures, and words capable of departing from familiar narrative schemes and techniques that centre on an individual empowered protagonist and push climate change into the background. Ghosh's work on the irrepresentability of climate change, which will be further explored in Chapter 5 of this dissertation, is part of a growing body of analysis that approaches the Anthropocene from a cultural and narrative angle, stressing that the conventional expectations of the novel must be revisited.

To give a few examples, in their influential analyses of climate fiction, both Timothy Clark (2015) and Adam Trexler (2015) posit that the traditional conventions of the novel might

be ill-equipped to represent the complexity of climate change; such negative tension, however, can be read as an opportunity to innovate the novel, as the following chapters will suggest. This call for a different framing of disasters through the stories we tell about them also resonates with Kate Rigby's *Dancing with Disaster: Environmental Histories, Narratives, and Ethics for Perilous Times*, published in 2015: the stories we tell ourselves, she suggests, "will shape how we prepare for, respond to, and recover from increasingly frequent and frequently unfamiliar forms of eco-catastrophes" (10), and can therefore foster a thorough reflection on the ethical implications embodied in our responses to the aftermath of environmental disasters; such stories, however, can "obscure as much as they reveal" (10). Among the stories that obscure, she places the concept of 'natural disaster': pairing the word 'disaster' with the word 'natural', indeed, runs the risk of reinforcing the hierarchical dualism of nature and culture by attributing the disaster to "an implicitly violent and hostile Other" (19), veiling the reality of human responsibility for today eco-catastrophes, and masking the entanglement of human and non-human agencies.[39] If stories can determine responses that can either maintain current systems, relations, and practices, or enable a transformative emergence of new

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[39] Several scholars have indeed critiqued the hyperseparation of nature from culture that characterises modernity (see Latour 1993 and the concept of "natureculture" elaborated by Donna Haraway to describe entangled multispecies histories: "My kinships are made up of the florid machinic, organic, and textual entities with which we share the earth and our flesh. These entities are full of bumptious life, and it would be a serious mistake to figure them mainly anthropomorphically or anthropocentrically. All of the agencies, all of the actors, are not human, to say the least. Indeed, if in his potent little work Bruno Latour convinced me that *We Have Never Been Modern*, I firmly believe that we have never been human, much less man. […] There is no border where evolution ends and history begins, where genes stop and environment takes up, where culture rules and nature submits, or vice versa. Instead, there are turtles upon turtles of naturecultures all the way down. Every being that matters is a congeries of its formative histories […]" (2004: 1-2).

ways of dwelling in these times of trouble, then "alternative ways of speaking about, and responding to, the calamitous impacts of climate change are urgently required" (22).

Disaster Narratives and the Post-Political Condition of Climate Change

As for the multiple genre models of climate fiction, finally, Goodbody and Johns-Putra confirm that one of the most influential modes of writing has been the post-apocalyptic one, but their survey also encompasses detective stories, thrillers, the *Bildungsroman*, ecotopian narratives, techno-thrillers, satires, allegories, and so on. What is also worth mentioning with regard to its possible forms is that climate fiction has borrowed from multiple existing genres: more precisely, disaster narratives and post-apocalyptic fiction, the pastoral tradition, and science fiction; however, Axel Goodbody (2020) suggests that all these principal forms have limitations. On the one hand, using templates from popular fiction can facilitate the encounter with pre-defined readerships' expectations; on the other, using existing plot formulas and stylistic conventions runs the risk of imposing narrative closure to the problem of climate change.

Pastoral narratives, to start with, may encourage nostalgia for a golden age in the past, and, lamenting the inevitable and irreversible losses determined by climate change, may foster apathy. Implausible disaster narratives, on the other hand, may drive us not to take global warming seriously and exploit our fascination with violence, destruction, extreme suffering, and doomist framing, in what has been described as "disaster porn," "disaster pornography" (Recuber 2013, Atkin 2017)[40] or "climate porn" (Lowe 2006)[41].

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[40] Atkin points out that, according to several critics, such "doom-and-gloom is unpersuasive and discouraging. 'My own experience in speaking to public audiences is that doomsday stories such as this article are so depressing that people shut down and stop listening', Jennifer Francis, an atmospheric scientist at Rutgers, wrote in an email to me. 'If there is no hope, there will be no action, and goodness knows we need a lot more action to reign in greenhouse gas emissions right now'" (2017: online).

[41] As asked by Thomas Lowe: "Is this apocalyptic construction akin to 'climate porn'; purely a way to entice the audience, to sell books, papers and films with no real intention of persuading the masses to reform their behaviour and mitigate their effects upon the global climate?" (2006: 8).

One of the major problems with the climate change and the Anthropocene discourses, suggests Marco Malvestio in his recently published analysis of Anthropocene fiction (2021), is their tendency to represent the environmental crisis as a much more catastrophic phenomenon than it really is, or as denoted by an exceedingly visible form of catastrophism.

A similar critique of the unnecessarily apocalyptic scenarios envisioning the effects of climate change can be observed in Michael Svoboda's analysis of climate change on the screens (2016), where he provides an overview of some 60 films about climate change, attempting to go beyond *The Day After Tomorrow* (2004, directed by Roland Emmerich), the one which has received far more attention than any other fictional film on the same topic. Svoboda's analysis encompasses notably successful films, films made for television, and films shown at festivals or in art houses, and it is structured according to each film's major focus or theme: flooding and sea-level rise (such as *Waterworld*, 1995, and *Noah*, 2014), extreme weather events (such as *Twister*, 1996, and *Sharknado*, 2013), ice age (*The Day After Tomorrow*, 2004, *Ice Age 2020*, 2011, and *Snowpiercer*, 2014), melting poles (*Ice Age: The Meltdown*, 2006, and *Happy Feet 2*, 2011), famine and drought (*The Road*, 2009, *Interstellar*, 2014, and *Mad Max: Fury Road*, 2015), preclima(c)tic stress disorder (*Take Shelter*, 2011), and films united by the presence of a wilful opponent (like *Day Earth Stood Still*, 2008). Most importantly, he draws from Susan Sontag's frequently cited essay "The Imagination of Disaster" (1965) on science fiction films of the 1940s, 1950s and 1960s, which, she claims, "are not about science. They are about disaster" (213). As reported by Svoboda, "such films offer the guilty pleasure of watching compelling spectacles of destruction while addressing and allaying the widespread fears of the historical moment" (2016: 52); failing to engage in social criticism, they are the emblem of our "inadequate response" to the "most profound dilemmas of the contemporary situation" (Sontag 1965: 48). Svodoba goes on to suggest

that apocalyptic depictions of climate change like the ones we can observe in *The Day After Tomorrow* and *The Road* cast the environmental crisis in a post-political sphere where discussion is reserved to "experts, bureaucrats, and executives" and "choice is ideologically reduced to capitalism or chaos" (53).

In this post-political situation (Swyngedouw 2010), indeed, the political concerns of climate change – such as questions of uneven distribution of resources – are made invisible, and the environmental crisis is framed as merely a technocratic problem to be solved. Erik Swyngedouw lists four symptoms that characterise such condition: first, there is a widespread scientific consensus that climate change represents a real threat to human civilisation; in other words, scientists have been able to announce that the science is in, as did Al Gore in 2006 documentary *An Inconvenient Truth*. Second, climate change is often represented as a universal threat to humanity as a whole: as we are all potential victims and global warming is socially homogenising, there is no space for politics. Third, responses to the climate crisis take the form of "self-management, self-organization and controlled self-disciplining […] under the aegis of a non-disputed liberal-capitalist order" (223), where individuals are asked to accept personal responsibility rather than question systemic asymmetries that institutionalise environmental exploitation. Fourth, the post-political environmental condition is characterised by the continuous invocation of fear and apocalyptic imaginaries that disavow and displace social conflict and antagonisms.[42] Besides creating a sense of emergency, apocalyptic

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[42] Sherilyn MacGregor posits that these narratives of "natural disasters, chronic resource shortages, global pandemics and perpetual war" are "not merely the stuff of science fiction" (2014: 621) but they are employed in UN conferences and grassroots organisations: one could look at "Please Help the World," the film chosen for the opening ceremony of the United Nations Climate Change Conference 2009 (COP15) in Copenhagen, depicting a fictional Scandinavian girl having a nightmare about an Earth wreaked by climate change. See: https://www.youtube.com/watch?v=NVGGgncVq-4 (accessed: April 26, 2022). One of the most frequent ways of presenting climate change is through the mobilisation of apocalyptic and surreal imaginaries: consider, for example, real-life drone footage of the orange sky over San Francisco filmed by resident Terry Tsay during 2020 California wildfires: the footage went viral after it was combined with music created for the 2017 movie *Blade Runner 2049*, with real climate change

climate narratives cast the relationship between human and non-human natures as one of antagonism, with nature as a threatening force retaliating against human beings. As such, Sherilyn MacGregor has suggested that "the dominant framing of climate change has produced a depoliticising view of nature as the enemy" (2014: 621). Finally, as suggested by MacGregor (2013) and Neimanis *et al.* (2015), the effects of this post-political condition are also importantly gendered: with the dominant climate discourse taking attention away from questions of power and social difference, environmental issues that are not immediately about carbon are sidelined and marginalised.

Science Fiction in the Anthropocene

As stressed in the previous paragraphs, the representation of climate change through templates taken from disaster narratives has been criticised from many quarters. Axel Goodbody adds science fiction to the other genres of popular fiction that impose a one-dimensional and formulaic interpretation of the climate crisis. Science fiction novels that centre on this thematic, he claims, "tend to imply human ingenuity will save the day" (8). A different but nonetheless harsh critique of climate change science fiction comes from Ghosh's *The Great Derangement*: lamenting the absence of climate change within the landscape of literary fiction, he argues that

> When the subject of climate change appears in these publications, it is almost always in relation to non-fiction; novels and short stories are very rarely to be glimpsed within this horizon. Indeed, it could even be said that fiction that deals with climate change is almost by definition not of the kind that is taken seriously by serious literary journals: the mere mention of the subject is often enough to relegate a novel or a short story to the genre of science fiction. It is as though in

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looking scarier than doomsday sci-fi scenarios. See:
https://www.youtube.com/watch?v=x_m9TUP_t_Y (accessed: April 26, 2022).

the literary imagination climate change were somehow akin to extraterrestrials or interplanetary travel. (2016: 15).

As the cited paragraph suggests, some people still consider that science fiction does not fall within "serious" genres.[43] Perhaps, as suggested by Carmen Concilio's reading of Ghosh's essay, the problem lies with the labelling of literary genres according to hierarchies and the consequent exclusion of some of them from mainstream literature and its market (2017).

And yet, posits Gerry Canavan in his anthology of ecology and science fiction *Green Planets*, co-edited with Kim Stanley Robinson, it cannot be denied that "we find ourselves living in science fictional times" (2014: ix). Although cars still don't fly, most features of science fiction have "colonized the rest of our reality," as put by science fiction author William Gibson (2007: online). Such science fictionalisation of the present is particularly evident in the Anthropocene discourse, which frequently adopts the language of science fiction to imagine the possible consequences of human impact on the planet's climate and ecosystems. Canavan provides multiple examples, from Dutch scientist Paul Crutzen, whose popularisation of the term Anthropocene "takes up the cosmic viewpoint native to SF to imagine the future scientists who will uncover the scant evidence of our existence on a long-deserted, post-human Earth" (Canavan 2014: x), to American biologist Rachel Carson, who famously began her book *Silent Spring* – which warned of the dangers of synthetic pesticides such as DDT, detailing how they entered the food chain – with the cautionary tale "A Fable for Tomorrow." The first chapter of what became the most influential book of the modern environmental movement is indeed set in a fictional small town somewhere "in the heart of America," a vibrant and prosperous place where everything flourished and human and non-human life seemed to live in harmony.

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[43] Consider, for example, how Margaret Atwood defended her *MaddAddam Trilogy* suggesting that it is speculative fiction rather than science fiction, as it is not set in outer space and is not characterised by monsters and spaceships but imagines a future that could really happen.

All of a sudden, "a strange blight crept over the area and everything began to change" (Carson 1962: 1): people started becoming sick, animals died, birds disappeared, flowers and trees no longer bloomed. In other words, spring was silenced. This "shadow of death" has not been emanated by an external enemy but is the result of human's reckless use of pesticide: "no witchcraft, no enemy action had silenced the rebirth of new life in this stricken world. The people had done it themselves" (1). This fictional tale does not look like fiction at all:

> This town does not actually exist, but it might easily have a thousand counterparts in America or elsewhere in the world. I know of no community that has experienced all the misfortunes I describe. Yet every one of these disasters has actually happened somewhere, and many real communities have already suffered a substantial number of them. A grim specter has crept upon us almost unnoticed, and this imagined tragedy may easily become a stark reality we all shall know. What has already silenced the voices of spring in countless towns in America? (1)

Another notable example is *The Collapse of Western Civilization: A View from the Future* by Naomi Oreskes and Erik M. Conway, a scientific essay on climate change which is framed as a science fiction story. Set in 2393, it imagines how a historian would write about this century if we keep ignoring climate science:

> science fiction writers construct an imaginary future; historians attempt to reconstruct the past. Ultimately, both are seeking to understand the present. In this essay, we blend the two genres to imagine a future historian looking back on a past that is our present and (possible) future. (2013: 40)

On a similar note, expanding beyond the Anglophone context, the Italian philosopher of science Telmo Pievani and geographer Mauro Varotto have recently published *Viaggio nell'Italia dell'Antropocene* (A Journey from Anthropocene Italy), a science-based fiction

of visionary geography set in 2786 that helps readers to understand the future that awaits us.

And finally, Donna Haraway's provocative study *Staying with the Trouble* (2016) concludes with the speculative Camille stories, in which the author imagines the development of a multispecies society. Haraway's approach to science/speculative fiction is particularly important for the analyses that this dissertation proposes in chapters 4, 5, 6, 7 and 8. In *Staying with the Trouble*, she defines SF as "science fiction, speculative fabulation, string figures, speculative feminism, science fact, so far" (2016: 2).[44] Most importantly, she emphasises that "science fact and speculative fabulation need each other, and both need speculative feminism" (3). Storytelling, she adds, is another SF thread crucial to the practice of thinking, and, particularly, of thinking-with. Haraway draws from Ursula Le Guin's carrier bag theory of fiction (1986), first published in the 1988 collection *Women of Vision: Essays by Women Writing Science Fiction*: Le Guin retells the story of human origin disputing the idea that the spear was the earliest human technology; instead, she tells the story of a carrier bag in which humans could gather food for later. This story grounds her in "human culture in a way [she] never felt grounded before. So long as culture was explained as originating from and elaborating upon the use of long, hard objects for sticking, bashing, and killing, [she] never thought that [she] had, or wanted, any particular share in it" (151). The carrier bag is also a method of storytelling, a way of configuring and reconfiguring worlds. Furthermore, the carrier bag contains no hero (it tells an "unheroic kind of story" [152]) and is, therefore, a collective rather than an individualistic endeavour. Similarly, the stories analysed in this

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[44] With regard to string figures, a design formed when a looped string is spanned between two hands and manipulated using one's fingers or the fingers of multiple people, she claims that "passing patterns back and forth, giving and receiving, patterning, holding the unasked-for pattern in one's hands, response-ability; that is core to what I mean by staying with the trouble in serious multispecies worlds" (12).

dissertation are unheroic, in that they entwine myriad configurations of human and non-human actors, social movements, and multi-species collectives.

What the aforementioned texts suggest is that science fictional way of thinking about the climate crisis might help us to think about the world here and now even when they represent other worlds. As argued by Darko Suvin in "On the Poetics of the SF Genre," science fiction is neither a description of reality nor a way to escape from it: his description of the genre as the "literature of cognitive estrangement" (1972: 372) tackles both science and fiction, with the tool of estrangement/fiction defamiliarising the conditions of everyday life, whilst allowing us to recognise them, and the function of cognition/science indicating the seeking for rationale understanding. Science fiction is, therefore, a representation of an idea that is different from our empirical reality, but similar enough to be plausible; such diversity, moreover, is generated by the so-called *novum*, a "strange newness" (373); in other words, a scientifically plausible innovation used by science fiction narratives. Cognitive estrangement, therefore, offers an "alienated view-from-outside" that "distances us from the contemporary world-system only to return us to it, as aliens, so that we can see it with fresh eyes" (Canavan 2014: xi).

Climate Change Between Utopia and Dystopia

Canavan further suggests that for Suvin and the following generation of science fiction critics it is in science fiction that the utopian imagination finds its strongest expression: "even the dystopian nightmares and secular apocalypses that so dominate contemporary SF point us, by negative example, in the direction of utopia" (xi). All science fiction can therefore have a utopian function, even when it depicts a dystopian society.

Dystopian and post-apocalyptic narratives are not the only forms through which future social-natural relationships are imagined: ecotopian – or green utopian – literature can

play an essential role in proposing visions of better and ecologically sustainable societies and therefore questioning our taken-for-granted unsustainable worlds. As suggested by Lisa Garforth in her book *Green Utopias*, the ecotopian tradition encompasses, among others, Ernst Callenbach's *Ecotopia* (1975), Marge Piercy's *Woman on the Edge of Time* (1976), Ursula Le Guin's *The Dispossessed* (1974) and *Always Coming Home* (1986), and Kim Stanley Robinson's *Pacific Edge* (1990) – with many of them shaped not only by ecological but also feminist ideas. Garforth draws on the work of utopian scholar Tom Moylan, who suggests that utopian texts' capacity to provoke estrangement became particularly evident in a series of texts published in the 1970s that he defines "critical utopias" (1986), some of them coinciding with Garforth's list of ecotopian texts (such as *Woman on the Edge of Time* and *The Dispossessed*). Aware of the limitations of the utopian tradition, these texts

> reject utopia as a blueprint while preserving it as a dream. Furthermore, the novels dwell on the conflict between the originary world and the utopian society opposed to it so that the process of social change is more directly articulated. Finally, the novels focus on the continuing presence of difference and imperfection within utopian society itself and thus render more recognizable and dynamic alternatives. (Moylan 1986: 10-11)

Similarly, ecotopian texts estrange us from the unquestionability of the current socio-economic system, and, by allowing us to explore more sustainable alternatives, they become a "site of cultural resistance" (Garforth 2018: 76) where the act of social dreaming is more important than the detailed description of a particular utopian society. None of the texts analysed by Garforth presents a future society marked by the return to a pastoral and simpler time, differing, for example, from Charlotte Perkins Gilman's classic feminist utopia *Herland* (1915), which describes a society of women living in

harmony with nature but does not unsettle the problematic trope of the pastoral. Garforth's definition of ecotopia is therefore close to the concept of critical utopia:

> At a formal level, these fictions do something distinctive to our capacity to imagine new social-natural relationships. The ecotopian novel does not offer didactic proposals, sketch blueprints or make an appeal to logic, ethics or values. Its power lies in its narrative capacity, drawn from the distinctive devices of science fiction and the critical utopia, to unsettle and estrange the everyday. (93)

However, she also claims that projections of green futures are more likely to take dystopian and post-apocalyptic forms and that these kinds of narratives have also been crucial in keeping green hope alive by warning of the potentially destructive consequences of ecological exploitation. The actual problem of the environmental crisis is instead that it threatens to become ordinary: the two most important strategies framing global climate change governance are adaptation and mitigation, both implying that the climate crisis can be addressed without significant changes in the way we live and we consume, and without calling into question capitalism and neoliberal models of economic growth (98). On the contrary, dystopian and apocalypse narratives are about "radical change" and the "necessity for change" (99). Most importantly, they can share the function of estrangement with utopian fiction, warning of what might happen if things don't change.[45] It cannot be denied that contemporary ecological science fiction imagines increasingly darker futures: green hope, however, can be found in the dark.

The majority of the novels, short stories, films, short films, and tv series that are addressed in this dissertation are climate change dystopias or eco-dystopias. This does not come as a surprise, climate change having been referred to as a "wicked problem"

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[45] While stressing the importance of dystopias and post-apocalyptic narratives, Garforth nevertheless acknowledges that "Much of this imagery is superficial and populist, particularly the violent end-of-days scenarios," and "offer[s] a spectacle of destruction for entertainment" (108).

(Hulme 2009: 335) *par excellence* because of its complexity, interdependence, and irrepresentability. As argued by Garforth, climate change

> makes utopia so difficult. A messy, intractable, open-ended problem which involves the likelihood of real environmental and human damage and loss that are already collapsing into the present does not lend itself to visions of better futures. (2018, 125).

And yet, this is precisely why climate change needs utopia, and, particularly, a "processual and open-ended kind of utopianism" (125). This dissertation builds upon the work of Raffaella Baccolini and Tom Moylan to consider how many critical dystopian texts "maintain the utopian impulse *within* the work" (2003: 7). If dystopias traditionally maintain utopian hope outside their pages, and "only if we consider dystopia as a warning that we as readers can hope to escape its pessimistic future," critical or open-ended dystopias, by contrast, reject "the traditional subjugation of the individual at the end of the novel" and open "space of contestation and opposition for those collective 'ex-centric' subjects whose class, gender, race, sexuality, and other positions are not empowered by hegemonic rule" (2003: 7). This dissertation, moreover, especially looks at narratives of climate change that resist the erasure of "ex-centric" subjects from the future.

Such "hope in the dark" (Solnit 2004) is about embracing the unknowability and unpredictability of the world, as theorised by environmental scholars such as Donna Haraway, Kate Rigby, Anna Tsing, and so on. The concept of hope in the dark was first introduced by Rebecca Solnit, who wrote *Hope in the Dark* in 2004 against the despair caused by the Bush administration and the onset of the war in Iraq. Even though that moment passed a long time ago, despair and defeatism have continued to characterise the 21st century, due to economic inequality, the attack on civil liberties, and the arrival of climate change, which is faster and harder than anticipated (Solnit 2016). The hope she describes does not deny all these realities but rather faces them by remembering

that the 21st century has also been, so far, a remarkable moment for "movement-building, social change and deep shifts in ideas, perspective and frameworks for large parts of the population" (2016: online). Hope, she goes on, locates itself in the embrace of uncertainty: when you recognise it, you also recognise that there might be room to act and therefore influence the outcomes of such unknowability – alone or as part of a community. The concept of hope in the dark has been subsequently reinterpreted within the Anthropocene framework, as an invitation to "stay with the trouble" (Haraway 2016) of ecological devastation, to learn and die well with one another on a damaged Earth, and to be "truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures, but as mortal critters entwined in myriad unfinished configurations of places, times, matters, meanings" (Haraway 2016: 1). On a similar note, Anna Tsing suggests that we should learn to coexist with the very conditions of our time, namely indeterminacy and vulnerability. Kate Rigby, to conclude, inspires us to learn to "dance with disaster," that is to say, "to develop modes of personal and collective comportment that are no longer premised on certitude – the confidence of possessing a sure guiding star – but that instead presuppose the unforeseeable. A largely improvisational dance" (2015: 30). What is also important for the present discussion is that she crucially frames this dance with disaster as a way of ensuring a voice for all those potentially affected who might have collective memories and situated knowledges that are necessary to survive these troubling times.

The Absence of Climate Justice: Gender, Race, and Ethnicity in Contemporary Climate Fiction

In his analysis of climate change communication, Axel Goodbody lists four key challenges in telling the story of climate change: communicating the science; paying attention to the vast spatial and temporal scale of climate change; representing the interaction of human and non-human agency; and avoiding narrative closures that would

give the impression that the crisis can be solved "through the resolution of dilemmas and conflicts relating to individual protagonists" (2020: 7). This dissertation adds a fifth dimension: resisting a "single story" (Adichie 2009) of climate change and a hegemonic discursive construction of the Anthropocene that divide power and agency along gender, racial, and ethnic lines.

According to ecofeminist scholar Greta Gaard, the "feminist fiction about climate change has yet to be written" (2017: 144-45): several texts that are considered to be part of the growing canon of climate change fiction are indeed male-authored and "non-feminist at best" and "anti-feminist and sexist at worse" (145). More generally, this resonates with the problem of gender, sexuality, and race in most post-apocalyptic mainstream narratives: as noted by Susan Watkins, contemporary white male-authored post-apocalyptic fiction "tends towards conservatism" (2020: 1) and a desire and longing for the confirmation of the status quo, being the authors the most invested in it. Ideas of human civilisation rely on traditional patriarchal and imperialist values and gesture toward a future that is either a "restoration of what has been lost during the apocalypse" or a "nostalgic mourning for the past" (1). Conventional post-apocalyptic imagination, moreover, cannot seem to move beyond traditional gender narratives, namely the protection of the heteronormative nuclear family unit and the obsession with the father-son bond. In *Sex After Life*, Claire Colebrook uses the term "sextinction" to define such tiring gender tropes:

> It is precisely here, in the genre of the post-apocalyptic, that the most tiring gender
> narratives are repeated [...] One might say that it is easier to imagine the end of
> the world, and the end of capitalism, than it is to think outside the structuring

fantasies of gender. There must always be an active male heroism driven by a feminine fragility that appears to hold the promise of the future. (2014: 150)[46]

Similarly, post-apocalyptic climate fiction tends to revolve around men: the protagonists with decision-making authorities are often white male heroes, mainly research scientists and government officials. Kim Stanley Robinson's trilogy on climate change – *Forty Signs of Rain* (2004), *Fifty Degrees Below* (2005*),* and *Sixty Days and Counting* (2007) – is one of the examples provided by Gaard: the ecosocialist scientocracy depicted in the novels is not only overwhelmingly male-dominated, but it also gives the impression that it can solve the problem of climate change without addressing social injustices. Children's climate change films have not fared much better: computer-animated films such as *Happy Feet* (2006) and *Wall-E* (2008) frame climate change through narratives of heterosexual romance, featuring "childlike and disempowered male heroes who succeed in ecodefense and heterosexuality alike" (Gaard 2017: 148). Quite differently, YA climate fiction offers several examples of narratives that can inspire environmental activism while empowering teenagers to speak up for justice through the representation of female survivalist characters, such as Mindy McGinnis's *Not a Drop to Drink* (2010) and Saci Lloyd's *The Carbon Diaries 2015* (2013). As for disaster movies about climate change, the vast majority depict white male heroes succeeding in the restoration of their love or life against a backdrop of environmental catastrophes, such as in *Waterworld* (1995), *The Day after Tomorrow* (2004), *Artificial Intelligence* (2001), *Elysium* (2013), and *Snowpiercer* (2013).

If the "paradigmatic figure of the Anthropocene is the European or Western white male scientist," as Andrew Baldwin suggests quoting Yusoff (2018: 218), then climate fiction becomes a useful entry point for conceptualising the meaning of the Anthropocene. The

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[46] Colebrook acknowledges that she builds on the preface to *The Seeds of Time* by Fredric Jameson: ''It seems to be easier for us today to imagine the thoroughgoing deterioration of the Earth and of nature than the breakdown of late capitalism'' (2014: xii).

theme of climate justice is almost entirely absent from mainstream cultural representations of climate change; those whose agency is most constrained, however, are also the most vulnerable to the violence of climate shift, as well as the main victims.

Hsu and Yazell (2019) term "structural appropriation" the process in which mainstream post-apocalyptic climate fiction projects onto white American characters and readers the structural violence of climate catastrophe that has already been experienced by colonised, postcolonial, and Indigenous populations. These future scenarios are often inhabited by small – and sometimes elitist – groups of survivors struggling to regenerate US culture and society, both endangered by a "third-worlding the West as a result of apocalyptic social collapse" (2019: 350). If, as Lawrence Buell (1995) has suggested, the "[a]pocalypse is the single most powerful master metaphor that the environmental imagination has at its disposal" (285), analysing what these narratives conceal and obscure instead of revealing is an urgent task. Indeed,

> rather than exploring environmental apocalypses that have already happened to populations outside the US (or to sovereign Indigenous nations putatively located "within" the US), post-apocalyptic fiction re-inscribes colonial and racial logics in imagined futures that, in many cases, have been unmoored from histories of race and empire. (Hsu, Yazell 2019: 349)

These narratives of apocalypse portray climate change as a universal human threat that is experienced by a universal human subject (read: white Western man), silencing the manifold vulnerabilities to environmental catastrophes that have been conceptualised by global climate justice movements. The authors linger over a significant episode staged in Cormac McCarthy's *The Road* (2006), when the father and son protagonists of the novel come across an old plantation house that has become a cannibal shelter. At first glance, this allusion seems to reveal that the novel is attempting to shed light on the structural violence of plantation slavery and thus explore the continuities between past, present, and future apocalypse; however, Hsu and Yazell contend that this scene only

serves to create a negative model for humanity that contrasts with the two protagonists. As noted by Eddie Yuen (2012), what renders this language of catastrophe problematic is its being

> 'apocalyptic' only in the Hollywood sense: […] devoid of ethical content. It says nothing of who we are and where we are going. (2012: 678)

Besides being written from a universal and un-embodied position, stories about apocalyptic environmental disasters can be very escapist: they give the reader the illusion that a techno-science approach will solve the problems of climate change without addressing social injustices and without a radical change in the way we live and we consume (see, for example, 2017 American science fiction comedy-drama film *Downsizing*, directed by Alexander Payne). There is an urgent need for utopian visions of the future that do not focus on the advances of Western technology and economics but rather recognise the disparities accentuated by climate change and imagine hopeful futures where no one (human and non-human) is left behind.

With regard to narratives of ultimate destruction, fear caused by implausible stories struggles to galvanise action in response to climate change. As Stephanie LeMenager (2017) suggests, much of the climate fiction of Europe, white America, Britain, and Scandinavia is indeed concerned with what Roy Scranton has termed 'learning to die' in the Anthropocene: according to Scranton one of the main challenges of the Anthropocene is learning to die not as individuals, but as a civilisation, because it is too late to imagine effective responses to the challenge of living in the Anthropocene. But who is learning to die as a civilisation? As the Potawatomi philosopher Kyle Whyte makes clear in *Indigenous science (fiction) for the Anthropocene: Ancestral Dystopias and Fantasies of Climate Change Crises* (2018), narratives of apocalypse that project climate crisis in "horrific science fiction scenarios" (2018: 225) obscure ongoing oppression against Indigenous people and conceal their perspectives on the continuities between

colonial violence and climate change. "Having endured one *or many more* apocalypses" (2018: 236) and having suffered the most severe hardship arising from environmental transformation due to different forms of colonialism, most Indigenous people live in a present which is already dystopian. Among such dreadful transformations, Whyte mentions "ecosystem collapse, species loss, economic crash, drastic relocation, and cultural disintegration" (2018: 226) and a disrupted relationship with the non-human. A key feature of what the philosopher has defined "living Indigenous science fiction" (2018: 230) is the contrast between a spiralling time of constant change and ongoing crisis – which sheds light on the role of colonial dispossession in environmental transformation – on the one hand, and linear narratives of upcoming crisis and dire futures of climate change on the other.

Over the following five chapters, this dissertation will explore feminist, decolonial and Indigenous approaches to the genre of climate fiction, engaging with and critiquing the "uneven universality" (Nixon 2011) of the Anthropocene. I will particularly analyse texts that work against hegemonic discursive constructions of the Anthropocene, and shed light on the relationship between climate change, global capitalism, and a flat trust in techno-fixes on the one hand, and structural inequalities generated by patriarchy, racism, and intersecting systems of oppression on the other.

4. Decolonising the Imagination: a Roadmap for Reading "Visionary Fiction" on the Climate Crisis

Having analysed the main tropes and limitations of climate fiction as well as the hegemonic strands of the Anthropocene discourse, the second part of this dissertation explores speculative and visionary novels, stories, and films on the environmental crisis that diverge from dominant narratives of power and privilege. In what follows, I enter the debate on fictional representations of climate change by focusing especially on speculative fiction that centres on the interconnections between gender, race, and environmentalism. Drawing on ecofeminist speculative fiction and feminist ecocritical perspectives that link the patriarchal domination of nature to the oppression of women, I particularly look at postcolonial, Afrodiasporic, African, and Indigenous futurisms: to put it otherwise, work that is all too often excluded from the canon of climate fiction, and that "extends beyond cli-fi in its rich and deep connections to social movements and everyday struggles" (Streeby 2018: 4-5). As suggested by Neimanis *et al.*, indeed, colonised, marginalised, or vulnerable groups are not only materially more vulnerable to the climate crisis, but their "agency and future imaginaries are also placed under erasure discursively" (2015: 77).

In *Imagining the Future of Climate Change: World Making through Science Fiction and Activism*, Shelly Streeby posits that people of colour and Indigenous people have been to the forefront of efforts to imagine climate justice and responses to the environmental crisis since the 1990s, not only through social movements and everyday struggles – one

could think of the #NODAPL movement,[47] also referred to as the Dakota Access Pipeline

protests, or to the Idle No More movement, just to mention the ones with significant global

resonance – but also in their speculative stories. In this regard, Streeby draws from

Walidah Imarisha (2015) to define Indigenous and people of colour futurisms as forms

of "visionary fiction" (Streeby 2018: 30), in that they struggle to conceive worlds that

diverge from the mainstream strain of science fiction, where dominant narratives of

power are usually reinforced, and use speculative fiction to decolonise the imagination

and "break with mainstream stories that center on white settlers and fail to imagine deep

change" (Streeby 2018: 31).[48] As such, they are able to imagine responses to climate

change that deviate from those envisioned by the fossil fuel industry. This does not

mean, adds Streeby, that such visionary fictions offer naïve optimistic and utopian

representations of the climate crisis: as many texts analysed in this dissertation highlight,

there is never a simplistic fixing of the world or reconciliation between human and non-

human ways of inhabiting the planet; sometimes, the world is broken to such an extent

that can only be destroyed. Most of the time, "activists, artists, and writers search for

possibilities in the wake of the climate change disaster already upon us rather than

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[47] Streeby further suggests that many social movements for climate justice intersect with one another, calling attention to overlapping vectors of identity and forms of discrimination. Black Lives Matter, for example, released in 2016 a statement of solidarity with the Standing Rock Movement, defined as a movement led by warriors, women, elders, and youth. The same form of environmental racism caused by pipelines on Indigenous land, stresses the statement, can be observed in the chemicals used for fracking (see the analysis of *Entanglement* by Vandana Singh proposed later on in this chapter), and in the water crisis affecting the African American Flint community, in Michigan.

[48] A great place to start to decolonise the imagination of climate change is Octavia Butler's work: her cautionary tales, especially *Parable of the Sower* (1993), anticipated plenty of the key themes explored in this dissertation, such as the intersection of the gender, race, and class dimensions of climate change, and the concept of "slow disaster," which, in defining global warming not "just an incident like a fire, a flood, or an earthquake" but rather "an ongoing trend – boring, lasting, deadly," anticipated by two decades Rob Nixon's *Slow Violence and the Environmentalism of the Poor* (2013). See: OEB 3193, commonplace books (medium), Octavia E. Butler Papers, The Huntington Library, San Marino, California.

turning a blind eye to the many kinds of disaster comprising our current conjuncture's ecological crisis" (Streeby 2018: 31).

This roadmap of visionary fiction, that sets the scene for the next chapters, begins with an intersectional reading of narratives that explore the impact of real-life environmental disasters – the only example of non-speculative fiction provided in this dissertation. Next, it proceeds by stressing the importance of entanglements: between environmental movements across the world, between different disciplines, and between activism and speculative stories; finally, it introduces Afrofuturism and Indigenous futurism. Most importantly, by providing multiple examples of visionary fiction, this roadmap centres on literary texts more than theories: if the first part of this dissertation sheds light on the imaginative and visionary features of feminist theory, this second part considers the proactive contribution of climate change literature to the conceptual debate about a more egalitarian planetary consciousness.

Setting the Scene: Cli-Fi, Intersectionality, and Climate Justice

As argued in chapter 3, mainstream cli-fi narratives tend to perpetuate racial, ethnic and also gender stereotypes, that form a pattern across multiple mainstream representations of climate change, and divide power and agency along racial, ethnic and gender lines. The theme of climate justice is almost entirely absent from mainstream cultural representations of climate change, and this has important consequences as those whose agency is most constrained are also the most vulnerable to the violence of climate shift, as well as the main victims.

In addition, chapter 3 has suggested that the majority of climate change novels present a futuristic setting that may be characterised as dystopian or post-apocalyptic. Being a literary genre that is fluid in nature, though, climate fiction can include novels that are set

in the present and focus on the impact of real-life environmental disasters. Before proposing a cartography of climate change futurisms, this chapter gives a brief overview of stories that have used hurricane Katrina (2005) as a narrative prompt: *Salvage the Bones* by Jasmyn Ward (2011) and *The Floating World* by Morgan Babst (2017). The former, set in the Mississippi Delta, depicts the life of a pregnant teenager in the days before the storm, while the latter focuses on the immediate aftereffects of Katrina on one multiracial family in New Orleans.

Besides, by exploring narratives that treat climate justice as a central issue, this first paragraph sets the scene for an intersectional analysis of climate change fiction. *Salvage the Bones* and *The Floating World* are indeed narrated from a situated perspective and represent the violence of the flood as a culmination of historical tendencies that render some bodies more vulnerable than others. As such, they give voice to the "everyday Anthropocene," a concept proposed by Stephanie LeMenager (2017) to indicate what it means to live day by day through the climate crises and through the interconnectedness of environmental degradation, racial oppression, and gender discrimination. These stories of partial destruction, displacement, and loss, she claims, are usually unheard in the mainstream discourse of the Anthropocene, which prefers narratives of ultimate and spectacular destruction. Both Ward and Babst, conversely, work against hegemonic discursive constructions of the Anthropocene and shed light on the relationship between climate change, on the one hand, and structural inequalities generated by patriarchy, racism, and intersecting systems of oppression, on the other.

Salvage the Bones and *The Floating World*, finally, are not directly about climate change but focus on one type of natural disaster that will become more prevalent with intensifying climate change. Climate scientists, moreover, have directly linked the increased intensity

of hurricanes to warming ocean temperatures.[49] What is also important for the present discussion is that Katrina has been one of the first extreme weather events to provide insights into how climate disasters affect different people unevenly and deepen inequalities and different forms of discrimination. Having affected in disproportionate numbers the African American working class of New Orleans, it is widely treated as one of the first case studies of climate justice. As for the gender dimension, chapter 2 has already suggested that hurricane Katrina predominantly affected low-income African American women, and that its aftermath was characterised by extensive reporting of rape in New Orleans.

Before diving into the analysis of the novels, it is worth mentioning that the 2012 American drama film *Beasts of the Southern Wild*, directed by Benh Zeitlin, another prominent fictional representation of Hurricane Katrina – even though Katrina is treated as an allegory more than an explicit subject – has been similarly interpreted as a much-needed alternative to climate fiction films and their neoliberal optimistic orientations and ideas of futurity. Whereas twenty-first-century climate disaster films such as *The Day After Tomorrow* and *Interstellar* present a traditional linear plot where the problem of climate change is overcome by the end of the movie and is "transformed into an obstacle that serves only to urge humanity onward to ever greater heights" (Knox-Russell 2018: 216), *Beasts of the Southern Wild* seems to break with containment narratives and elude "audience mastery of the climate change threat" (217). Set on an island in the Louisiana bayou called the "Bathtub," the film follows a six-year-old girl named Hushpuppy who lives with her hot-tempered father Wink in a small community cut off from the rest of the world by a sprawling levee. Hushpuppy believes that the natural world is in balance with the whole universe, until a catastrophic Louisiana storm breaks in and changes her

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[49] See Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis,* Summary for Policymakers, February 2007, page 16, www.ipcc.ch. Accessed: April 26, 2022.

reality. The concluding shot of the film – where survivors, "shed of all previous attachments," move "forward into a future they recognize as uncertain" (223) – has been described by Knox-Russell as a form of "futurity without optimism," that is, "a futurity cleared of fantasies projected from the (patriarchal, anthropocentric) past and thus a futurity radically open to difference and change" (218).

What has been harshly criticised from many quarters, however, is the film's troubling treatment of race. bell hooks, among others, has emphasised the romanticisation and eroticisation of Hushpuppy's vulnerable body, the denial of the reality of race in the representation of "black and white poor folks [that] live together in utopian harmony," and the hateful and stereotypical representation of black masculinity embodied by the character of Wink. Moreover, she stresses that ultimately it is patriarchal masculinity that controls the film, while "women, whether black or white, drink but say very little; they do not question male authority" (2012: online). On a similar note, Christina Sharpe stresses that the introduction of black characters in the film serves to naturalise their precarity:

> If one sees this film primarily as a way to visualize *resistance* to climate disaster then that requires that one have no desire to alleviate Hushpuppy's devastation. […] The film *needs* black bodies because how else could incipient sexual and other violence, the violence of extreme poverty, flooding, the violence of a six-year-old girl child living alone in her own ramshackle house with no mother or father, be inspiring and not tragic? (2012: online)

Most importantly, she claims, "how does a little black girl child orphaned and abandoned become a vision for climate resistance for so many people who watched the film?" (2012). What is also problematic is the lack of references to the members of the Choctaw and Houma tribal communities, the primary inhabitants of the Isle de Jean Charles, Louisiana, named by Zeitlin as the inspirational site for his Bathtub community. Despite grounding his film on the real experiences of an Indigenous community, he chose not to make explicit reference to Indigeneity. As the next paragraphs will suggest, *Salvage the*

Bones and *The Floating World* can be interpreted within a similar "futurism without optimism" framework that is not interested in fixing or mastering the problem of climate change. While moving towards a future that is recognised as uncertain, however, both novels take a step further and explore the interconnectedness of climate change vulnerability, gender, and race.

Salvage the Bones, winner of the 2011 National Book Award for Fiction, is Jesmyn Ward's second novel. Ward, an American novelist who was raised in a poor black area of rural Mississippi, lived through the devastations of Hurricane Katrina, an experience that underpins her novel. She has detailed her family's experience of the storm in an essay published in *The Oxford American* literary magazine, stressing that her sister was pregnant when the storm hit: this experience, again, is central in *Salvage the Bones*, as its main protagonist Esch Baptiste is also pregnant.

The novel covers the ten days preceding Hurricane Katrina, the day of the cyclone, and the day after, and it is told through the perspective of the Batiste family – with a particular focus on Esch, a fifteen-year-old pregnant girl. The novel is set in the fictional Mississippi-coast town of Bois-Sauvage and shows one of the rare glimpses of the devastation beyond New Orleans, stressing that the effects of the storm were much more wide-ranging than usually considered. The family lives in the so-called Pit, a rotting junkyard populated by dead trucks and feral chickens. The Pit is lost in the woods, and, most importantly, trapped in the wet lowlands, and it is opposed throughout the whole novel to the nearest white family house outside of the woods and on top of a hill: from the first pages of the novel, it is easy to imagine which location will succumb to flood damage. As suggested by Mary Ruth Marotte,

> Ward wants us to see the connection between the sense of desperation that the contemporary African American on the gulf coast experiences and that of the plantation slave. The storms of the past have effectively kept them subjugated,

have kept them entrenched in "The Pit," separated and distanced from the community at large. (2015, 210-211)

Together with her father and three brothers, Esch is still reckoning with the death, seven years earlier, of her mother, who was the cohesive force of the family and whose absence is felt viscerally, their father being depicted as an alcoholic and violent man. All they eat is canned, processed goods, and the sheets are so dirty that they would "wake up often in the middle of the night, itching, scratching a shin, an ankle" (Ward 2011: 179). Disaster, writes Marotte, is a way of life for them — responding to it, grappling with it, emerging out of it (2015, 209). In fact, ever since the death of his wife, the father has been preparing for another disaster: "Daddy's crazy," laments Esch, "obsessed with hurricanes. […] He spent the entire summer pointing out the safest places in the house to crouch. Every time he caught Junior [the youngest child] in the kitchen, he made him practice the tornado drill we were all taught in school" (46).

Esch has been having sex with her brothers' friend Manny since she was twelve, because "it was easier to let him keep on touching me than ask him to stop" (23). When she confesses her pregnancy, he reacts by screaming "Fuck!" and throwing her off him with disgust and indignation. It takes some time for Esch to move from denial to acknowledgement of her own state:

The girls say that if you're pregnant and you take a month's worth of birth control pills, it will make your period come on. Say if you drink bleach, you get sick, and it will make what will become the baby come out. Say that this is what you do when you can't afford an abortion, when you can't have a baby, when nobody wants what is inside you. Only thing I wouldn't be able to find is the birth control pills; I've never had a prescription, wouldn't have money to get them if I did, don't have any girlfriends to ask for some, and have never been to the Health Department. (102)

What this passage implies is that Esch lacks not only a maternal figure, but also any kind of sexual education as well as economic security to end an unintended pregnancy that will worsen the impact of the hurricane on her life. The arrival of the hurricane is narrated through Esch's vulnerable body, hit harder than her brother's ones by the lack of supplies: "I hate peas. My stomach, which has lately been pulling at me, driving me to eat at all hours of the day to feed the baby, burns" (192); "I barely have the energy to walk, to push back. On mornings like this when I am hungry, the nausea is always worse" (198). As soon as the Pit starts flooding, however, Esch needs to gather all her strengths to escape and, most importantly, take responsibility for her family. The environmental disaster, in Ward's novel, is therefore a present, lived and situated experience, poles apart from the implausible disaster narratives akin to "climate porn" analysed in chapter 3. If "bodies tell stories" (83), as affirmed by Esch, *Salvage the Bones* tells the story of an impoverished family which lacks the economic means to escape the Pit safely. Moreover, it sheds light on Katrina's deepening of pre-existing inequalities and forms of racial, class, and gender discrimination.

Notwithstanding, besides being described as "the murderous mother who cut us to the bone" (255), Katrina is also presented as a meaningful experience for the Batiste family: as Esch claims, "she left us alive, left us naked and bewildered as wrinkled newborn babies, left us to learn to crawl . . . to salvage" (255). The revealing subtitle of the aforementioned article detailing Ward's experience of the storm is "our legacy of not evacuating." As suggested by Marotte, therefore, the novel expresses "how closely tied her familial heritage is to storms of the past and of the future, how preparing for and enduring these storms has defined and continues to define their understanding of the world" (2015: 217). It also provides a form of resilience in the face of environmental catastrophes, with Esch and her family developing the capacity to cope with uncertainty, "stay with the trouble," and move into new roles that they did not inhabit before the storm.

Ward narrates what it means to live through the new geological era in vulnerable bodies that do not have access to technical exodus strategies for elites, at the core of much US Americans post-apocalyptic fiction: one could think of 2009 American science fiction disaster film directed and written by Roland Emmerich, *2012*, where the world's elite hastens to an escape route on luxurious ships. A similar science fictionalisation of the present in the aftermath of Katrina is described in *The Shock Doctrine* by Naomi Klein, who mentions the project "Help Jet" launched by an airline in West Palm Beach, Florida. Help Jet defines itself as

> "the first hurricane escape plan that turns a hurricane evacuation into a jet-setter vacation." When a storm is coming, the airline books holidays for its members at five-star golf resorts, spas or Disneyland. With the reservations all made, the evacuees are then whisked out of the hurricane zone on a luxury jet. "No standing in lines, no hassle with crowds, just a first-class experience that turns a problem into a vacation" (Klein 2007: 415-16).

If *Salvage the Bones* narrates the moments that led to Katrina, *The Floating World* focuses on the immediate aftereffects of the 2005 hurricane on one multiracial family of New Orleans. The novel was published in 2017 by American novelist Morgan Babst, who evacuated New Orleans the day before Hurricane Katrina made landfall off the coast of Louisiana on August 29, 2005. The novel, therefore, does not narrate her own experience of evacuation and failure to return, but "a story about what might have happened if some other version of me had not left" (Babst 2017, 371).

The novel's protagonist is Cora Boisdoré, a young woman who struggles with mental illness and depression, and who refuses to leave the city as the storm is approaching the Louisiana coast. Her parents, Joe, an artist descended from freed slaves and his white wife, Dr Tess Eshleman, are forced to evacuate without her. After a few days, Cora's sister Del makes the decision to leave the successful life she is building in New York and returns to New Orleans, to find the city devastated by a disaster that was far

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from being natural: "Why were we shocked? This had been going to happen. Been going to happen for a long time, and we pretend it wasn't, went on our merry way" (104). Del, moreover, finds her sister Cora in a catatonic state that is caused by the mental health problems she was struggling with long before the arrival of the hurricane, but is also related to what she had experienced and witnessed during the hurricane and in the immediate aftermath, when significant parts of the city were flooded. In trying to figure out what happened to her sister, Del must also reckon with the racial history of the city, entwined with a not-so-natural disaster that affected particularly New Orleans' most vulnerable citizens. While she is watching on television images of the Louisiana Superdome, which became the biggest storm shelter in New Orleans the day before Katrina's arrival (around 16,000 people eventually settled in, but it rapidly degenerated into a nightmare of robbery, filth, death, and rape), Del is able to intertwine for the first time past and present histories of vulnerability and discrimination:

> She had seen the men and women and children teeming on the bridges and on the concrete skirt of the Dome. She had looked among them for her sister's face. You know there's a train station a block from there, she had said to Yuri, the bartender, pushing her glass across to him for another shot. Don't you think maybe you put your people on a train instead of in a motherfucking football stadium in the path of the storm? […] Built that thing in the same spot where they used to make slaves fight to the death, you know. (2017: 29)

When Del arrives in New Orleans, she finds out that her sister's experience of the hurricane is weaved with that of Reyna, an impoverished black woman with two sons, who is also struggling with mental health. Reyna refuses help and prefers to leave on her own rather than waiting for buses and helicopters that were mobilised to support the evacuation process: "this isn't a place for women and children", she claims, underscoring the uneven impact of environmental disasters. "Full of rapists, killers, and all you do is stand around and say the buses are coming, the buses are coming, the buses are coming, the buses are coming" (201-202). By refusing to be helped, she also sheds light

on the failure of government response to Hurricane Katrina: the storm's damage, indeed, was exacerbated by the failures of the Bush administration, the Federal Emergency Management Agency (FEMA), and the Army Corps of Engineers. "Help is a fucking Help is a fucking Help is a fucking," Reyna says, "like the tiny FEMA checks that didn't do much except keep people from coming home. Like the volunteers rebuilding houses that would just flood all over again" (276).

Reyna's experience of the hurricane is worsened when one of her children finds out that his body is covered in sores: "the little boy must have waded through the water for some time – the gasoline and industrial waste and sewage – and he must have trailed his hands in the water, because they too were covered in sores" (201). This resonates with feminist philosopher Nancy Tuana's analysis of Katrina as a form of "viscous porosity": "the hurricane is a natural phenomenon that is what it is in part because of human social structures and practices" (2008: 192) and is therefore emblematic of the viscous porosity between humans and our environment, social practices and natural phenomena. Tuana stresses that there were five toxic waste sites around New Orleans, all of which were compromised by Katrina's flooding. Such "toxic soup" (198), she claims, is the emblem of the viscous porosity between social discrimination – the majority of New Orleans' residents being black and living below the poverty line – and environmental catastrophes. I further suggest that it is not by chance that one of the victims of this toxic water in the novel is one of Reyna's sons, her mother being the most vulnerable character of the novel because of intersecting forms of discrimination. Reyna will eventually commit suicide, and Cora will not be able to distinguish between the flooded world and the world of the living: as such, *The Floating World* ends on a bleaker note than *Salvage the Bones*. Both novels, though, provide an alternative to optimistic and escapist narratives where the problem of climate change is overcome by a (usually male and white) savir of civilisation, and give voice to the intersectionality of oppression that

can be worsened by climate change. As Morgan Babst writes in *The Floating World*, "the flood itself came out of an apocalyptic movie, but the aftermath was something else" (30).

Thinking Across Disciplines and Questioning Boundaries

In her foreword to *Dystopias and Utopias on Earth and Beyond: Feminist Ecocriticism of Science Fiction*, edited by Douglas Vakoch and released in 2021, Indian science fiction writer and professor of physics Vandana Singh narrates her encounter with the Chipko movement, a nonviolent forest conservation movement originated in the Himalayan region of Uttarakhand in the 1970s by rural villagers – particularly women – who determinately hugged trees in order to prevent them from being cut down. Being the main collectors of fuel, fodder, and water, as stressed in chapter 2, village women would have become the first victims of this forest destruction through mass felling and monoculture. Chipko women's connection to nature has often been essentialised and presented as a naïve form of ecofeminism, ignoring the movement's sociological dimension that included women's empowerment and a fight against the caste system. Since the origin of the movement, adds Singh, multiple other "grassroots efforts for self-determination, participatory democracy and ecological regeneration" (28) developed in India and across the planet. Most of them are local movement, but not isolationist: "many of them have a self-consciously planetary outlook and are beginning to talk to each other, reimagining the planet as a tapestry of alternatives that resist patriarchal capitalist dominance and domination" (28). In other words, they are entangled – and how can it be otherwise? Being one of the most ruinous results of the culture/nature divide, the current crisis of climate change asks us to unsettle the legitimacy of boundaries: between nature

and culture, the individual and the environmental and sociological context, and between science and the humanities.[50]

It is precisely to question these boundaries and explore what it means to "live and die within the interdependent web of life" (34) that in 2013 Singh wrote her first climate change novella, *Entanglement*, set in five different places around the world: the Canadian Arctic, the Amazonian rainforest, the floodplains of the Ganges, Texas, and a remote place in the Himalayas. Besides being based on scientific accuracy and elaborating a framework for a transdisciplinary approach to climate change, Singh's novella explores several themes that are central in this dissertation, such as environmental racism, climate justice, intergenerational justice, the utopian process of making a better world, the importance of art and literature as responses to indifference and denial, collective action as opposed to heroic individualism, the role of local communities, and so on. Most importantly, it raises marginalised experiences of the climate crisis.

The novella opens in the Canadian Arctic, staging a woman scientist, Irene, who has lost her Inuit roots: while she is diving to plug methane leaks, her equipment fails her, and she is rescued by a whale: "A beluga? She felt the solid body of the whale below her, tried to get ahold of the smooth flesh, but she needn't have worried, because it was pushing her up with both balance and strength, until she broke the water's surface near the boat" (2017: 13). As she thanks the whale for saving her life, she realised that "she was speaking Inuktitut, the familiar syllables coming back as though she had never left home" (14): thanks to the Inuit wisdom of her grandparents, she is therefore capable of acknowledging the entanglement of human and non-human agency. In a context in

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[50] Singh's understanding of entanglement is indebted to physicist and feminist philosopher Karen Barad's notion of intra-action between matter and meaning. As for the term 'intra-action', Barad suggests replacing 'interaction', which necessitates pre-existing and distinct entities that participate in action with one another, with 'intra-action', where agency is understood as a dynamism of forces constantly exchanging with and influencing one another. See Barad 2007.

which polar bears have become the main popular symbols of what we would lose to global warming, whereas the struggle of Indigenous people in the Arctic regions to preserve their cultures in the face of the environmental crisis is often invisible in the public arena (Sturgeon 2010), Singh resists a silencing narration of the region as well as an anthropocentric framing of climate change and interweaves human and non-human struggles for survival. At the end of the chapter, moreover, we are introduced to the Million Eyes Project, an experimental network that virtually connects people addressing global warming when they need help or inspiration. Once again, this collaborative project has its roots in Indigenous cultures, as suggested by Irene: "She had a sudden vision of a multilevel, complexly interconnected grid, a sentience spanning continents and species, a kind of Gaiaweb coming alive. […] Didn't science ultimately teach what the world's Indigenous peoples had known so well, that everything is connected?" (16).

The Million Eyes network transports readers from the Arctic to the Amazon rainforest, where another character is introduced: Fernanda, a scientist who has just spent several months in the coastal jungle studying the drought and counting dead trees. Once again, Singh represents a profound connection with the natural world, as Fernanda considers her own species to be "alien" (21) when she comes back from the forest. Furthermore, Singh's accurate depiction of science and nature is entwined with issues like politics of extraction in the Capitalocene – Fernanda's job in the coastal jungle includes "fighting a forest fire started by an agricultural company to clear the forest" (21) – and environmental racism, as the story makes clear that in times of drought and severe heat those with air conditioning "cranked it up," whilst "the poor on the city's east side made do without, some falling victim to heat exhaustion" (22). Notwithstanding, the lives of the middle and upper class seem to go with indifference and denial, removed from the "dire warnings the biosphere was giving them" (22). In this regard, the importance of culture – particularly visual culture – in bringing about a response to climate indifference is tackled

briefly but effectively: looking at drawing of jaguars, macaws, sloths, and other jungle animals on the sides of buildings alongside Manaus' streets, hit by an anonymous graffiti artist, Fernanda is astonished by such tridimensionality and is able to "feel the jungle around her again": she "thought in triumph: This is the answer to the oblivious life. Art so incredible that it brings the jungle back into the city, forces people to remember the nations of animals around us" (23). Last but not least, Singh emphasises the role of collective action to imagine a sustainable future that can only be achieved through working together, and opposes this model to that of the white male hero of American Western:

> The trouble with the forest was that it would never be enough without a million other things happening too, like the work at the polar icecaps, and social movements, ordinary people pledging to make lifestyle changes, and governments passing laws so that children and grandchildren could have a future. The crucial thing was to get net global dioxine emissions down to zero, and that would take the participation of nearly anyone. The days of the Lone Ranger were gone; this was the age of the million heroes. (29)

While in Manaus, Fernanda watches a television report of a tornado that has hit India, and we enter the life of Bhola, an orphan low-caste Harijan who works in the Rajput village of Songaon. After the tornado destroys half of Songaon, Bhola is willing to give voice to marginalised experiences of the climate crisis: "I want to help my village. I want people to know about it, even though it is only a Harijan basti sitting on stony ground (31). As in the Amazon rainforest, climate change is linked to neocolonial exploitation of natural resources: "You know there is a big coal-mining company that wants to buy all the land around us? (34), asks Bhola. He is also able to save the lives of the children of a powerful man, but, in order to do that, he needs to break caste rules on property and social conduct; as argued by Murphy, Bhola's action anticipates an alternative future where "caste divisions are anachronistic" (2017: 235).

Singh's journey across the planet through the actions of ordinary people moves to Texas to explore the phenomenon of fracking.[51] This fourth story is told from the viewpoint of a Texan senior citizen, Dorothy Cartwright, who has spent part of her life as a housewife. Due to her gender and age, she doubts that her voice can really make a difference: her husband Rob was the kind of husband who went mad at Christmastime heatwaves and cranked up the air conditioning so that they could have a traditional Christmas evening by the fireplace; he used to tell her wife, moreover, that worrying for the environment was "impractical" (52). He was also the kind of man who couldn't stand women swearing – "generally, he said that either they were common or they needed a good lay" (47) –, embodying the "industrial breadwinner masculinity" that links climate scepticism and sexism, as exposed in chapter 2 of this dissertation. With regards to Dorothy's age, she is afraid that "in these days of books and computers and all, who needed grandmothers? They lived in retirement homes or in huge, echoing houses, at the periphery of society, distracting themselves, waiting for death" (44). Dorothy is finally inspired by younger generations fighting against climate change and finds her own voice in the anti-fracking protest, suggesting that what is truly needed is a collective and global action, as well as a deep transformation of society:

> Less coal burned here means coal prices fall, and it gets exported elsewhere, so coal usage will go up somewhere else if fracking happens here in the United States – Idiots don't understand the meaning of 'global'. […] They say fracking for shale oil and gas is going to reduce carbon dioxide emissions, but can you believe they base that on completely ignoring the methane emissions from the fracking? […] Think about switching to green energy. Fracking for oil and gas just means putting off what we need to do. Like, you know, you need to fucking quit, not go from cocaine to… to meth! (46-47)

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[51] A method used to get oil and gas from underground rocks by injecting fluid at high pressure into cracks. Due to potential health and environmental effects (such as contamination of groundwater, waste disposal, exposure to toxic chemicals, and so on), it is a highly controversial method of extraction.

Dorothy's words resonate with the last vignette, where it becomes clear that all these individual and community-based approaches to climate change are connected through an experimental network, the Million Eyes project. We meet Yuan, a student of computer engineering but also a terminally ill man who is searching for a mysterious city he has dreamt of, a "great university hidden deep in the Himalayas," a place where "people like him could gather to weave the web that would save the dying world" (55). In the last pages of the novella, Yuan emphasises the importance of interdependence and interdisciplinarity:

> Most of us think there is nothing we can do about climate disruption. So, we live an elaborate game of denial and pretend – as though nothing was about to happen, even though everyday there are more reports of impending disaster, and more species extinctions, and more and more climate refugees. But what I learned from my teacher was that the world is an interconnected web of relationship – between human and human, and human and beast and plant, and all that's living and nonliving. I used to feel alone in the world after my parents died, even when I was with friends or with my girlfriend, but my teacher said that aloneness is an illusion created by modern urban culture. She said that even knowledge had been carved up and divided into territorial niches with walls separating them, strengthening the illusion, giving rise to overspecialized experts who can't understand each other. It is time for the walls to come down and for us to learn how to study the complexity of the world in a new way. (58-59)

The ending of the novella, therefore, elaborates a framework for a collaborative, multidisciplinary, and transdisciplinary approach to climate change, understood as both a local and a global issue. The final part of this chapter will draw attention to the entanglement of environmental movements and voices across the world, introducing the visionary dreams of Afrofuturism and Indigenous futurisms.

The Importance of Visionary Dreams: Afrofuturism and Climate Change

Among the more dynamic and radical visions of ecology, we can surely situate Afrofuturist creative efforts to imagine the future. Coined in 1993 by white American scholar Mark Dery, the term Afrofuturism refers to "speculative fiction that treats African American themes and addresses African American concerns in the context of twentieth-century technoculture" (Dery 1993, 180). Through the recovery and reclamation of often silenced histories, it aims to foreground non-white, African and African American literary and artistic production, but also to create a more inclusive genre, capable of challenging the predominant whiteness of science fiction and addressing everybody's dreams, desires, hopes (Bigoni 2019). In *Afrofuturism: The World of Black Sci-Fi and Fantasy Culture* (2013), Ytasha Womack argues that at its core, Afrofuturism is about envisioning possible futures through a black cultural lens and reinvigorating an often-repressed culture. The African continent, indeed, has historically been depicted as locked in a temporal stasis, perpetually underdeveloped, and a place without a future. According to Kodwo Eshun, when Africa exists as the object of futurist projections, its social reality is

> overdetermined by intimidating global scenarios, doomsday economic projections, weather predictions, medical reports on AIDS, and life-expectancy forecasts, all of which predict decades of immiserization. These powerful descriptions of the future demoralize us; they command us to bury our heads in our hands, to groan with sadness. Commissioned by multinationals and nongovernmental organizations (NGOs), these developmental futurisms function as the other side of the corporate utopias that make the future safe for industry. Here, we are seduced not by smiling faces staring brightly into a screen; rather, we are menaced by predatory futures that insist the next years will be hostile. […] Africa is always the zone of the absolute dystopia. (2003: 291-92)

The twofold aim of Afrofuturism is, therefore, to recompose past and future and untie futurist projections from a single story of white Western development. Kenyan filmmaker Wanuri Kahiu is part of the current generation of Afrofuturist authors that is reimagining

and charting new futures for a dying planet, making insightful interventions in current conversations about climate change.[52] Her widely acclaimed short film *Pumzi* (2009) feeds into conversations on ecological concerns, as Kahiu has suggested in numerous interviews. *Pumzi*, which means 'breath' in Swahili, is set 35 years after World War III, a water war that caused droughts and water shortages, and torn the world apart. The reality of climate change is foregrounded immediately through doomsday newspaper captions stating "The Greenhouse Effect: The Earth is Changing Already" and "Whole Day Journey in Search of Water." The last remaining community is the East African "Maitu[53] Community," an underground and self-sustaining society that produces energy and recycles water through the purification of bodily fluids. The film revolves around Asha (Kudzani Moswela), the curator of the "Virtual Natural History Museum," which contains relics of the time before nature had died, who anonymously receives a soil sample which tests low for radiation levels and high for water content, suggesting that life might be able to flourish again outside the community. When she inhales the smell of the soil, moreover, she falls into a vision in which she is swimming in a pool full of water; afterwards, a blooming tree appears, in stark contrast with the surrounding desert. Suddenly, a dream-detecting machine interrupts her vision and reminds her to take the mandatory dream suppressants. All the inhabitants of the Maitu community are indeed forbidden to even imagine alternative futures and forced to live in an eternally dystopian

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[52] In an interview with Oulimata Gueye, Kahiu has also contributed to the discussion about Africa and science fiction: she asserts that, in writing a story about a girl in the future, she wasn't deliberating choosing science fiction; it was only when her producer asked her to make a choice between science fiction and fantasy – the original draft of the script featuring some elements of fantasy – that she decided to go more science fiction than fantasy. This experience prompted her to argue that science fiction has ancient roots in Africa: "I think science fiction has been a genre in Africa that has been used a lot for a long period of time – way before I was even born...If we think of science fiction as something that is fictitiously science or speculative fiction within a story then we've always used it. Because we've used Botany; we've used Etymology; the idea of the study of animals to tell stories or the idea of insects to tell stories or the idea of natural sciences using trees – that's all science fiction" (2013).
[53] The term 'Maitu' lends itself to several interpretations: the etymology of the Kikuyu (a Kenyan language) compound is shown in one of the first frames of the film: "Noun – Mother. Origin: Kikuyu language from MAA (Truth) and ITU (Ours). OUR TRUTH."

present. The authoritarian council reacts to the vision by destroying the museum and compelling Asha to produce energy on one of the community's machines, suggesting that Maitu's inhabitants are subjected to a form of biopolitical control; Asha, nonetheless, manages to escape the confinement and plants the soil sample outside. The film ends with Asha offering her own bodily fluids in order to moisture and nurture the seed's growth. As the final shot pans out and Asha takes her last breath, we see a tree growing rapidly – perhaps spreading from Asha's body – and we hear the sound of thunder and rainfall.

Choosing a Swahili name as a title and a Kikuyu word to name the community, Kahiu situates *Pumzi* in East Africa, and specifically in Kenya, a country that has been enduring a severe water crisis for decades; Kenya, moreover, is among the water-scarce countries across the world (Mulwa *et al*. 2021). Additionally, other lived experiences such as climate change and neo-colonial resource exploitation are behind Kahiu's imaginings (Mayer 2016). According to Sophie Mayer, *Pumzi* addresses the problem of water scarcity both locally and globally, and "shows its protagonist literally reclaiming a girlhood lost to waterlessness" (113). As underscored in chapter 2, gender roles burden women and girls with water fetching responsibilities; consequently, women face higher risks during extreme events such as droughts.

Revolving around Asha's refusal to give up her vision of a sustainable future, *Pumzi* highlights the importance of those creative dreams that are usually erased from the dominant discourse of the Anthropocene. To start with, it imagines a world where African-descended peoples and their cultures play a central role in the interpretation of possible futures: as suggested by Mackay, the film "represents a specifically Afrocentric vision of post-climate crisis futurity" (2018: 537). Furthermore, in its critique of the harmful separation between nature and culture and in its futuristic representation of inter-species nurturing, *Pumzi*'s visionary dream is deeply influenced by ecofeminism, expanding Mark

Dery's masculinist foundation of Afrofuturism. The assemblage of woman-tree-water that emerges at the end of the film resonates indeed with many other configurations of human and non-human hybridity analysed in this dissertation, like the ones depicted in Wright's (chapter 5) and Okorafor's (chapter 6) novels. Due to its focus on the interconnections between gender, race, and environmentalism, Kahiu's short film can also be interpreted as an ecowomanist representation of climate change: with ecofeminist theory being dominated by the perspectives of white middle-class women, ecowomanism emerges to propose an intersectional methodology in the examination of environmental injustices around the world, lifting up the viewpoint of women of colour and specifically of women of African descent (Harris 2016), as underscored in chapter 2. The idea of ecowomanism also interconnects with the concept of African ecofeminist activism, epitomised, for example, by 2004 Nobel Peace Prize winner Wangari Maathai's Green Belt Movement, a grassroots and non-governmental organisation based in Nairobi, Kenya, that works to "promote environmental conservation; to build climate resilience and empower communities, especially women and girls; to foster democratic space and sustainable livelihoods," as stated in the "Who We Are" section of the movement's website.[54] Wangari Maathai, who founded the movement in 1977 to encourage rural Kenyan women to work together and grow seedlings and plant trees, has been championed for her reconceptualisation of ecofeminism from an African perspective (Muthuki 2006). Besides directing *For Our Land*, a TV documentary on Wangari Maathai (2009b), Wanuri Kahiu admitted in an interview (2009c) that Maathai's environmental activism inspired the production of *Pumzi*: drawing on the Green Belt Movement, the film seems indeed to suggest that the planting of trees could be a remedy for environmental degradation. In a fascinating comparison between Maathai's environmental Afrofuturist imaginary and Kahiu's *Pumzi*, James Wachira suggests that Maathai's 2004 Nobel Peace Prize Lecture

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[54] See: http://www.greenbeltmovement.org. Accessed: January 26, 2022.

contains the seeds of Asha's call to heal the Earth. In the Lecture, Maathai recalls, for instance, her childhood experience when she would visit a stream next to their home to fetch water for her mother: "today, over 50 years later, the stream has dried up, women walk long distances for water, which is not always clean, and children will never know what they have lost" (2004). Most importantly, Maathai's invitation to dream ("I would like to call on young people to commit themselves to activities that contribute toward achieving their long-term dreams. They have the energy and creativity to shape a sustainable future" [2004]) resonates with Asha's continuous dreaming of a sustainable future despite the compulsory dream suppressants and the Council member's denial that life might be possible outside. I read Asha's invitation to keep dreaming, finally, as a powerful answer to the "crisis of imagination" determined by climate change.

Decolonising Extractivist Epistemologies: Indigenous Futurism and Climate Change

In her introduction to *Walking the Clouds: An Anthology of Indigenous Science Fiction*, editor Grace Dillon suggests that Indigenous science fiction "is not so new – just overlooked, although largely accompanied by an emerging movement" (2012: 2). She further claims that writers of Indigenous science fiction "sometimes intentionally experiment with, sometimes intentionally dislodge, sometimes merely accompany, but inevitably change the parameters of sf" (3). As has been observed with regard to Afrofuturism, Indigenous futurisms have been to the forefront of efforts to imagine alternatives to the fossil fuel industry, building on Indigenous struggles for climate justice that have also related global warming to settler colonialism and conflict over resource extraction. Furthermore, the genre of Native Slipstream, which views time as pasts, presents and futures flowing together, decolonises science fiction imagination from extractivist epistemologies considering Western versions of science based on linear notions of progress as the only possible forms of development. Concerning

sustainability, Dillon argues that Indigenous sustainable practices, also known as "traditional ecological knowledge or TEK, "constitute a science despite their lack of resemblance to taxonomic western systems of thought" (7). As underscored in chapter 2, Métis anthropologist and scholar of Indigenous studies Zoe Todd further suggests that the Euro-Western academic narrative of the Ontological Turn (or posthumanism), credited for its insights on more-than-human agencies, is usually considered to be drawing on a European intellectual heritage, whereas many Indigenous thinkers around the world have told us for millennia that "the climate is a common organizing force" (2016: 8). These final paragraphs will therefore anticipate the analysis of Alexis Wright's *Carpentaria* and *The Swan Book* by providing examples of narratives that envision crucial roles for Indigenous people in the future of climate change, imagine this future by remembering the past and helping readers to think critically about the present, and reimagine human relationship with the more-than-human world by drawing on Indigenous scientific literacies "used by Indigenous people over thousands of years to reenergize the natural environment while improving the interconnected relationships among all persons (animal, human, spirit, and even machine)" (Dillon 2012: 7). The two examples provided over the ensuing pages, one from New Zealand and one from Canada, have been chosen because of their specific engagement with these themes.

Stonefish, to start with, is a collection of short stories and poetry published in 2004 by New Zealand novelist of Kāi Tahu and Kāti Māmoe descent Keri Hulme which provides an example of a geontology of "being-with-the-world" more congruent with Indigenous ontologies that end-of-world narratives (DeLoughrey 2015: 358). In depicting sea-level rise, Hulme resists and parodies post-apocalyptic fiction: "do you like millennialist fiction? You know, we have arrived at a crucial time for humanity, and DOOM is upon us. […] But you know that the author will sort things out at the end – one quirky brave couple of homo sapiens (homo sexuals if it's really post-modernist) will survive And The World Will

Go On. I read millennialist fiction because it's SO reassuring" (2004: 30-31). Instead, she proposes a narrative that emphasises kinship, fluidity and mutability and the collapse of the porous boundaries between the female protagonist and the submarine world. The protagonist learns to merge with the ocean, to think with sea creatures, and describes a world in which everything is alive; a world that appears very close to the one theorised by feminist new materialism, explored in chapter 2. Nature is more than a passive social construction, but it is an agentic force that interacts with the other elements, including the human. Plastic, too, is an agentic force: "I suppose it was animate once, now you come to think of it. They're made of plastic after all, and plastic was once dinosaurs" (29). While the protagonist merges into the ocean, she seems to echo Stacey Alaimo's claim that "thinking with sea creatures may also provoke surprising affinities" (2011: 283), as chapter 6 on Nnedi Okorafor will emphasise. Her husband of course finds it "fuckingbloodyannoying" (31) and refuses to merge with the ocean. Instead, he travels to Washington to "push the button" but he has no human companions to join him in the mobile home he has built to survive the post-nuclear world; most importantly, he cannot find a woman to create "man on top again as it always was, and always should be" (32).

A more recent example of Indigenous futurism about climate change is *The Marrow Thieves*, a Young Adult novel published in 2017 by Métis writer, activist, and member of the Georgian Bay Métis community in Ontario, Cherie Dimaline. The novel is set in a futuristic Canada destroyed by global warming. In this age of "rising waters, tectonic shifts, and constant rains" (Dimaline 2017a, 26) white people have lost the ability to dream as a result of environmental trauma. The novel makes clear that at the foundation of this ecological crisis does not lie a hostile nature that is allegedly retaliating against human beings, but rather a neocolonialist and capitalist logic, its consumptive force and its turning of habitats, environments, and bodies into resources to be subjugated, transformed, and exploited. To save themselves from the water they have poisoned and

from the air they have polluted so much that "the earth shook and melted and crumbled" (47) settlers turn to Indigenous people for salvation. North America's Indigenous People are being hunted for their bone marrow, which could restore the dreams of the rest of the world: "dreams get caught in the webs woven in your bones. That's where they live, in that marrow there" (18).

The Marrow Thieves' protagonist and first-person narrator is Frenchie, a fifteen-year-old fictional character from Cherie Dimaline's community, as the writer confesses in an interview (Dimaline 2017b). Early in the novel, he escapes capture while his brother falls into the hands of government's Recruiters, hunting Indigenous people to bring them to marrow-stealing "factories." As Frenchie flees the Recruiters, he is rescued by Miig, a middle-aged Anishinaabe men, who invites him to join an intergenerational group of Indigenous people also seeking safety. Together, they struggle for survival, attempt to reunite with their loved ones, and take refuge form the recruiters.

Miig is the keeper of the so-called "Story," the account of the events that led to the post-apocalyptic world. As much of the importance of the novel lies in the articulation of stories that keep culture intact, I quote this "Story" at length:

> Anishnaabe people, us, lived on these lands for a thousand years. […] We welcomed visitors, who renamed the land Canada. […] We lost a lot. Mostly because we got sick with new germs. And then when we were on our knees with fever and pukes, they decided they liked us there, on our knees. And that's when they opened the first schools. We almost lost our languages. […] Then, the wars for the water came. America reached up and started sipping on our lakes. And where were the freshest lakes and the cleanest rivers? On our lands, of course. Anishnaabe were always the canary in the mine for the rest of them. Too bad the country was busy worrying about how we didn't pay an extra tax on Levi's jeans and Kit Kat bars to listen to what we were shouting. […] The Water Wars raged on, moving north seeking our rivers and bays, and eventually, once our homelands were decimated and the water leeched and the people scattered, they moved on to the towns. […] The Water Wars lasted ten years before a new set of treaties and

agreements were shook on between world leaders in echoing assembly halls. The Anishnaabe were scattered, lonely, and scared. On our knees again, only this time there was no home to regroup at. (Dimaline 2017a: 26)

What this passage implies is a strong continuity between the legacies of residential schools and past exploitation on the one hand, and a post-apocalyptic and post-climate change future on the other.[55] Far from being implausible and disconnected from the material reality, Dimaline's dystopian world sheds light on the ongoing repetition of past and current traumas. By putting the story of residential schools through the lens of future, and through the lens of climate change, the novel's apocalypse reveals the processes of colonial violence and dispossession that have culminated in the eruptive event of environmental catastrophe, rather than portraying a story of universal and dis-embodied human threat that conceals oppression against Indigenous people. Furthermore, Frenchie and the other members of the group do not respond to the dangers posed by climate change by 'learning to die' in the Anthropocene: they have already experienced such threat of loss – loss of culture, loss of language, loss of lands. The story moves perhaps more slowly than other post-apocalyptic narratives on climate change, particularly in the YA field, but I read this slowness as a strategy to enlighten the so-called "slow violence" of climate change" (Nixon 2011). The main casualties of slow violence are the unseen "poor" (hence Nixon's title *Slow Violence and the Environmentalism of the Poor*) lacking resources. Nixon brings together postcolonial studies, ecocriticism, and literary studies to address the representation of climate crisis in an age when the media often chooses the instant sensational event over the long-term effects of disasters that are "anonymous and star nobody" (3).

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[55] Residential schools were government-sponsored boarding schools established to assimilate Indigenous children into Euro-Canadian culture by adopting Christianity and speaking English or French, eradicating all aspects of Indigenous cultural and spiritual identity. The residential school system operated in Canada from 1876 to late 1990s, although the origins can be traced to as early as the 1830s. It is estimated that 150,000 First Nation, Inuit and Métis children attended residential schools, while the number of school-related deaths remains unknown (as many as 6,000 children may have died).

Besides underscoring the links between colonisation and the Anthropocene, the novel voices a more contemporary threat to land, language, culture, and identity that might be increased by current vulnerabilities to climate change. Once again, this mirrors the history of settler colonialism in the Americas. In a future devastated by extreme weather events a huge part of the population would be displaced, and the so-called uninhabited traditional territory would be the first space to be reclaimed by the dominant society (Dimaline 2017b). As Miig recounts, indeed, after the advent of climate crises the Indigenous people of North America were removed from lands that "were deemed 'necessary' to the government, same way they took reserve land during wartime" (Dimaline 2017a, 88). Like land, Indigenous culture is under serious threat: when settlers find out that Indigenous marrow holds the cure for the rest of the world, their initial openness and real interest toward Indigenous forms of knowledge soon turns into appropriation and commodification:

> At first, people turned to Indigenous people the way the New Agers had, all reverence and curiosity, looking for ways we could help guide them. They asked to come to ceremony. […] And then they changed on us, […] looking for ways they could take what we had and administer it themselves. How could they best appropriate the uncanny ability we kept to dream? (88)

After having asked for volunteers, they turned to history and built new residential schools where the marrow was forcibly extracted. I propose to read Indigenous ability to dream in spite of environmental threat as an allegory of Indigenous knowledge on climate change: a potential resource to be exploited and decontextualised instead of allowing Indigenous communities to make meaningful contributions.

Kinship relations too are an explicit target of attack. As Colorado-born citizen of the Cherokee Nation Daniel Heath Justice (2018) underscores in *Why Indigenous Literatures Matter*, one of the fundamental purposes of residential schools was to "dismantle Indigenous resistance through a direct, sustained attack on families and the

full network of relations and practices that enabled health and self-determination" (85). Marrow-stealing schools function in similar ways: every member of the group's connections to family members has been broken by government's Recruiters, with devastating results for all of them. Frenchie has first lost his father, then his mother, last of all his brother; Miig has lost his husband Isaac; Minerva, the elder of the group, was feeding her new grandson when the Recruiters "busted into her home, took the baby, and raped her" (98). Bodies too, indeed, are sites of struggle, especially women's bodies. The chronological order of the novel is sometimes interrupted by a number of flashbacks or "coming-to-stories," in which some characters of the group share the circumstances that led to their separation from their communities. Besides Minerva, we get to know the background story of Wab, an eighteen-year-old girl who is also a rape survivor. The rape profoundly debilitates her body, to the point that she gives up running, having previously depended on her strong legs to survive and earn a living as a messenger. Through these female characters, referred as "the dissenting voice to the way things are" (32), the novel stresses that bodies can carry indelible marks of a violence caused by intersecting forms of oppressions: racial, colonial, and gender violence, but also the violence of climate shift.

It would be tempting to read *The Marrow Thieves* as a bleak story of dispossession and climate catastrophe; what needs to be stressed, however, is that Dimaline's authorial focus lies in subverting toxic colonial stories about Indigenous people to voice persistence and survival. In an interview with *Publishing Perspectives*, talking about the Métis Nation on the Georgian Bay, forcibly removed from Drummond Island, she explains that

> removals and relocations of a culture are specific to my community, although experienced in different ways by all Indigenous people. It's part of our stories. And it's a huge piece of why we share stories and keep that history intact, just as we've

kept our culture intact. […] My community has struggled and survived, and I'm enormously proud to be able to carry our voices forward. (Dimaline 2017d: online)

Similarly, Daniel Heath Justice (2018) stresses the importance of stories of "that which continues, that which remains" (56), stories about the "now" that subvert dominant colonial narratives seeing Indigenous people as disappearing historical artifacts. North American Indigenous people are more than descendants of those who survived the apocalypse: they are "survivors, too" (5) of the apocalypse of colonisation and environmental transformation that continues today. Furthermore, I argue that Dimaline's choice to propose a story about the "now" of climate change helps readers to deconstruct dominant apocalyptic narratives concealing, obscuring, and appropriating the structural violence of environmental crises that has already been experienced by colonised, postcolonial and Indigenous populations.

Despite its dystopian setting, *The Marrow Thieves* is a healing story of survival where Indigenous youth are able to see themselves in the future (Dimaline 2017b). By the end of the novel, Frenchie and the other members of the group are still trying to escape from the Recruiters and learning to coexist with climate change and a drastically altered environment. As such, the novel does not propose a "naïve story of hard effort overcoming all struggles" (Heat Justice 2018: 137); instead, it is

hard, desperate work. We had to be careful we weren't making things up, half remembered, half dreamed. We felt inadequate. We felt hollow in places and at certain hours we didn't have names for in our languages. (Dimaline 2017: 214)

Yet they keep resisting because they have each other ("we were still hopeful. Because we had each other. New communities to form" [88]), because they establish new forms of kinship and relationality that rebuild what settler colonialism has mutilated. As Heath Justice suggests, it is telling that near the novel's end Frenchie uses the word 'family' to describe his small group of fellow Indigenous runaways. In this context, the term serves

to contrast colonial notions of 'Indian blood' – figured here as bone marrow – used by settler governments to define who is "Indian," control access to Indigenous land, create standards of Indigenous authenticity and claim belonging without Indigenous kinship, as established by the Indian Act, first introduced in 1876. It is through resistant kinship practices which include inter-generational dialogue that the protagonists step towards a more hopeful future. As opposed to more mainstream YA narratives about climate change that focus on inter-generational conflicts and raise ethical questions about inter-generational responsibility (see *The Carbon Diaries* 2015 by Saci Lloyd), in *The Marrow Thieves* the relationship between ancestor and future generations strengthens the struggles of the present while providing "secret sources of agency" that empower protagonists and help them "survive the dystopia" (Whyte 2017: 231). We could think of relationship – with the human community, with ancestors, but also with the land and the more-than-human world – as the driving force of the novel. As Miig states near the novel's conclusion, "we can start healing the land. We have the knowledge, kept through the first round of these blasted schools, from before that, when these visitors first make their way over here like angry children throwing tantrums. When we heal our land, we are healed also" (Dimaline 2017: 193).

Final Remarks

Climate change narratives analysed in this chapter do not revolve around a desire to save and fix the world; they rather focus on how we tell stories about saving the world. As Donna Haraway writes in *Staying with the Trouble*, "it matters what stories we tell to tell other stories with" (2016: 12). Such visionary narratives, moreover, present different viewpoints that respond to what Chimamanda Adichie has termed the "danger of a single story": the mistake of reducing a person, a country, an event to a single, stereotyping

narrative (2009).[56] Moving beyond techno-optimist endings and the diametrical resignation to what Gerry Canavan has termed "necrofuturism" – the "endlessly rehearsed landscape of death and disaster that dominates contemporary visions of the coming decades" (2014a: 2-3)[57], determined by capitalism's unsustainable and destructive practices – visionary narratives propose a shift from an "if-this-goes-on" framework (Canavan 2014b: 13) to stories that imagine how life might be otherwise when marginalised and non-dominant perspectives have a place in it, and humans are profoundly entangled with their non-human counterparts. This roadmap – or "critical cartography," using Rosi Bradotti's words (2013)[58] – that sets the scene for the four close readings provided over the ensuing chapters, aims to illuminate the insights and possibilities that would be missed with a focus on nation-states.

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[56] In the case of Africa, she states that the continent is "full of catastrophes: There are immense ones, such as the horrific rapes in Congo and depressing ones, such as the fact that 5,000 people apply for one job vacancy in Nigeria. But there are other stories that are not about catastrophe, and it is very important, it is just as important, to talk about them" (2009).
[57] Among the "long chain of necrofuturist blockbusters that "cast the future as a world of death rather than opportunity or open possibility" (2014a, 12), Canavan lists *The Road*, the *Hunger Game* franchise, *Dollhouse*, *Elysium*, *The LEGO Movie*, *WALL-E*, and *Snowpiercer*.
[58] For a definition of critical cartography, see chapter 2.

5. A Crisis of Imagination:
   Alexis Wright's *Carpentaria* and *The Swan Book*

> But time is running out
> And time is close at hand,
> For the Dreamtime folk are massing
> To defend their timeless land.
> Come gentle black man
> Show your strength;
> Time to take a stand.
> Make the violent miner feel
> Your violent
> Love of land.
>
> Oodgeroo Noonuccal (1970)[59]

I wonder how we can create a poetry and a literature so grand that it breaks through the nexus of indifference, the violence of forgetting, to make sure these catastrophic weather events never happen again, in this so-called Pyrocene era of collective human suicide, or omnicide, or the Anthropocene. Perhaps we cannot find the answers yet, of how to tell stories that will match the scale of the radical uncertainties of the future, where stories require radically different ideas, and more expanded thinking than individual concerns and personal perspectives. Yet one day we will eventually meet the challenges of imagining how to live in worldwide catastrophic times because, i*f anything, global warming is expanding our imagination, and it is already eclipsing all normality in our current literary concerns*. We will be left to create from the new normalities rupturing the country of the soul.

Alexis Wright (2020, emphasis added)[60]

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[59] Oodgeroo Noonuccal (1929-1993) was a writer and political activist, and the first Aboriginal Australian to publish a work of poetry. The poem "Time is running out" first appeared in the 1970 edition of *My People*, a collection of poems that is today considered a classic of postcolonial literature, in that it reconstructs the memory of an older Indigenous past and intertwines it with official and hegemonic Australian history.

[60] The excerpt is taken from the speech "In times like these, what would Oodgeroo do?", delivered by Alexis Wright at the 2020 Fryer Lecture in Australian Literature. Wright poignantly suggests that Oodgeroo Noonuccal's poetry can crack the nexus of indifference that characterises these times of planetary rupture.

Alexis Wright, activist and award-winning writer, is a member of the Waanyi nation from south of the Gulf of Carpentaria and the Northern Territory. She has written widely on Indigenous Australian rights: her works of fiction and non-fiction include *Grog War* (1997), *Plains of Promise* (1997), *Carpentaria* (2006), winner of the Miles Franklin Award in 2007, and *The Swan Book* (2013). The present analysis dwells on the epic novel *Carpentaria* and the climate change dystopia *The Swan Book* and considers the novels as an entry point to address the climate-related crisis of culture and the danger of a singular Anthropocene narrative. Exploring themes such as environmental racism, ecological imperialism, and the slow violence of climate change, I suggest that Alexis Wright's novels are of utmost importance for global conversations about the Anthropocene and its literary representations, as they bring the unevenness of environmental and climate crisis to visibility.

As stated in chapter 3, in the past two decades climate change and its effects have been articulated in a growing body of literary works and have especially become major trends in Anglophone fiction (for a comprehensive analysis of cultural works engaging with anthropogenic climate change, see Goodbody and Johns-Putra 2019). Environmental humanities scholars such as Ursula K. Heise, Adam Trexler, and Adeline Johns-Putra are increasingly investigating the ecopolitical value of environmental literature, and the main challenges faced by authors of climate fiction, such as the more-than-human complexity of climate change, the novel's anthropocentric tendencies, the planetary scale and the slowly unfolding pace of human environmental impact.

In his ground-breaking monograph *Ecocriticism on the Edge: The Anthropocene as a Threshold Concept* (2015), Timothy Clark draws on the idea that the roots of the climate crisis are to be found in a failure of the imagination, hence literary studies can play an important role in understanding, if not solving, this crisis. He also posits, however, that the Anthropocene might be a threshold at which literature becomes inadequate to

represent the planetary scale of human environmental impact. Providing multiple examples of climate change fiction, from Ian McKewan's *Solar* (2010) to Barbara Kingsolver's *Flight Behaviour* (2012), he claims that the generic conventions of the contemporary novel and the techniques available to engage a reader's response (such as the conflict between characters with opposing views) are at odds with the scale of the ecological crisis: Clark argues that "familiar modes of suspense and identification […] have more to do with the human psychology of competition or self-fulfilment […] than with the true complexities of the issue" (181). He further validates that extreme weather events unfold with "indulgence in a pleasurable destructiveness" (182), and that literary realism is ill-equipped to deal with the agency of material things. The clash of scales also encompasses the distinction between *Homo* and *Anthropos*: humans have never experienced themselves as a species nor thought of human agency over multiple scales at once (Chakrabarty 2009; Horn and Bergthalle 2020).

Adam Trexler's study on climate change novels (2015), similarly, highlights that the "interpenetration between domestic and planetary scales" (26), the *longue durée* of climate change and the agency of non-human others require a complex transformation of the novel's generic conventions. In order to be articulated through fiction, climate change should force multiple narrative innovations of pre-existing genres:

> [t]he Anthropocene challenges science fiction's technological optimism, general antipathy toward life sciences, and patriotic individualism. Chiller fiction becomes wholly implausible when supernatural forces resolve enormous, atmospheric effects. Coming-of-age stories break down when the actions of prior generations trigger insolvable weather disasters and collapse economic opportunities for young people struggling toward independent adulthood. Safe identification with the hero of a suspense novel breaks down when he drives sports cars and exotic yachts, not to mention serves a government that has repeatedly thwarted climate accords. It is even more difficult to condense the distributed, impersonal causes of global warming into a climate villain. (14)

A thorough analysis of the challenges presented by the Anthropocene to the art and the humanities is offered by Amitav Ghosh's extended essay on the subject of climate change, *The Great Derangement* (2016). One of the most debated books on the limits of human thought when it comes to environmental catastrophe, it points out "serious" fiction's reluctance to deal with climate change. The acclaimed novelist identifies a variety of factors that are likely to have an important influence over the crisis of imagination that he laments: the novel is usually set in a certain time horizon that rarely extends beyond the lives of the characters and requires a confined setting. Further, the literary imagination is "radically centred on the human" (114) and on the individual at the expense of the idea of the collective and treats nature as a mere background. It tends to employ conventional literary strategies linked to human psychology rather than to the non-human context, whilst the land and the natural world are portrayed as a backdrop for human drama, lacking agency. Ghosh also argues that science fiction and climate fiction might be better equipped to deal with climate change, but they are "made up mostly of disaster stories set in the future," which "is but one aspect of the age of human-induced global warming: it also includes the recent past, and, most significantly, the present" (124-125).

What is also important for the present discussion is his assertion that among the key features of the birth of the modern novel were the relocation of the unlikely – such as a character hit by "an unheard-of weather phenomenon" – and the unheard-of to the margins and the exile of catastrophism toward the background. In fact,

> to introduce such happenings into a novel is in fact to court eviction from the mansion in which serious fiction has long been in residence; it is to risk banishment to the humbler dwellings that surround the manor house – those generic outhouses that were once known by names such as 'the Gothic', 'the romance', or 'the melodrama', and have now come to be called 'fantasy', 'horror', and 'science fiction'. (45)

The Anthropocene, however, is defined precisely by weather events that have a high degree of improbability. Ghosh actually suggests that there are literary movements confronting and celebrating the improbable, like surrealism and magical realism. He posits, though, that what marks a major difference between these movements and the current weather events is that "these events are neither surreal nor magical. To the contrary, these highly improbable occurrences are overwhelmingly, urgently, astoundingly real" (50). To treat climate change as magical or surreal would run the risk of robbing it of its urgency: magical realism, he concludes, is a form of concealment as much as the realist novel.

Diverging from Ghosh's scepticism about literary movements replete with the unheard-of, Ben Holgate (2019) states that one possible response to the crisis of imagination posed by climate change could come from magical realism. Besides drawing on postcolonial scholars such as Elleke Boehmer and Homi Bhabha who have widely described the link between magical realist fiction and the postcolonial world, he also sheds light on the commonalities between the former and environmental literature; namely, the development of new language and forms of expression that respond to dominant ontologies and epistemologies, the defamiliarising juxtaposition of the unreal and the ordinary, a focus on the interconnectedness of the natural world, and a capacity to break down boundaries between human and non-human. He particularly reads Alexis Wright's *The Swan Book* as an antidote to "the great derangement" (Ghosh 2016), linking Indigenous Australian ontology with magical realist fiction, and asserting that the magical elements of the text do not undermine the urgency of climate change, but rather help the reader to "understand the 'real' setting of climate change" (Holgate 2019: 9). As Holgate notes,

> [a] magical realist text does not necessarily have to present extreme weather
> events or climate change as the 'magical' elements. Indeed, Wright's *The Swan*

Book portrays drought and flooding in the apocalyptic setting in a matter-of-fact manner, that is, as 'real'. (9)

Holgate notes that Wright employs magical realist conventions to convey the Indigenous Australian understanding of the world and of its creation, the Dreamtime, following other Aboriginal authors. The land and its entanglements with human and non-human beings are central to the Dreamtime as well as to Indigenous Australian Law, that Bill Gammage defines as "an ecological philosophy enforced by religious sanction' that 'compel[s] people to care for all their country" (cited in Holgate 2019: 43).

I situate my critical position as a partial departure from both Ghosh' and Holgate's stances, underscoring that several critics have warned against the association of Indigenous Australian knowledge with magic and the supernatural. In relation to "Western" categorisations of Alexis Wright's work, Alison Ravenscroft (2012) points out that not only the Waanyi writer has been anchored to white Australian literary canon, but her texts – both *Carpentaria* and *The Swan Book* – have often been fixed "within the constraints of magic realism" (60), reinforcing the binary opposition between Indigenous magic and "Western" reality as the only possible reality. She refers to Toni Morrison's claim that "among African Americans there are ways of knowing that might fall into magic or superstition in the eyes of white American readers" (cited in Ravenscroft 2012: 25), and that she aims at representing reality even when her stories have been referred as magical by white scholars. Similarly, Wright refuses this assimilation with magical realism and states that she considers literature "the best way to tell the truth … more of a truth than non-fiction which isn't really true either. Non-fiction is often about the writer telling what it is safe to tell" (2002, 13). As such, Wiradjuri writer, poet and academic Jeanine Leane, following Wright and Ravenscroft, defines Carpentaria "a work of Aboriginal realism" (2015: 155). Critically, Frances Devlin-Glass addresses white readers urging them to read *Carpentaria* as Aboriginal realism and a true representation of Indigenous

Australian Law and a "powerful contribution to understanding of Indigenous knowledge" (2008, 392). These texts provide the foundations of my argument and have helped me to recognise the limitations of my own position as a white Western European reader of an Indigenous text. As Ravenscroft notes, "Indigenous Law cannot be 'seen' from a Waanyi point of view if one is not Waanyi" (2012: 77), and although it is important to keep moving towards understanding, this movement can never be an arrival, and knowledge always remains provisional. Bearing in mind Ravenscroft's paradigm of "radical uncertainty and impossible dialectic" (63) and the risks arising from efforts to find "redemption in Aboriginal people's culture, as if those we have conquered should now save us" (Rose 2004: 2), I propose a reading practice of *Carpentaria* and *The Swan Book* that considers the novels as entry points to address the climate-related crisis of culture (while acknowledging the problematic aspects of reading the novels as antidotes to the "great derangement") and the danger of a singular Anthropocene narrative.

Following Lucy Rowlands' lucid work on the issue of narrative and indigeneity (2019), I stress that Indigenous perspectives on climate change and environmental damage cannot be excluded from the global conversations about the Anthropocene, "precisely because the survival of their culture and relationships with their country are most at risk" (2). Much contemporary discourse on the Anthropocene, though, invites us to think at undifferentiated species level, running the risk of erasing power hierarchies, as the *Anthropos* after which geologists have named the current epoch does not seem to have a class, a race, a gender, nor in-built vulnerabilities shaped by colonialism and capitalist inequality, as highlighted extensively in the previous chapters. As Ursula K. Heise suggests, the environmental humanities should provide an account of the "productive conceptual tension between humans' agency as a species and the inequalities that shape and constrain the agencies of different kinds of humans, on one hand, and between human and nonhuman forms of agency, on the other" (6).

This universalising logic is also a recurring feature of multiple literary representations of the Anthropocene, as hightlighted in the previous chapters. Sharae Deckard has rightly suggested that climate fiction from the Global South and other postcolonies might differ from the one published in North America or Western Europe, in terms of contents but also aesthetic (Deckard and Akbar, 2020). Having the unevenness of environmental crisis and the tight link between climate change and settler colonialism as "constitutive part[s] of its own aesthetic," it can offer "a corrective to the 'invisibilisation' of these already-occurring disasters in the Western media" and intervene in Hollywoodian and Euro-American representations of climate change where apocalypse is a "sudden, total shock to a bunch of privileged white people fleeing for their lives, rather than a process unfolding incrementally." As the ensuing paragraphs will explore, this resonates, again, with the "slow violence" of climate change, which is "neither spectacular nor instantaneous, but rather incremental' and 'occurs gradually and out of sight" (Nixon 2022: 2), taking years, even centuries, to manifest.

The 'Slow Violence' of Ecological Imperialism: *Carpentaria*

Reconstructing *Carpentaria*'s plot is an exceedingly challenging task: as Kate Rigby notes, the novel's nonlinear narrative and its several tangled storylines pose "profound hermeneutic challenges" (Rigby 2013: 123) for non-Indigenous readers. These difficulties partly derive from Wright's choice to "engage more Indigenous readers, especially from remote locations, to be readers of this book either now, or in the future, or perhaps at least, to be able to listen to a reading of the book" (Wright 2007: 80).

Set in the fictitious town of Desperance, in the Gulf of Carpentaria in north-west Queensland, the award-winning novel presents a multilayered structure that portrays the lives of the Indigenous Australian people of the Pricklebush clan. The clan lives in a "human dumping-ground next to the town tip […], piled up together in trash humpies

made of tin, cloth, and plastic too" (Wright 2006, 4), separated from the white settler population's quarter known as Uptown. As Ben Holgate notes, this garbage ghetto segregating Indigenous Australians from the white society and preventing them from having legal control over their traditional land is a form of slow violence and environmental racism, a form of systemic racism whereby minority groups and communities of colour are burdened with a disproportionate number of health hazards. It is clear from the first pages that the Indigenous protagonists of the novel suffer ongoing colonisation, although Australia is officially considered a decolonised nation since the British handed over direct rule to Australia in 1901 and the Commonwealth of Australia was inaugurated. The novel centres on the Phantom family and their patriarch Normal Phantom, leader of the Westend Pricklebush people – and, most importantly, a guardian of the Law and protector of the environment – and their disputes with the Eastside camp – home to Joseph Midnight's mob exiled from the West – on the one hand, and with the white Uptown and the Gurfurrit mine on the other.

The town of Desperance, built "in the hectic heyday of colonial vigour" (3), was intended to serve as a port but eventually lost its harbour waters as the Rainbow Serpent altered the river's course. The Serpent is one among multiple ancestral spirits that reside within the environment, shape it, and watch over the Country. As such, it collapses space and time, merging geological time with the Dreamtime and creating a place of "deep time underneath Desperance" (Leanne 2015: 9) that falls out of the scene of white settlers imagining: "the inside knowledge about this river and coastal region is the Aboriginal Law handed down through the ages since time began" (Wright 2006, 3). Just as *The Swan Book*'s polluted dry swamp, *Carpentaria*'s main setting is a place nobody cared about: "they were changing guards at Buckingham Palace but nobody in the world cared what happened to Desperance" (71), and "never in their wildest imagination had they [the

Pricklebush clan] expected to see the likes of downtown Desperance splashed across television, like New York, Jerusalem or Kosovo" (303).

The town acquires a more sophisticated outlook when the first multinational mining operation is established in the region:

> The multi-million dollar mine, from infancy to its working prime, was probed, described and paraded to network viewers. Interviewers and footage of scenery went jig-jogging along in soap opera intensity, before finally shifting to pan, and viewers were encouraged to dissect what had become of this showcase of the nation. (397)

It soon becomes clear, however, that the resource extraction industry starts "pillaging the region's treasure trove" (8) and undermining the traditional sacred land. The novel highlights that both the traditional land and its dwellers are "pillaged" and exploited by the mining company – "they cannot crush people just because they have the power to crush the landscape to smithereens" (185) –, and that the Pricklebush people are well aware of the environmental risks arising from the dewatering of the ore in a flood-prone area. "Who was involved? Who knows? Who cares? What was the environmental hazard to his traditional country?" (372); "how many evolutions would it take before the natural environment included mines in its inventory of fear?" (379). As Holgate suggests, the iron ore is yet another form of ecological imperialism, a concept introduced by Alfred Crosby to describe European settlers' introduction of plants, animals, and diseases in colonised areas as well as the dispossession of land, the subjugation of native peoples, and the exploitation of the natural environment for economic profit. Furthermore, by making a false Native title claim on the area, Joseph Midnight chooses to benefit from mining royalties, indicating that ecological imperialism can also lead Indigenous people to fight among themselves. Holgate argues that *Carpentaria* is set in 2002, a decade after Mabo judgement abolished the legal fiction of *terra nullius* – or "land belonging to no one," on which British based their claims to possession of Australia – and recognised

the land rights of the Meriam people, traditional owners of the Murray Islands. The novel, therefore, could be interpreted as a "counter-reaction to the conservative reaction to Mabo" (Holgate 2020: 53).

The Uptown's white settler population, instead, maintains a good neighbour policy with the Gurfurrit mine – a policy that "worked to kill opposition" (364), as Will Phantom explains. Son of Normal Phantom, leader of the Westend Pricklebush Aboriginal, Will remains adamant through the whole novel in his campaign against the environmental and cultural damage brought about by the new mine, acknowledging that:

> cold and heartless ambitions of politicians and bureaucrats came flying in from faraway cities and capitals to destroy the lives of Aboriginal people (123), [and] some little operation like this could be very lucrative for any of the miners wanting to make their retirement package. Nothing short of an olive plantation back in the home country for the italian. Palaces in Europe or Asia for the management." (372)

He will eventually guide the sabotage of the Gurfurritt pipeline, but the final defeat of the mine will be helped by the complete destruction of the town by a massive cyclone. Anthony Carrigan suggests that Wright thus depicts the "slippage between Indigenous-led resistance and environmental agency" (Carrigan 2015: 94). The arrival of the 'big rain' is sensed by the main characters, who observe this "mysterious change of great attitude" (Wright 2006: 443) in the clouds, the seagulls, the cockatoos and many other birds heading inland. The Pricklebush's dwellers, who are presented from the first pages as the ones who understand the Gulf country weather and "know the moment of climatic change better than they know themselves" (Wright 2006, 3), feel the agency of the air long before the Uptown people:

> Remember the real people of the Gulf, those poor black should living on heartbreak and worries in the Picklebush because they know all about cyclones, unlike those copycat Uptown dolce vita type of people sitting in comfortable armchairs expecting to acquire their ancestral ties with the sea by sitting on their posteriors

watching television programs, and never going out to sea on any occasion to pay their respect, like the old people who were the backbone of the Pricklebush who did not mind paying their dues, and will tell you cyclones don't come from nowhere, because there is plenty of business going on when cyclones come onto the country out of the rooftop of the world, like what is going on outside now from the most powerful creation spirits, who come down out of the skies like a tempest when they start looking for Law breakers. (460)

The cyclone obliterates the whole town, including the Gurfurritt mine. Will, observing the devastation left behind by the cyclone, realises that the whole human history could be erased if the Gods decided to "move the country" (473). But whose history is obliterated by the cyclone? Throughout the whole novel, Wright stresses that Desperance's dumping ground, home to the Pricklebush clan, is one of the most unknown places in the world (as the swamp in *The Swan Book*); the cyclone, however, erases both the mine and the privileged side of the town, whose inhabitants turn a blind eye to the arrival of the flood. This way, the living land writes an alternative history that fills the gaps and silences of the official one. Kate Rigby suggests that "the massive cyclone constitutes the most dramatic incursion of the other-than-human into the action of the novel and, ultimately, facilitates its utopian conclusion" (Rigby 2013: 132), and "acts as a corrective in the lives of some of the key Aboriginal characters as well, and it is with their unfinished stories that the novel ends" (133). Will Phantom, indeed, learns to see nothing monstrous in "the bulwark of the spirits rose from the waters" (473) and in the consequent more-than-human creation "singing the country afresh" (Wright 2006: 499). The Indigenous Australian protagonists' experience of the cyclone is radically different from that of the Uptown people, who pathologise the event as a malign force to defeat. As Leanne notes,

for the settlers, the town is levelled and destroyed. For the Aboriginal residents, the town is transformed as part of the cosmos of the underground serpent. It never was a question of 'if', but 'when'. In this way, Wright challenges European arrogance and inexperience with the living land. (2015: 158)

The flood catastrophe mitigates the effects of colonisation on the traditional sacred land and its Indigenous Australian inhabitants. While Rigby stresses that in the world beyond the novel the incursion of the non-human rarely benefit the most vulnerable ones, and the erasure of the mine does not signal the end of ecological imperialism, *Carpentaria*'s hopeful conclusion comes from the various forms of resistance – spiritual and militant – to environmental exploitation offered by Dreamtime ancestral spirits, guardians of the Law like Normal Phantom, and Indigenous Australian guerrilla warriors like Will, who join hands to watch over the Country. The novel therefore challenges the binary opposition between the real and the supposedly unreal, responds to the crisis of the imagination that Ghosh laments, and resists a magical realist reading that would stigmatise the cyclone as a supernatural event – hence ill-equipped to represent the compelling urgency of climate change.

As this extreme occurrence suggests, even though Northern Australia is a flood-prone area, such "natural disasters" are as a matter of fact less natural than human induced. The cyclone comes at the very end of the novel, but it is built from the very first pages through the representation of the "slow violence" of environmental and neo-colonial exploitation. Thus, *Carpentaria* prepares the reader to the altered environment represented in *The Swan Book*, but it is not less engaged with climate change than Wright's latest novel, as Anthony Carrigan stresses:

> its creative integration of many factors that have driven climate change – from colonialism to extractive industry – permit us to read for climate change at multiple narrative levels, and in ways that reflect the culturally differentiated responses that are needed to address climate change in reality. (Carrigan 2015: 95).

'The Eternal Reality of a Legacy in Brokenness': *The Swan Book*

The Swan Book is set 100 years into the future, when the Indigenous Australian are still living under the Intervention in the North, and the environment is fundamentally altered by climate change. In Wright's third novel, despair seems to predominate over hope:

> Mother Nature? People on the road called her the Mother Catastrophe of flood, fire, drought and blizzards. These were the four seasons. People talked the language of extinction. They talked about surviving a continuous storm under the old rain shadow, or they talked about living the best part of their lives with floods lapping around their bellies. (Wright 2013: 5)

The novel follows the life of a young Indigenous Australian woman called Oblivia, a victim of a gang-rape by petrol-sniffing Indigenous boys, that signify "dysfunction within her own society" (Holgate 2020, 45). After being raped, she hides from her abusers inside a sacred tree, where she inscribes "stanzas in ancient symbols" (6) over the tree surfaces, writing knowledge on the land itself. Like Normal Phantom in *Carpentaria*, she becomes the guardian of the Law and of the environment. Eventually, she is rescued by a European Old Woman, Bella Donna of the Champions – "the white woman was one of those nationalities on earth lost to climate change wars. The new gypsies of the world" (20) – but she never recovers from being violated and decides to stay mute. Bella Donna takes the girl to live with her in a polluted dry swamp, "the world's most unknown detention camp in Australia that still liked to call itself a first-world country" (35) and begins to tell stories about her journey and the climate refugees from the Western countries. The swamp, resembling Desperance's human dumping-ground, is a hidden place that is considered from European people "another eden" (27). However, Wright does not romanticise this land as a pristine land: it is affected by environmental devastation as any other place in the world, as she has previously stressed in *Carpentaria*. The swamp is another site of ecological imperialism and environmental racism, a place of traditional land controlled and destroyed by white settlers.

Environmental degradation and the denial of Indigenous Australian rights are woven together:

> This was the history of the swamp ever since the wave of conservative thinking began spreading like wildfire across the twenty-first century, when among the mix of political theories and arguments about how to preserve and care for the world's environment and people, the Army was being used in this country to intervene and control the will, mind and soul of the Aboriginal people. (41)

As Holgate notes, we can also read a critique to twenty-first-century environmentalism that claims to preserve virgin wilderness while impinging human rights. The swamp people "already knew what it was like to lose a Country" (35) and were not interested "in being conquered by other people's stories" (29). As such, *The Swan Book* represents the vulnerability deriving from human-induced "slow violence," restoring voice to those people who can already perceive the scale and the effects of climate change.

Wright invites the reader to consider Oblivia not as the main character, but "the main *human* character." The very idea of the book came indeed from the migration of the black swans, as the author declares in an interview:

> The black swan is Indigenous to Australia. But when I started thinking about writing a book about swans, way back in 2003, people started telling me stories of swans that they had seen in the desert, so far away from coastal and wetter regions of Australia. What happens to a bird – or to anyone – who has no story for that country? We had taken them out of their habitat through environmental damage that has been mostly men-made, and the swan moved. Where do they go and what stories do they have? (Wright and Zable 2013: 30)

When the black swans arrive at the swamp, Oblivia understands that they share a similar experience of exile: like swans displaced from southern Australia by global warming, Oblivia has lost sovereignty over her own brain: "I have become a gypsy, addicted to journeys into these distant illusionary homelands" (3). Similarly, "the swans had become gypsies, searching the desert for vast sheers of storm water" (13). From this moment

onward, their stories and their fight for survival are "brought together in an interwoven relation," as Meera Atkinson stresses (Atkinson 2018, 51). The swans, Oblivia and the Indigenous Australian community – which has lost sovereignty over its land and culture – are all inheritors of oppression and dispossession: "it's the eternal reality of a legacy in brokenness" (Wright 2013: 75) that is not just a prerogative of the human society. The struggle of the black swan is intimately bound to that of Indigenous Australian people, and not just the backdrop for human drama. Ben Holgate suggests that the black swans are not just a "metaphor for Australia's original inhabitants," but they are to be read "literally as 'ancestors who once travelled the continent, sharing their Law stories" (Holgate 2020: 63).

Like the black swan who has no story for that part of the Country, Oblivia, observing some alcoves depicting scenes from the world's history, cannot find anything regarding her story and the swamp's story:

> After exploring all of these little scenes that had been created by months of labor, she had found no eucalyptus tree trunk with strange writing in the dust, no swamp lined with people guarded by the Army. She could not understand why this history did not exist in this world of creation. There was no miniature of a black girl such herself in any of these depictions of humanity, no swamp world of people quarreling over food. (198)

Furthermore, Oblivia and the swans share a condition of forced muteness: the black swans die without sound, and Oblivia, who experiences a denial of her Indigenous voice, observes that "she had no sound either, and knew what it was like to be without sound. This country would never hear her voice, or the language she spoke" (157). Oblivia and the swans have such an intimate bond that she starts to believe that by helping them to survive on the polluted swamp she might learn how to escape as freely as they had been able to take flight. When she becomes a climate refugee herself, indeed, the swans help

her flight. At the end of the novel, when everyone is forced to head north to escape the ruined cities and the polluted areas,

> Oblivia doesn't join the people with passports who were not a threat to national security. People who could pay the tax that allowed them to pass through the numerous security checkpoint on the highways. She joins instead those who were traveling incognito on unofficial and illegal crossings through the swamps. Some were former street people, others were the homeless people. (273)

Oblivia carries in her arms a cygnet refusing to fly, and she calls him Stranger – significantly. When everyone becomes increasingly disoriented during this forced migration and begins to hallucinate, she is probably saved by her own care for the cygnet. Moreover, as she could not be discovered escaping, she keeps hiding and walking under the cloud of swans moving slowly. It is this multi-species connection that saves both of them, and it is through this connection that they both gain agency and write their own story.

Conversely, the male human protagonist Warren Finch, who comes from a community of people who "wanted to be good Black people, not seen as troublemakers, radicals, or people who made Australians feel uneasy" (84) and is educated to become the first Indigenous president of Australia, will eventually lose his voice and agency. Finch is the male hero saving the world from environmental catastrophes:

> Like a modern Moses, with the same intent of saving the world from the destructive paths carved from its own history. […] He espoused correct answers for saving the lives of the Aborigines, displaced people, freedom of speech, endangered species, the environment. Enough causes to cover the entire planet. (110)

When he visits the swamp, the community commented:

> the world's foremost environmentalist was visiting – but if anyone needed to know, they had some of the world's true environmentalists living at Swan Lake. They

could bet a million dollars to think that they were not using much of the world's resources. (115)

To solve the pollution problems of the swamp, he closes down the swamp, because "there is no time for places like that" (207). He will eventually die, and his violent individualist agency will be replaced by the interconnection between Oblivia, the swans, and the land, and their reciprocal ethics of care.

Final Remarks

It has been widely stressed (Rigby 2013, Carrigan 2015, John-Putra 2018) that Alexis Wright's two most recent novels respond to what Val Plumwood has defined Western culture's "hegemonic centrism," which she considers to be "androcentric, eurocentric, ethnocentric, as well as anthropocentric" (Plumwood 2002: 101).

In Wright's fictitious worlds, women are not the silent background of male action, but they gradually gain agency and write their own stories. However, some significant differences can be observed between the two novels. While Oblivia is the main (human) protagonist of *The Swan Book*, the female characters in *Carpentaria* seem to be quite peripheral to the main action, which revolves around the male protagonists Normal and Will Phantom, Elias Smith and Mozzie Fishman. Nevertheless, the novel explores the interconnectedness between sexism, racial and environmental exploitation through the figure of Stan Bruiser, mayor of Uptown, whose only one motto is: "if you can't use it, eat it, or fuck it, then it's no bloody use to you" (Wright 2006, 34). He brags about how he has raped most black women of the Pricklebush clan, including Angel Day, Normal's wife; further, Angel Day' and Normal's daughter Girlie is sexually harassed by the corrupt local white policemen Truthful. Whilst Angel Day's attempt to escape a persistent wretched condition (she is considered a property by her husband Normal as well) is not successful – and her voice remains at best projected in the statue of the Virgin Mary that

she colours and textures into an Indigenous Australian woman who lives by the sea –
the other female character of the novel, Hope, acquires agency in the last pages of the
novel. After the arrival of the cyclone, helped by the tide and the gropers, Hope leaves
to find her husband Will Phantom:

> The groper fish circling the boat, building up speed, crossing each other under the
> boat, picking the boat up and moving it back to sea through the surging flow of the
> changing tide. Hope rowed with all her might with the ongoing tide. She was so
> blinded by her mission she did not see the gropers helping her. (498)

Kate Rigby notes that Hope's agency is different from the "autonomous individual
valorised within eurowestern liberalism (including liberal feminism)," but it is rather closer
to the "recognition of interconnectivity shared by Indigenous and ecofeminist
philosophies" (Rigby 2013: 133). Hope becomes part of a multi-species collective, just
as Oblivia in *The Swan Book*.

The novels also respond to the crisis of imagination in dealing with climate change, and
to the anthropocentric conventions of popular cultural responses to the Anthropocene.
The Swan Book ends with some very significant lines about the swan's language: "you
had to hear those soothsaying creatures creating glimpses of a new internationally
dimensional language about global warming and changing climates for this land. Really
listen to what they were saying" (Wright 2013: 298). Similarly, *Carpentaria*'s conclusion
places the language of the land at its centre:

> Neither [Norman Phanton and his grandson, Bala] spoke, because neither would
> have heard the other. It was so much better to listen to the mass choir of frogs –
> green, grey, speckled […]. It was a mystery, but there was so much song wafting
> off the watery land, singing the country afresh. (Wright 2006: 499)

This "new language" writes the land into fiction: the Country is not just the background
for human action, or, most importantly, a *terra nullius* and an inert resource to be
developed and improved for profit, but it is rather an active, vibrant, and living land with

agency. Quoting *Green Utopias*, by Lisa Garforth (2018): "a truly ecological thought should not offer the beauty of landscape or harmony with nature but instead unsettle us by gesturing the enormous scale of an interconnected universe and the uncanny experience of living without stable ontological categories" (146).

Alexis Wright also responds to the "unevenness of that *unsettling* prefix *anthropo"* (Crane 2019 5) that compounds the term Anthropocene and fails to consider that some bodies are more vulnerable than others to human-induced climate change. By casting a new light on the continuities between colonial exploitation and climate change, the author questions and challenges the depoliticising universalism intrinsic in the Anthropocene. Both *Carpentaria* and *The Swan Book* address the alignment of ecological imperialism, environmental racism, and the denial of rights to Indigenous Australian people, and give voice to the long-term processes of slow violence that lead to final extreme catastrophes, amplifying the marginalised and forgotten experiences of those who are already experiencing the climate apocalypse.

However, unlike the hopeful portrayal of the power of the Country represented in *Carpentaria* (Gleeson-White 2016), *The Swan Book* is an overwhelmingly dystopian novel ending with the death of the black swans. If *Carpentaria*'s utopian conclusion is facilitated by the spiritual and militant resistance to environmental damage, *The Swan Book* portrays the bleakness and despair that will predominate in the future if the voices of those who have cared for the land the longest keep going unheard. The reasons behind what we can consider by all odds an environmental apocalypse, as Holgate notes, might be related to "a lack of advancement in Indigenous Australian affairs on a political front in the early twenty-first century as well as increasing global anxiety about climate change" (61).

It becomes clear, then, that the events described in Wright's novels are urgently real, and that the term Aboriginal realism used to describe her fiction is rather appropriate.

As recent record-breaking heatwaves have revealed, Indigenous Australian people living across central Australia fear becoming the country's "first climate refugees" (Allam and Eveshed 2019: online). The recent Australian bushfires crisis has added another layer of trauma to multiple Indigenous communities, whose cultural identity comes from the land and grieves for non-human relations as well. As Williamson, Weir, and Cavanagh have stated (2020), this sense of "perpetual grief' also stems from 'the as-yet-unresolved matter of the invasion and subsequent colonisation of our homelands" (online), although the long-term consequences of colonisation have rendered them accustomed to living with environmental damage. Calls for the reintegration of Indigenous Australian fire management techniques to lessen the damage of the fire have grown louder. And yet, as Alexis Wright has pointed out in a recent interview, Indigenous Australian knowledge "of caring for the land is questioned or largely ignored" (2020). Similarly, in *The Swan Book* no one listens to the voices of those who have cared for the land and adapted to changing climate conditions for millennia. The novel is replete with forced silences, muteness, and denial of Indigenous voices, hence the final invitation to listen to the language of the swans. It is only here, outside the story and the dominant narrative of human and non-human exploitation, that a form of resistance is possible.

6. "A Queer Family of Companion Species": Nnedi Okorafor's *Lagoon*

The interrogation of Anthropocentric values and the unequal impacts of climate change along the lines of social power are among the core themes of *Lagoon* (2014), published in 2014 by the award-winning author of African-based science fiction Nnedi Okorafor. Her second novel for an adult audience portrays a powerful image of the tragic impact of oil culture on Nigerian communities and marine ecosystems, while at the same time casting a new light on the consequences of neo-colonial developmentalism and on multiple sites of othering (resulting from gender, racial, and species differences) intersect with one another.

Across three different acts, the novel revolves around an alien invasion in the city of Lagos and begins in the liminal zone of Bar Beach: "a perfect sample of Nigerian society. It was a place of mixing. The ocean mixed with the land and the wealthy mixed with the poor" (1). Over the course of 55 chapters, we follow the interactions of the alien ambassador Ayodele with three human characters: a marine biologist named Adaora, a hip-hop artist from Ghana named Anthony, and a Nigerian soldier named Agu. We soon learn that Ayodele has shape-shifting abilities that allow her to move between human, animal, and inanimate forms, and that Adaora, Anthony, and Agu have special abilities: Adaora can breathe underwater, Agu has superhuman strength, and Anthony has amazing communicating skills that allow him to send sound waves of great power. A Christian priest, Adaora's husband Chris, abusive military men, and members of an LGBT organisation are among the secondary characters. As in *Carpentaria* and *The Swan Book*, moreover, the novel pullulates with non-human characters, such as a vengeful swordfish and a spider. The heterogeneous

community that the novel puts together undertakes a race through Lagos and against time to save the city and possibly the entire planet from pollution and oil consumption: this chapter explores *Lagoon*'s possibility of a rupture with fossil capitalism but also with human exceptionalism, structures of othering, and mutually reinforcing dualisms that prevent us from acknowledging the interdependent agency of humans and nature.

From Afrofuturism to African Futurism

From its very beginning, the novel places Lagos as the most important focal point of the narrative, exploring the possibilities of an alien invasion in Nigeria's largest city and thus destabilising the genre of science fiction, where aliens are usually allowed to invade New York, Los Angeles, or London:

> Welcome to Lagos, Nigeria. The city takes its name from the Portuguese word for "lagoon." The Portuguese first landed on Lagos Island in the year 1472. Apparently, they could not come up with a more creative name. Nor did they think to ask one of the natives for suggestions. And so the world turns, masked by millions of names, guises, and shifting stories. (Okorafor 2014: prologue)

What is also implied from this incipit is the postcolonial ambition of the novel, which immediately sheds light on European settlers' occupation and renaming of the city without consultation with the native population. After the aliens' landing, the narrative remains in Lagos for the whole development of the plot. As suggested by Hope Wabuke, unlike *Black Panther*'s post-credits scene where King T-Challa addresses the United Nations in Vienna about opening up Wakanda's advancements in technology to the world – no longer wanting it to be an isolationist country – in *Lagoon* "there is no move to undercut the Africanfuturist gaze with a location change to a city such as New York or Los Angeles, or any other place in the United States and the West" (2020).

Lagoon, indeed, can be read as an example of the Africanfuturist gaze, which Okorafor distinguishes from the Afrofuturist one: while the former is freed from the white Western gaze, the latter still privileges a Western perspective. As stressed in chapter 4 of this dissertation, the term Afrofuturism was first introduced in 1993 by Mark Dery in the essay "Black to the Future: Interviews with Samuel Delany, Greg Tate, and Tricia Rose." His conception of Blackness could not exist outside its relationship to whiteness and 400 years of violation, with the long history of Blackness that existed before such violation being erased: "can a community whose past has been deliberately rubbed out, and whose energies have subsequently been consumed by the search for legible traces of its history, imagine possible futures?", he asks (180). The imagination of Blackness as tied to centuries of oppression by whiteness makes it difficult to even imagine the possibility of free Black futures.

As a Black diasporic writer, Okorakor felt the urgent need to move away from Afrofuturism and come up with a more accurate word: the term Africanfuturism was coined because "the term Afrofuturism had several definitions and some of the most prominent ones didn't describe what [she] was doing," and she needed to "regain control of how [she] was being defined" (2019). She further claims that she is

> an Africanfuturist and an Africanjujuist. Africanfuturism is a sub-category of science fiction. Africanjujuism is a subcategory of fantasy that respectfully acknowledges the seamless blend of true existing African spiritualities and cosmologies with the imaginative.
> […]
> Reminder: Africa is not a country, it's a diverse continent. I'm also aware that it's a construct (and an ethereal thing who travels across space and time); I'm just rolling with it.
>
> […]
>
> Afrofuturism […] is centered on and predominantly written by people of African descent (black people) and it is rooted first and foremost in Africa. It's less

concerned with "what could have been" and more concerned with "what is and can/will be". It acknowledges, grapples with and carries "what has been". Africanfuturism does not HAVE to extend beyond the continent of Africa, though often it does. Its default is non-western; its default/center is African.

[…]

An example: Afrofuturism: Wakanda builds its first outpost in Oakland, CA, USA.

Africanfuturism: Wakanda builds its first outpost in a neighboring African country. (2019: online)

What emerges from this passage is a frustration with a term chosen by a white scholar to define Black experience, and an urgent need for a new language capable of acknowledging Black diasporic writers' longtime roots in the African continent as an inextricable part of their existence as well as literary work. In her TED Talk "Sci-fi stories that imagine a future Africa" (2017), Okorafor narrates personal anecdotes about her relationship with classic American science fiction stories, in order to highlight that she wasn't able to see the reflection of anyone who looked like her – a girl born to two Nigerian immigrant parents and raised in the United States – in those narratives: all she could see was xenophobia, colonisation, and the mistake of reducing aliens to others. Despite having received her education in one of the birthplaces of science fiction, it was thanks to her trips back to Nigeria that she started experimenting with this genre: it was her Nigerian heritage that inspired her. For Africans, she claims, homegrown science fiction can inspire new technologies, ideas, and sociopolitical changes; most importantly, it can be a "will to power," as "what if?" can be a very powerful question. What if, for example, a marine biologist with an impressive career helps to deconstruct the opposition between a perpetually background Africa and visions of progress that centre around the white Western gaze? What if the concerns of the African diaspora are addressed through a technoculture lens?

Decolonising Fist-Contact Narratives: Alien Invasion of Lagos

The very possibility of an alien invasion of Nigeria seems indeed implausible, even to some of the main characters. In fact, despite acknowledging that "much of the world's most famous extraterrestrial material, mainly meteorites, has fallen right here. In Nigeria," (2014: 19), as suggested by Adaora, when it comes to aliens, it is usually New York or London to be invaded. "If there were aliens, they certainly wouldn't come to Nigeria," (40) we learn from Father Oke, a corrupt preacher of a local diocese; other characters believe them to be part of Boko Haram or "other terrorist groups from the north" (195). Their main reaction, thus, is one of disbelief, as emerges from an interview released by a Lagos corporal:

> We have never had that nonsense in Lagos. But we are treating this as an attack," he said. "An attack? Against Nigeria?" "Yes," he said, turning to the newscaster. "By who?" "We don't know," he said. "We don't know anything. But did the Americans know who destroyed their World Trade Towers when it first happened?" (21)

Despite the implausibility of an alien intrusion, however, Lagos' inhabitants know all too well what it means to be invaded: crucially, the novel specifies that "this wasn't the first invasion of Nigeria, after all" (138). This line immediately entwines the unusual alien incursion to Nigerian history of colonisation; Okorafor's reference in the epigraph of the novel to the landing of the Portuguese on Lagos Island in the year 1472 goes in the same direction.

As such, *Lagoon* reverses science fiction's – and, particularly, first contact narratives' – long-standing obsession with colonialism, imperial adventure, and the slave trade, a trope that has been thoroughly explored by John Rieder in his ground-breaking work

Colonialism and the Emergence of Science-Fiction (2008).[61] Science fiction, he argues, came into visibility during the "period of the most fervid imperialist expansion in the late nineteenth century" (22) and "in those countries most heavily involved in imperialist projects – France and England" (22-23), and became popular in the United States, Germany, and Russia as soon as they entered the imperial competition. One of the first and most iconic examples of the relationship between science fiction and the ideological and political realities of colonialism, and the subsequent abuse of colonial metaphors in science fiction narratives, is H. G. Wells' *War of the Worlds* (1897), which begins with a comparison between the Martian invasion and the colonial occupation of Tasmania:

> we men, the creatures who inhabit this earth, must be to them [the Martians] at least as alien and lowly as are the monkeys and lemurs to us. […] And before we judge of them too harshly we must remember what ruthless and utter destruction our own species has wrought, not only upon animals, such as the vanished bison and the dodo, but upon its inferior races. The Tasmanians, in spite of their human likeness, were entirely swept out of existence in a war of extermination waged by European immigrants, in the space of fifty years. Are we such apostles of mercy as to complain if the Martians warred in the same spirit? (2)

What Wells asks from his English readers – the colonisers – is to imagine themselves as the colonised. Colonial metaphors became more and more frequent in science fiction stories that followed *War of the Worlds*. Many of these stories, as suggested by Berlatsky (2014), represent a non-white, foreign other reversing on white Western people the process of colonisation. Such reverse colonialism can be animated by an anti-colonial stance, as in the case of Octavia Butler's *Xenogenesis* Trilogy (1987-1989, republished under the current title of *Lilith's Brood* in 2000), which crosses the identities of colonisers

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[61] On the relationship between science fiction, colonialism, and the Black Atlantic slave trade see also Bould 2015, Grewell 2001, Haywood Ferreira 2013, Kerslake 2007, Langer 2011, and Lavander III 2011.

and colonised, but can also be a justification for imperialism (Berlatsky provides as an example *Ender's Game*, both 1985 book and 2013 movie).

As for *Lagoon*, Okorafor states in the novel's acknowledgements that it was written as a response to South African science fiction film *District 9* (2009, directed by Neill Blomkamp): despite being the first African film to bring together science fiction and postcolonial issues (Adejunmobi 2016), it represents Nigerian characters and stereotyped and racialised figures with cannibalistic tendencies. Okorafor thanks *District 9* for both "intriguing" and "pissing [her] off" to such an extent that she "started daydreaming about what aliens would do in Nigeria." *Lagoon*, she adds, "was birthed from my anger at *District 9*, but it quickly became something else entirely" (293).

The alien arrival in *Lagoon* has nothing to do with colonisation and violence: as the alien ambassador Ayodele underscores, they do not seek Nigerian oil or resources, but they landed there to nurture a polluted world, and, specifically, a polluted ocean (107): "we do not want to rule, colonize, conquer or take. We just want a home" (214). What is also made clear is that the aliens do not land in the city of Lagos by chance: "If they'd landed in New York, Tokyo or London, the governments of these places would have quickly swooped in to hide, isolate and study the aliens. Here in Lagos, there was no such order" (58); in other words, the subjugation of the Other is a prerogative of US science fiction.

Nigeria's Reliance on Oil and the Genre of Petrofiction

The alien arrival is therefore linked to a necessary process of renewal: the key to Lagos survival is the purification of the ocean from all the offshore drilling facilities. *Lagoon* is therefore set up as a "petrofiction," a term that originated in Amitav Ghosh's 1992 review essay of *Trench*, a novel published in 1991 by Abdelrahman Munif, best known for the oil novel *City of Salt* (1984). In his review, Ghosh laments the absence of oil from the realm of literary writing, particularly the novel, despite its omnipresence in U.S. everyday

life. There is as yet not a "Great American Oil Novel," he argued in 1992: the main reason is not a lack of environmental consciousness, but rather the inconceivability and slipperiness of the idea of oil. Since Ghosh's coinage, the term has gained popularity among scholars of ecocriticism, indicating both literary texts with oil production as a subject matter, and novels in which the theme is tackled obliquely.[62] In *Living Oil* (2014), the first monograph on petrofiction in American Studies, Stephanie LeMenager argues that oil is a subtext for all modern novels, if we consider that it enables the very existence of modernity. Borrowing from the process of ultradeep drilling – that is, drilling in waters deeper than 1500 metres, a process implying an unprecedented potential for catastrophic destruction – she claims that oil is "psychologically ultradeep, the affects and emotions lodged in gasoline fuel, cars, and in the thousands of everyday items made from petroleum feedstock, from lip balms to tampon applicators, dental polymers, and aspirin tablets" (13). What follows is that novels can be about oil even if they do not explicitly address the subject. Being modernity saturated by oil – LeMenager talks about "petromodernity" (71), Szeman about "petroculture" (2013: 148) – the possibility of a rupture with oil consumption is even difficult to imagine.

The pervasive violence of the oil trade in Nigeria has been exposed and analysed by Rob Nixon in the chapter from *Slow Violence and the Environmentalism of the Poor* about Nigerian writer and activist Ken Saro-Wiwa, titled "Pipedreams." The scholar states that Nigeria's dependence on exported oil for its economic survival is "absolute" (2011: 106), and that Shell is the largest foreign stakeholder. As if this was not enough, the so-called "Delta of Death" (Nixon 2011: 105) is one of the most polluted places on the planet, according to a 2011 United Nations report: from 1970 to 2000, indeed, there were over seven thousand oil spills that created an ecological disaster in the region

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[62] The emerging field of study that aims at responding to growing concerns about fossil fuels and climate change using humanities methodologies is termed Energy Humanities. See https://www.energyhumanities.ca. Accessed: January 26, 2022.

(Dixon 2011). Moreover, the distribution of oil wealth is extremely unequal, as it "goes to a mere 1 percent of the populace, almost none of whom belong to the micro-minorities who inhabit, ingest, and inhale the ecological devastation" (106-107). Ken Saro-Wiwa has long protested what he termed "ecological genocide" (1992) against the Ogoni people, one of the micro-minorities dwelling in the Niger Delta and constituting 0.4 percent of the Nigerian population. Because of the country's reliance on oil, therefore, ecological disaster and social inequalities are closely interlaced.

Lagoon provides a harsh critique of Nigerian petroculture and attempts to imagine an alternative future where a post-petroleum Nigeria would be possible. The perspective adopted, though, is a peculiar one: from its very first chapter, the novel denounces the pollution of the water using the point of view of an enraged swordfish that aims to sabotage a seawater pipeline.[63] Okorafor thus gives voice not only to the human victims of Nigerian petroculture, but also to the marine animals who might be even more vulnerable to the slow violence of human-induced environmental disaster. Oceanic pollution is emphasised from the first lines of the prologue, narrated by the swordfish:

> They brought the stench of dryness, then they brought the noise and made the world bleed black ooze that left poison rainbows on the water's surface. She often sees these rainbows whenever she leaps over the water to touch the sun. Inhaling them stings and burns her gills. (2014: prologue)

Those who bring the rainbows are also "burrowing and building creatures from the land and no one can do anything about them. Except her. She's done it before and they stopped for many moons. They went away. She is doing it again" (2014, prologue). The swordfish is the one who triggers the first explosion, piercing an underwater oil hosepipe, the "giant dead snake" which starts blowing "black blood." The second explosion is

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[63] There are several other excerpts in the novel which focus on Nigerian petroculture and the subsequent pollution of oceanic water, such as the moment in which Kola, Adaora's daughter, reports to Ayodele that "the waters are dirty and dead because of oil companies," as her mother says (42).

caused by the aliens and targets the actually existing vessel FPSO (Floating, Production, Storage, Offloading) Mystras, built in 1976 and currently sailing under the flag of Nigeria. The attack removes pollution from the ocean by populating it with monstruous sea creatures:

> Despite the FPSO Mystras's loading hose leaking crude oil, the ocean water just outside Lagos, Nigeria, is now so clean that a cup of its salty-sweet goodness will heal the worst human illnesses and cause a hundred more illnesses not yet known to humankind. It is more alive than it has been in centuries and it is teeming with aliens and monsters. (2014: prologue)

By the end of the novel, Okorafor explores the possibility of a post-petroleum Nigeria: "all the offshore drilling facilities would be destroyed by the people of the water. Even in the delta, all was lost. Oil could no longer be Nigeria's top commodity. It could no longer be a commodity at all" (266).

From Climate Fiction to the Blue Humanities: Okorafor's Oceanic Futurism

Besides being relevant for the petrofiction label, *Lagoon* can also be interpreted within a climate fiction framework, due to its focus on the destruction of the marine ecosystem in the Lagos Bay, its celebration of interspecies connections, and its figuring of the ocean as a catalyst for the survival of Lagos. Seawater, in particular, is a central force of the novel, together with oil (Jue 2017: 176). One need only consider the epigraph ("The cure for everything is saltwater – sweat, tears, or the sea") and the prologue, which is narrated by a swordfish and therefore endows marine creatures with a fundamental role in the rebellion against oil companies. When the four-foot tidal wave rises up and overcomes the three human protagonists, signalling the arrival of the alien emissary Ayodele, Adaora immediately thinks about the phrase "Aman iman," which means "water is life" in the Tuareg language of Tamashek, as she learnt when she worked with a Tuareg man on a diving expedition. Far from being a threat, the ocean becomes a space of intimacy,

and "despite the pain in her lungs now and the swallowing darkness, she smiled. Aman iman" (6). Adaora's attachment to seawater is also described through her capacity to transform into a fish: "she'd been floating and breathing beneath the water in whatever contraption they'd built down there on the reef-like structure," her arm becoming "coated with lovely iridescent fish scales and her fingers webbed together" (18). Finally, when Ayodele makes her first appearance, she is described in relation to Mami Wata, the water spirit celebrated throughout much of Africa and the African Atlantic: "the strange woman creature silently ran back to the water and dove in like Mami Wata" (7). The first name Adaora thinks of for alien emissary is indeed Miri, but she then dismisses it in favour of Ayodele as the "name needed to be more subtle than the Igbo word for 'water'" (12).

What the previous paragraph reveals is the centrality of the ocean, represented in *Lagoon* as a space where new ecological imaginaries can proliferate. This coincides with an extensive and interdisciplinary turn to the ocean under the banner of the so-called blue humanities, with the undersea world deemed as a site for rethinking epistemological and methodological stances of sustainability. From archaeology's offshore move to environmental history's recent attention to species of fish and marine mammals, an increasing number of theoretical, literary, and artistic projects are now "thinking with water" (MacLeod *et al*., 2013), expanding environmental imaginaries beyond forests and terrestrial spaces. Humanities' attention to the aquatic Anthropocene, which requires the mediation of science and technology studies since "most aquatic zones, species, and topics exist beyond human domains (Alaimo 2019, 429) has also been called "hydrocriticism" or the "oceanic turn" (Winkiel 2019: 1). As suggested in chapter 2 of this dissertation, environmental humanities and material feminism scholar Stacy Alaimo points out that oceanic depths resist the flat mapping of the Earth through satellite images that favour a comfortable and disembodied perspective, to propose instead an immersed and never omniscient position on worldly entanglements. In other words, "the

substance of the water itself insists on submersion, not separation" (Alaimo 2016: 161). Lagoon's ocean, indeed, is not a space of absolute alterity, but rather a site that provokes a recognition of human life as always enmeshed with the more-than-human world, with seawater represented as a fluid that trans-corporeally traces the material interchanges between human beings and the local ecology of Lagos. What is also highlighted by Melody Jue is that the ocean is a recurring element in Afrofuturism, a site where traditional cosmologies and diasporic imaginations come together after the Middle Passage (2017: 177): as such, she uses the term "Oceanic Afrofuturism" to describe Okorafor's novel, and, more generally, Afrofuturist novels where water becomes a fundamental element.

Besides foregrounding the recognition of intimate connections between humans, animals, matter, and technology that has been underscored in chapter 2, situated epistemologies, as opposed to distancing epistemologies of hyperseparation, are relevant in the analysis of Adaora's confrontation with the 'alien' Ayodele. Borrowing from feminist accounts of objectivity – such as Keller's dynamic objectivity (1995), Haraway's situated knowledges (1990), and Barad's intra-action (2007) – Jue describes as "intimate objectivity" the relationship of open curiosity through which the marine biologist approaches the presence of aliens. Feminist accounts of situated and embedded vision from below have challenged a dominant model of objectivity that ontologically separates the observed object from the disinterested and dethatched observer and proposed an embodied objectivity (Haraway) and an ontological entanglement of objects and agencies of observation (Barad). Similarly,

> intimate objectivity signals a relationship of open curiosity that does not precategorize the other – aliens, underwater cities, monstrous sea creatures, Indigenous deities – ahead of time, into the genres of science fiction, fantasy, or the folkloric, nor does it disqualify them as "unrealistic" or threatening outright;

instead, it cultivates a practice of listening to the other as a precondition for working toward common pursuits, like cleansing the ocean of oil. (Jue 2017: 175)

The laboratory scene, where Adaora asks Ayodele for a sample of her blood to analyse under the microscope, is compared by Jue with a parallel scene in Stanislaw Lem's *Solaris*, where a male scientist, Kelvin, places under a microscope the blood of a mysterious being that resembles his dead wife, and discovers that she has no real substance, as her body is not composed of visible particles. Unable to control what he cannot see, he reacts with a state of high anxiety. In *Lagoon*, on the other hand, Ayodele willingly gives the sample to Adaora despite being endowed with superior strength, and Adaora reacts with "an ache of excitement deep in her belly. 'Shit!' she whispered" (18). What she observes is nothing that resembles cellular matter:

> She's made of tiny, tiny, tiny, metal-like balls. It's got to be metal. Certain types of metal powders look like that at two hundred times. I think that's why she can . . . change shape like that. […] "The balls aren't fixed together as our cells are," Adaora said. (19)

Adaora's husband Chris and his Christian priest Father Oke, instead, react with fear and violence to the presence of Ayodele, who is described as a witch, and particularly "a *marine* witch, the worst kind." "Look at her knowledge of the water" (29), warns Father Oke. All witches are evil, adds Chris, but the marine witch is the most powerful because she can "harness water" (11). The unequal power relation between the object of study, the alien emissary, and a male gaze that could be described, using Haraway's words, a conquering and violent eye that "fucks the world" (1986, 581), is exemplified by Father Oke's attempt to tame Ayodele: "'I can help you. […] I'm trained to help you control your evil, to find grace and salvation and goodness.'" (39).

Likewise, Adaora's laboratory had been defined by her husband Chris as the "witch's den" (15) long before the arrival of the alien species. Despite being a scientist whose "world was founded upon empirical evidence, on rigorous experimentation, on data"

(152), her practice of feminist intimate objectivity allows her not only to encounter the fantastic and the alien with "a rationality that does not discredit or presume that the fantastic must be evil (as does Chris), nor that the fantastic cannot be real," but also to encounter and embrace her own "latent marine witch-like powers" (Jue 2017: 181). In other words, feminist embodied objectivity allows her not only to escape any form of pre-categorisation of the other and to rejoice over the encounter with Ayodele's alterity, but also to deconstruct her own disembeddedness from nature.

Questioning Species Boundaries and the Status of the Human Subject: the Alien, the Cyborg, and the Animal

In her chapter "The Posthuman Turn: Rewriting Species in Recent American Literature" (2011), Ursula Heise analyses three different modalities through which speculative fiction has questioned the status of human as a species and, more broadly, species boundaries: the alien, the cyborg, and the animal. Heise provides a diachronic view that suggests changing cultural concerns about the notion of the human as a species: the alien moment characterises science fiction of the 1950s, 1960s, and 1970s, the cyborg moment begins in the 1980s, and the animal moment in the mid-1990s.

Starting from a classic film such as *The Day the Earth Stood Still* (1951), she states that the arrival of the aliens is usually perceived as a threat by the human inhabitants of the Earth, who react by putting aside their internal differences to unify as a species against the extraplanetary Other. Aliens, however, can also take the opposite role "of allegorizing already existing differences between humans" (Heise 2011: 457), such as in television and film series such as *Star Trek* (1966-1969). In more recent science fiction, such as Octavia Butler's *Xenogenesis* Trilogy (*Dawn* [1987], *Adulthood Rites* [1988], and *Imago* [1989]) the allegory is much more complex and ambiguous, with the aliens being characterised as both saviours of the human species and a dominating and subjugating

colonial power forcing humans to join them in creating a new human-alien hybrid species. In this way, she shifts from the allegory of the alien as human Otherness to an evolutionary leap that ultimately transforms humans into a posthuman species identity.[64]

From the 1980s onward, science fictional definitions of the other started to be articulated through the figure of the cyborg, as in Ridley Scott's film *Blade Runner* (1982), James Cameron's *Terminator* (1984), and Paul Verhoeven's *Robocop* (1987). These part human and part machine beings, generated by advanced technology, "ask anew the old question of whether a sufficiently sophisticated machine is ontologically different from a human" (Heise 2011: 459). As emphasised by Donna Haraway in her "Manifesto for Cyborgs" (1984), "the cyborg appears in myth precisely where the boundary between human and animal is transgressed. Far from signalling a walling off of people from other living beings, cyborgs signal disturbingly and pleasurably tight coupling […] The second leaky distinction is between animal-human (organism) and machine" (152). The cyborg, moreover, as "a creature in a post-gender world" (150), offers the possibility of rethinking human boundaries in terms of gender, race, class, and geopolitics. While the encounter between the inhabitants of the Earth and beings from another planet usually forces humans to recognise some kind of greater unity, Heise stresses that the cyborg emphasises the moment of fission as well as the "potential for posthuman transformation" (Heise 2011: 461).

Finally, the environmental crisis and the loss of the planet's biodiversity have accelerated the emergency of the transdisciplinary field of animal studies, and, at the same time, increased attention to the problems of species extinction and to the implication of the distinction between human and animal. As suggested by Cary Wolf, indeed, such

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[64] Another example of a complex relationship between aliens and humans is the one narrated by Butler in the short story "Bloodchild," where a colony of humans who have escaped Earth and the insect-like lifeforms Tlics depend on one another for their very survival and accept intimacy despite their difference.

distinction lies at the foundation of many other forms of inequality between human beings, with several marginalised groups being deemed as subhuman or not fully human (2003; 2010). Such a shift from the cyborg to the animal moment in speculative fiction parallels Donna Haraway's transition from *The Cyborg Manifesto* to her *Companion Species Manifesto* (2003) and *When Species Meet* (2008), where she has "come to see cyborgs as junior siblings in the much bigger, queer family of companion species" (2003, 11), and the animal has become the crucial figure of the posthuman turn. The cyborg and the animal, according to Heise, are the result of the splitting of the alien in earlier speculative fiction into a component of technological superiority (the cyborg) and one of biological Otherness (the animal).

What emerges from her study is that speculative fiction mirrors changing cultural concerns about conventional notions and limits of the human, even though most of the novels and films that she analyses seem to attribute nonetheless "a special status to humanness" (Heise 2011: 465). With regard to *Lagoon*, I suggest that Okorafor reinterprets all these three moments, but makes a step further as the alien, the cyborg, and the animal have the same purpose of decentring Anthropocentric values and interrogating human exceptionalism.

The figure of the alien, to start with, does not aim at uniting humans as a species, helping them to put aside internal differences in the face of an extraplanetary other, but rather at harmonising humankind and aliens through the negation of interspecies difference. When Ayodele is first introduced in the novel, her otherness is immediately underscored: "In the moonlight, he couldn't clearly see the creature, but as it walked out of the water even he knew it was not human. All his mind would register was the word 'smoke'" (Okorafor 2014: 7), thinks a young boy that witnesses the arrival scene together with Adaora, Agu, and Anthony. At the same time, she is not presented as the embodiment of radical difference: glancing at Ayodele, Adaora observes that "every time she looked

at her, there was a disorienting moment where she was not sure what she was seeing. It lasted no more than a half-second, but it was there. Then she was seeing Ayodele the "woman" again" (17). Adaora, moreover, resists any kind of objectification of Ayodele:

> not "it", "her". The woman looked like someone from Adaora's family – dark-skinned, broad-nosed, with dark brown thick lips. Her bushy hair was as long as Adaora's, except where Adaora had many, many neat shoulder-length dreadlocks, this one had many, many neat brown braids that crept down her back. (10)

As for Ayodele, she is aware of the status of not-fully-human in which she is cast ("You people will call me an alien because I am from space" [31]), but at the same time she reclaims her difference as a positive self-identifier, freeing it from negative associations with extraplanetary and threatening others: "I am not a witch," she replies to Father Oke, "I am alien to your planet, I am an alien" (40). During a conversation with Adaora's daughter Kola, Ayodele makes clear that it is human exceptionalism and its justification of the superiority of the human species that identifies the other as different and inferior:

> "Are you really an alien?" Kola asked. Ayodele closed her book and looked at Kola. "By your definition, yes." "Well, how come you look human?" "Would you rather I didn't?" "Why not appear as yourself?" "Human beings have a hard time relating to that which does not resemble them. It's your greatest flaw." Kola liked this answer very much because it made sense. *In cartoons, even the animals who could talk also had to look human*. (61-62, emphasis mine)

For Ayodele, then, her own otherness is a figure of the Anthropocene (Haraway would say Chthulucene): accepting that she does not look human opens up to the possibility of encountering a member of the "queer family of companion species" (Haraway 2003: 11).[65]

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[65] Recently, Haraway has indeed claimed that most toy (or cartoons) animals are far from being biologically right, but they are rather humanoid representations, human projections identified by bodily features such as round eyes (Haraway 2020).

Furthermore, it is not difficult to read the embodiment of Haraway's description of the cyborg in the characters of Adaora and Ayodele. *Lagoon*, indeed, abounds with several examples of transgressions of boundaries between humans and animals and between humans-animals and machines: Adaora, to start with, can transform into a fish and breath underwater, as already mentioned in the previous paragraphs. Regarding Ayodele, she is first described by a witness on the beach as "smoke" but at the same time a "shape-shifter" (8); throughout the novel, she explains that she is able to blur the boundaries between herself and other organisms, mutating her own body but also everything that surrounds her: "we change. With our bodies, and we change everything around us" (40). This happens because they not only have some kind of extraterrestrial technology, but "in a way, they are technology" (22), suggests Agu. When Adaora analyses a sample of Ayodele's blood under the microscope, she finds out that she is made of metal-like balls. Over the course of the novel, she transforms into a black woman resembling the water spirit Mami Wata, into Adaora's threatening husband Chris, a monkey, a "broad-shouldered, stocky white man in a blue uniform" (211), a lizard, Karl Marx, and a dolphin, and she transforms chaos into a plantain tree. Adaora and Ayodele's metamorphoses resemble that fusion of animality, magic, and technology that characterises Haraway's cyborg.

More importantly, both Haraway and Okorafor seek to free the figure of the cyborg from its masculinist and militarist foundations, that can be observed in works such as *Terminator* and *Robocop*, and reinterpret it as a feminist utopian figure of possibility (Heise 2011: 459). In her essay on "becoming animal" in black women's speculative fiction (2008), Madhu Dubey provides several insights that may be relevant in the analysis of *Lagoon*: examining the device of animal metamorphosis in Octavia Butler's *Wild Seed* (through the character of Anyanwu) and Nalo Hopkinson's *Midnight Robber* (looking at the character of Tan-Tan), Dubey observes that the trope of becoming animal

recurs with rising frequency in women's science fiction published from the 1980s. In particular, Afrodiasporic and Euro-American women's science fiction uses the trope of shape-shifting not only to explore the implications of black people[66] and women's association with animals, but also to critique the dualistic ideology of modern science and the hierarchical conceptions of gender and race differences. Dubey draws on feminist critiques of science fiction as a genre grounded in the opposition between a feminised nature and a masculinist science: women, being considered the others of modern rationality, are at best authors of the 'soft' genre of fantasy, a genre driven by the antiscientific principles of magic, whilst the higher genre of science fiction, dealing with 'hard' sciences, is a prerogative of men. She further states that Afrodiasporic and feminist writers of science and speculative fiction like Butler and Hopkinson associate the trope of animal metamorphosis to magical modes of knowing, with the aim of calling "into question dualistic and overlapping oppositions between nature and culture, magic and science, animal and human, body and mind, female and male, European and African, and so forth" (2008: 35).

Butler and Hopkinson's elaboration of an "alternative feminist epistemology grounded in empathy and embodiment" (36), that attempts to deconstruct the distinction between female magic and male science, resonates with Okorafor's *Lagoon*: the character of Adaora, in particular, evolves from being a scientist focused on "facts" ("she'd never believed in the mysterious […]. She was a scientist. Her world was founded upon empirical evidence, on rigorous experimentation, on data. […] She studied the ocean and its creatures. She calculated, documented, observed. She wrote articles for academic journals and was respected in her field" [151-152]) to a transgressive subject able to overcome the common belief that her abilities as a scientist and as a 'witch' are

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[66] Women's identification with nature has been widely analysed in the first part of this dissertation; for a comprehensive analysis of African and African American people's association with animal nature, see Bennett 2020.

mutually exclusive. Together with Ayodele, moreover, she overcomes the opposition between masculine technology and a feminine and animalised body.[67] The cyborg identity that emerges from this transgression of bodily boundaries complicates any comfortable construction of the human subject as the measure of all things, and defamiliarises the distinction between human and non-human. As suggested by Allison Mackey, Lagoon "exposes the modern fantasy of human 'disembeddedness' from nature for what it is: a dangerous illusion" (2018, 535): using Haraway's words, "we have never been human" (2004: 1).

The non-human figure identified by Heise that we mostly encounter in Lagoon, however, is the animal. As observed in the previous paragraphs, in the opening chapter of part I the disaster of human's oil drilling in the bay of Lagos is first observed from the perspective of a swordfish, which immediately becomes a defender of the polluted environment; similarly, acts II and III begin with chapters narrated by a tarantula and a bat, respectively. Both Adaora and Ayodele, moreover, cross the threshold between the human and the animal sphere: the former by accepting her ability to become "half fish and half human" (255), and the latter by transforming herself into several animals. What is implied by this interrogation of anthropocentric values is that animal nature, far from being identified as degenerate, is instead a moral and ecological conscious alternative to humankind's destructive attitude towards the environment. At first glance it may seem that the animals who decide to fight back are characterised as monstrous others: as soon as the swordfish sabotages the pipeline, she claims that "now she is no longer a great swordfish. She is a monster" (6); after the aliens' attack removes pollution from the ocean, the seawater outside Lagos in described as "teeming with aliens and monsters" (6); toward the end of the novel, the narrator states that "today, as the sun rises, there

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[67] It is worth mentioning here that Okorafor gives the power to i-shift to another of her heroines, the protagonist of her most renowned novel *Who Fears Death* (2010).

may as well be a sign on all Lagos beaches that reads: 'Here There Be Monsters'. This has always been the truth, but today it is truer" (222). It soon becomes clear, however, that it is humans who are the monsters, to the point that Ayodele abandons her human appearance after having witnessed several scenes of human violent domination and exploitation over what is constituted as Otherness: "Ayodele had changed herself into this creature an hour ago because she'd decided that she no longer wanted to be a human being" (146).

I therefore argue that the three moments of boundaries transgression identified by Heise (alien, cyborg, and animal), rather that signaling a progress from the Anthropocentric purpose of uniting humans as a species to the posthuman turn spurred by the environmental crisis, are all reinterpreted in Okorafor's *Lagoon* as a wide and thorough critique to Anthropocentric values and human exceptionalism. From the alien Ayodele to the vengeful swordfish, from alive and agentic oceanic waters to female cyborgs, all these figures of absolute alterity concur to celebrate interspecies connections in which the other is never precategorised.[68]

With regards to inter-species connections, I further suggest that it is possible to read a parallel between *Lagoon* and *Pumzi*'s assemblage of woman-tree-water analysed in chapter 4: through the course of the novel, we learn that Ayodele is not only capable of transforming herself, but she can also mutate her surroundings. This becomes clear when she transforms the remnant of a fight outside Adaora's house into a plantain tree:

The wet piles of meat, the scattered clothes, even the spattered blood, were gone as though they had never been there. In their place was a plantain tree, heavy with

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[68] The importance of connection and communication among all forms all life can also be observed in other works published by Okorafor, such as the graphic story *LaGuardia*, published in 2019. Its front cover is particularly relevant for the present discussion, as it shows humans, aliens, and animals attending a demonstration for the rights of non-human populations. The front of the cover, moreover, features a Nigerian pregnant woman, presenting an intersectional viewpoint and alluding to the importance of reproductive rights in the fight for equality and justice. See: https://www.instagram.com/p/B-4j5OclEqW/. Accessed: January 26, 2022.

unripe plantain. […] Ayodele had taken the elements of oxygen, carbon, hydrogen, nitrogen, calcium, phosphorus, potassium, sulfur, sodium, chlorine and magnesium that had been Benson[69] and the other soldiers and rearranged them into a plant. (132)

With the help of the metal-like balls that make up her body, she creates a configuration of human and non-human hybridity that seems to respond to ecofeminist (or ecowomanist) theorisations of inter-species nurturing. Such recognition of interconnectivity is also close to Alexis Wright's *Carpentaria* and *The Swan Book*, where the female human characters Hope and Oblivia acquire agency by becoming part of an inter-species collective.

Queer Ecologies and Hierarchies of Humanness

Besides focusing on creating and connecting inter-species communities that respond to single hero stories of solving climate change, *Lagoon* works against hegemonic constructions of the Anthropocene as it sheds light on the relationship between climate change and capitalist neocolonialism on the one hand, and structural inequalities generated by patriarchy, cisnormativity, and heteronormativity on the other. The race against time undertaken by Ayodele, Adaora, Anthony, and Agu to save the city of Lagos and the whole planet, indeed, intersects with several episodes of gender-based violence. Adaora's husband Chris, to start with, is described from the very beginning as an abusive man, whose coercive and threatening behaviour persuades her to escape from what she recognises as domestic violence. When the meteorite hit the ocean, Adaora

was here at Bar Beach because her loving perfect husband of ten years had hit her. Slapped her really hard. All because of a hip-hop concert and a priest. At first, she'd stood there stunned and hurt, cupping her cheek, praying the children hadn't

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[69] A corporal involved in the fight.

heard. Then she'd brought her hand up and slapped him right back. Shocked into
rage, her husband leaped on her. (2)

As the story unfolds, it turns out that the hip-hop concert she was planning to attend is Anthony's, while the bishop Father Oke is an overfamiliar figure whose religious fundamentalism is marked by misogyny and homophobia. He is the one who instructs Christ to "slap his wife 'in the name of Jesus" (38), warns him against women who turn to witchcraft like Adaora and Ayodele, and, more generally, advises him to "avoid the appearance of contention; women thrive on that" (30). Women, according to Father Oke, are "weak vessels. It is identified in the Bible. Your Adaora is a highly educated biologist but she's no different from the others. She could not change herself if she tried" (29). In the meantime, gender violence erupts in different parts of the city, perpetrated by soldiers, policemen, and even a caporal who justifies his sexual aggression by arguing that the victim was "drunk" and "practically spreading her legs" for him (75). Through the same characters, violence takes the form of homophobia against members of the Black Nexus, the "only LGBT student organizations in Nigeria" (65): Father Oke, indeed, gives sermons on the "evils and filth of homosexuality," equates "homosexual activity with bestiality" (66), and leads a Christian procession that attacks the members of the LGBT organisation that gathered outside Adaora's house in order to meet Ayodele. Oke and his fellows, notes a member of the Black Nexus, represent the kinds of people that "always showed up whenever the masses stopped 'suffering and smiling'" (93) and attempted to challenge heteronormativity.

Besides exposing how gender hierarchies are constructed in society, *Lagoon* imagines a future that is liberated from oppressive systems, intersecting Afrofuturism and queer theory at the point where both question "long-held ideas that have come to be deemed normal" (Ncube 2020: 3) and challenge the status quo. As the perspective of queer ecologies suggests, sexual norms "constitute and regulate hierarchies of humanness" (Luciano and Chen 2015: 186) and the queer "has never been human" (183). In this

context, Ayodele's malleable identity functions as a destabilising force, in that she defies any normative and hegemonic conception of fixed gender identity and challenges tacit heteronormative assumptions. In more than one instance, she is described by the narrator as a fluid liminal character: "this was the most interesting person/thing/whatever she'd ever met" (62), "this woman . . . man . . . whatever" (67), "this woman, thing, whatever she was" (80). Her shape-shifting abilities, moreover, help readers to imagine a future that is liberated from long-held ideas about gender and sexual identities as well as from alleged complementary binarisms between male and female, masculine and feminine, biological sex and gender/sexual identities. As suggested by Gibson Ncube, as it dismantles "a deep-rooted system which humanity has come to consider the correct way of being and of relating to 'otherness'" (2020, 5), Ayodele's shape-shifting is deemed dangerous by those most involved in the status quo, such as Father Oke and Adaora's husband: "if the woman was an alien who could shape-shift, she wasn't just a woman. And maybe that made her dangerous" (51). Non-normative subjectivities such as the young members of the Black Nexus, on the other hand, relate to Ayodele and are empowered to come out and become visible: "the Black Nexus can come out of secrecy for this. Who better to understand than a shape-shifter?" (Okorafor 2014: 68). Crucially, not only the notion of the human is interrogated in its relation to the queer, but Ayodele also transgresses the human/non-human divide, complicating any comfortable distinction between human and the perceived inhumanity of the other.

Final remarks: Imagining the Rupture

Lagoon's subversion of value systems that place the humanistic subject as the measure of all things does not imply a simplistic reconciliation between the humans, the animals, and the surrounding environment. The aliens' merging with the ocean, indeed, creates powerful and huge sea creatures which subsequently take revenge on humans for the

pollution of their aquatic homes: "The sea creatures. They wanted the water to be "clean".

"Clean" for sea life . . . which meant toxic for modern, civilized, meat-eating, clean-water-drinking human beings" (242). The main target of this much-needed cleansing of the ocean is marine life, namely all the plants, animals, and other organisms that live in the salt water. Such transformation reveals a contrast between animals' ecological consciousness – towards the end of the novel, Adaora speaks with a giant swordfish who "spoke like a member of that group Greenpeace!" (256) – and the subjugating nature of human enterprise: thanks to the intervention of the aliens, humans will no longer be able to "subsume nature as means to dominate both it and themselves" (O'Connel 2016: 305).

As Allison Mackey points outs, however, Okorafor does not suggest that collective change can only be achieved through the intervention of an "alienus ex machina" (2018: 535): the rupture with a system based on Anthropocentric values, extractivism, and systemic violence, is helped by a joint action involving Adaora, Anthony and Agu, animals, and other beings of Nigerian folklore that have "always been there. Beneath the surface" (Okorafor 2014: 252), as stated by Adaora. Anthony's contribution to the deep transformation of society, to start with, comes from his ability to harness what he refers as the rhythm, a kind of energy coming from the Earth that allows him to affect people. The rhythm, which is also the reason why he is a successful hip-hop singer, is presented as a connection with matter, other species, but also the cosmos:

> Those . . . creatures that Anthony was having a hard time separating from himself. He could still hear their song, still hear the beat of their drums; yes, he could still feel them. They were deep in the ocean, just off the coast of this great megacity called Lagos. He felt them in a way he'd never felt anything before. Because they were still with him. They were listening through him. They were hearing, seeing and feeling with him. Nevertheless, he was still himself and when he got angry, he got . . . mad. When he was mad, he would take from everyone around him. He would take from the earth. From the very ground beneath his feet. (154)

What this passage implies is a deep bond between humans and the vital force of living matter that Rosi Braidotti would call *zoe*, "the dynamic, self-organizing structure of life itself" (Braidotti 2013: 60). Anthony defines these creatures the "Elders from the stars" (Okorafor 2014: 252), suggesting that this kind of energy has always been there. His rhythm, moreover, is linked to the primordial story-weaving spider Udide Okwanka, part of Igbo mythology,[70] who claims: "I know the one who wove [Anthony's] rhythm. Anansi is my cousin. Anthony has always been within my reach" (285).[71] Furthermore, Adaora's marine witch-like abilities are associated in the novel with Mami Wata, the "goddess of all marine witches" (229); Ayodele too is frequently described in relation to Mami Wata, as already stated in the previous paragraphs. As pointed out by Melody Jue, the ocean in *Lagoon* is not simply a space of alterity, but also an ancient and familiar element of Nigerian traditional cosmologies (2017: 173). As such, Nigerian deities cooperate with aliens, Indigenous animals, and the trio of human unlikely heroes to regulate and cleanse the ocean from pollution. The African Futurist message of the novel is quite clear: Africa is seen as a guide and fulfils an important role in the resolution of the environmental crisis, which is also seen as a matter of social injustice.

The post-petroleum society described towards the end of the novel, when the ambassador Ayodele finally manages to persuade Nigeria's president that the oil could no longer be the country's top commodity – *"it could no longer be a commodity at all"* (Okorafor 2014: 266) – allows readers to imagine the possibility of a rupture with oil consumption. This rupture, however, is not a realistic roadmap towards a more utopian society, nor a detailed description of the process that can lead to the end of capitalism. As pointed out by Jue, "imagining that this rupture has already occurred frees Okorafor from explaining how the rupture might occur, enabling her to venture into the important

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[70] Later in the text, we learn that Udide is the real narrator of the story.
[71] Anansi is a West African god who often takes the form of a spider. He is deemed to be the god of all knowledge of stories.

work of world-building and imagining new forms of postcolonial, feminist science in its foamy wake" (2017: 184). *Lagoon*'s rupture, spurred by the arrival of the alien but subsequently helped by a multi-species, queer, and African-futurist community, is yet another way to decentre and decolonise the imagination of climate change, and to imagine responses to climate crisis that diverge from those envisioned by the fossil fuel industry.

7. "Some things are too broken to be fixed."
Climate disaster and social justice in N.K. Jemisin's *Broken Earth* Trilogy

"The genre of science fiction finally, however grudgingly, acknowledges that the dreams of the marginalized matter and that all of us have a future," stated N. K. Jemisin during the 2018 Hugo Award ceremony, where the most prominent award for science fiction and fantasy literature is given each year: the representation of the hopes and imagination of marginalised people are important too, even if – and especially when – they spark reactionary protest. In 2013, two years before Jemisin's publication of the first novel of *The Broken Earth* Trilogy, a small group of science-fiction writers and commentators – mostly male, white, and conservative – launched the "Sad Puppies" and the even more extremist "Rabid Puppies" campaigns to unite conservative voters against the profusion of diversity on the Hugo nominees lists. These alt-right extremists have spent years trying to keep authors like Jemisin, African American and woman, from winning the award. Notwithstanding, Jemisin made history in 2016 when she was the first African American woman to ever win the Hugo Award for Best Novel. But she did not stop there: for three years in a row, she won the same award, one for each novel of her *Broken Earth* Trilogy: in 2016 for *The Fifth Season*, in 2017 for *The Obelisk Gate*, and in 2018 for *The Stone Sky*, making history as the first writer – male or female, black or white – to ever do so. In her acceptance speech, she raised a "rocket-shaped finger" (a reference to the stylised rocket-ship design of the Hugo trophy) to the racist rhetoric implying that "when they win it's meritocracy, when we win it's identity politics" (Jemisin 2018).

On the same stage, she also claimed that, in writing *The Broken Earth* Trilogy (TBET), she was drawing on the long history of structural oppression:

> "It's been a hard year, hasn't it. A hard few years, a hard century. For some of us, things have always been hard. I wrote the *Broken Earth* trilogy to speak to that struggle, and what it takes to live, let alone thrive, in a world that seems determined to break you — a world of people who constantly question your competence, your relevance, your very existence." (2018)

In particular, she was outspoken about the fact that the Trilogy was inspired by responses to oppression such as the Black Lives Matter Movement (Hanifin 2015) as well as the Ferguson Unrest and the Ferguson Riots, a series of riots and protests triggered by the fatal shooting of teenager Michael Brown by a white police officer (Hurley 2018, Flock 2019): her Trilogy was initially shaped by her frustration and anger over this story.

That *The Broken Earth* Trilogy explores the methods and effects of structural oppression is made clear from its very beginning, as the dedication that opens the first novel of the Trilogy, *The Fifth Season* (TFS), is "for all those who have to fight for the respect that everyone else is given without question" (Jemisin 2015). What is less obvious is the Trilogy's exposure of the intersections between social justice and climate change, that will be examined throughout this chapter. Jemisin, indeed, has stated that she did not intend to create a metaphor for climate change in TBET, but at the same time she understands why people have analysed the three novels from this viewpoint: "I get that it works as a metaphor for same, especially given the revelations of the third book, but that just wasn't the goal," she states. She also points out, however, that "anyone who's writing about the present or future of *this* world needs to include climate change, simply because otherwise it's not going to be plausible, and even fantasy needs plausibility" (Jemisin in Anders 2019: online). This chapter will therefore begin by examining the links between the Trilogy and the concept of the Anthropocene; it will then explore Jemisin's

complication of the concepts of oppression, enslavement, and freedom, and, by connecting these themes to the climate crisis, it will suggest that TBET is one of the few cli-fi works treating climate justice as a central issue, and perhaps as the core theme of the three novels. Finally, it will propose a feminist new materialist reading of the Trilogy, as well as a feminist and decolonial critique of the concept of sustainability.

The Anthropocene Brought to the Extreme

The world described in TBET is made of a single continent perpetually hit by destructive seismic events that cause Fifth Seasons: long winters that can last hundreds of years, when ash falls on the continent and life is put in peril. Despite the planet's restlessness, its only supercontinent is known ironically as the Stillness: it is indeed "a land of quiet and bitter irony" (7). Quite surprisingly, moreover, the planet is known as Father Earth. Humanity is divided into three subspecies: stills, stone eaters, and orogenes. Stills, that bear no magical abilities, are what resemble humans the most; stone eaters are stone-alike people who can travel through the Earth; orogenes possess orogeny, that is "the ability to manipulate thermal, kinetic, and related types of energy to address seismic events" (Jemisin 2015: 462). Orogenes can therefore manipulate the Earth by absorbing or redirecting energy from elsewhere. In the novel, we follow the perspectives of three female orogene protagonists, Damaya, Syenite and Essun, as they try to navigate the destruction that shatters their world. Later in the novel, it is discovered that all three perspectives belong to the same woman and represent different stages in her life, with a clear reference to the long history of fractured narrations in feminist science fiction (see Joanna Russ' 1970 novel *The Female Man*). This is part of a strategy often adopted by feminist science fiction in order to counter representations of unitary subjects and normative points of view and give voice to alterity, diversity, fragmentation and multiplicity (see Federici 2015).

Essun is a middle-aged woman – and, secretly, an orogene – with two young children (a girl named Nassun and a boy named Uche) living in a small southern comm[72] named Tirimo[73]. Her children, too, have orogenic abilities, but they cannot use them deliberately: "it's the first lesson of orogeny. Any infant can move a mountain; that's instinct. Only a trained Fulcrum orogene can deliberately, specifically, move a boulder" (215). Most orogenes are trained in the so-called Fulcrum, a paramilitary order located in Yumenes and created by the Old Sanze Empire. Fulcrum-trained orogenes, also known as Imperial Orogenes, are "legally permitted to practice the otherwise-illegal craft of orogeny, under strict organisational rules and with the close supervision of the Guardian order" (585); they are usually exploited because of their ability to manipulate the Earth, and, at the same time they are feared by stills and considered a sub-human race with no rights of their own. When Essun's husband (a still man) realises that his children possess orogenic abilities, he kills Uche and leaves the town taking Nassun with him. Enraged and grieving, Essun shuts a massive earthquake that originated in Yumenes, saving Tirimo from its complete destruction but alerting the members of her comm that an orogene is present. As we learn from the prologue, the earthquake has been caused by Alabaster, an extraordinarily powerful Fulcrum-trained orogene who laments the oppression of his race. This massive fracture causes the beginning of a new fifth season; in a world that is about to be devastated, she journeys south to find her daughter Nassun.

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[72] Comm means community: "The smallest sociopolitical unit of the Imperial governance system, generally corresponding to one city or town, although very large cities may contain several comms. Accepted members of a comm are those who have been accorded rights of cache-share and protection, and who in turn support the comm through taxes or other contributions" (Jemisin 2015: 583).

[73] Tirimo is one of the biggest cities of the Sanze Empire, whose capital is the city of Yumenes. Sanze is described as the only nation that has survived a Fifth Season intact, not once but multiple times: "only once in known history has a whole nation, many comms all working together, survived. Thrived, even, over and over again, growing stronger and larger with each cataclysm. Because the people of Sanze are stronger and smarter than everyone else" (2015: 123).

We then meet Damaya, a young girl living in a northern comm, whose still parents have recently discovered that she possesses orogeny. They, therefore, decide to summon a Guardian, Schaffa, to collect her and bring her to the Fulcrum, where she is trained to become an Imperial Orogene and serve the nation. The third character that we meet in the Trilogy is Syenite, a rising orogene star in the Fulcrum who is instructed to breed with another orogene that she has never met, Alabaster, the most powerful living orogene. After the Trilogy reveals that Essun, Damaya, and Syenite are the same woman in different stages of her life, the story follows Essun's journey to find her kidnapped daughter Nassun, and her effort to discover why fifth seasons exist and what can be done to stop them.

Even though Jemisin did not intend to create a metaphor for climate change, the Trilogy parallels the progress of anthropogenic global warming in our world. It is indeed set in a human-created era, where the concept of humanity as a geological force – the very concept of the Anthropocene – is brought to its extreme consequences, as not only the fifth seasons have been initially caused by human tampering with nature, but orogens can also manipulate and control the Earth, its plates, and the earthquakes. The planet, however, is just fine, and the main victims of the fifth season are its human (and less-than-human) inhabitants: "When we say 'the world has ended', it's usually a lie, because the planet is just fine" (2015: 4). In other words, the *Anthropos* is simultaneously the cause of catastrophe and its main victim. Like islands are barely significant on the scale of the planet's history because they "tend to form near faults or atop hot spots," human beings too "are ephemeral things in the planetary scale" (195). This means that apocalypse, too, is a relative thing, as explained in the third volume of the Trilogy: "When the earth shatters, it is a disaster to the life that depends on it – but nothing much to Father Earth" (Jemisin 2017: 25-6).

Despite the representation of the planet as an "Evil, eating Earth" (2015: 343)[74], a planet that "hates us, never forget, and his gifts are neither free nor safe" (53), as Schaffa warns little Damaya when they begin their journey towards the Fulcrum, it is soon made clear that Father Earth did not originally hate life: at first, he "did everything he could to facilitate the strange emergence of life on its surface":

> He crafted even, predictable seasons; kept changes of wind and wave and temperature slow enough that every living being could adapt, evolve; summoned waters that purified themselves, skies that always cleared after a storm. He did not create life—that was happenstance—but he was pleased and fascinated by it, and proud to nurture such strange wild beauty upon his surface. (485)

Back then, life had a Mother too. It was not the Earth that started his cycle of hostilities, but human beings:

> People began to do horrible things to Father Earth. They poisoned waters beyond even his ability to cleanse, and killed much of the other life that lived on his surface. They drilled through the crust of his skin, past the blood of his mantle, to get at the sweet marrow of his bones. And at the height of human hubris and might, it was the orogenes who did something that even Earth could not forgive: They destroyed his only child. (485)

The "only child" of the Earth is the moon, that was destroyed by an ancient society called Syl Anagist, metaphor for the exploitative nature of advanced capitalism: as explained in *The Stone Sky*, humans of Syl Anagist, whose dreams about progress had no limits, mastered the forces of matter, "shaped life itself to fit their whims" (2017: 21), and explored the mysteries of the ground and of the sky until they grew bored with them. Through their tampering with the flow of life, they altered the whole equilibrium of the planet and swung the moon out of orbit with the Earth. As a consequence, the Earth revolved against humanity, and became its enemy. At this point, the parallels with climate

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[74] Evil Earth, in particular, is a recurring expression throughout the whole novel.

change in our real world become very clear: like advanced capitalist societies, "Syl Anagist is ultimately unsustainable. It is parasitic," and "The Earth's core is not limitless. Eventually, if it takes fifty thousand years, that resource will be exhausted, too. Then everything dies" (2017: 481). It is human pursuit of power, control, and dominion of the planet that has destroyed the equilibrium of the continent, rendering it almost inhabitable. Father Earth simply "fought back": "as one does, against those who seek to enslave" (2016: 492).

The condition in which people in the Stillness live (or rather survive) could be described as the "everyday Anthropocene" mentioned by Stephanie LeManeger in *Climate Change and the Struggle for Genre*. LeMenager describes it as the "present tense, lived time of the Anthropocene" and focuses her attention on "what it means to live, day by day, through climate shift and the economical and sociological injuries that underwrite it" (2017: 225). I further suggest that Jemisin's Trilogy is a powerful metaphor for what it means to live with disaster, to stay with the trouble, to coexist with ecological disturbance. The people of the Stillness have to live on a daily basis with the consequences of catastrophes and earthquakes that wreck their world. The so-called Seasonal planning proves its efficacy most of the time, with comms being able to subsist on their own stores during extreme weather events, but it shows several limits due to the high level of unpredictability that characterised the Stillness. When the coastal town Allia is destroyed following the eruption of a volcano, for example, such a strategy of resilience and adaptation reveals its inadequacy: "All of Allia's alarms, all their preparations, were shaped around surviving tsunami, not the volcano that has obviously, impossibly occurred instead" (2015: 442). Finally, as suggested by MaryKate Eileen Messimer, "the diversity of the disasters on the Stillness is another parallel to climate change, as it illustrates the myriad and variable ways that climate change can manifest" (2019: 136). The consequences of the fracture that has caused the beginning the most recent Fifth

Season, the worst in recorded history, are described as follows, resembling the multiplicity of the physical impacts of climate change:

> Enough ash covering the warm surface of the sea, and the ice might grow at the poles. That means saltier seas. Drier climates. Permafrost. Glaciers marching, spreading. And the most habitable part of the world should that happen, the Equatorials, will still be hot and toxic. (2016: 93-93)

Epistemologies of Mastery: the Oppression of the Orogenes

Alongside the parallel between the Trilogy's planet and the condition of the Earth in the Anthropocene, the system of slavery and oppression represented by Jemisin echoes America's enslavement of African Americans. References to racial oppression and the Black American experience are frequent in the three novels: TFS states indeed from its very first chapter that Essun's "skin is unpleasantly ocher-brown by some standards and unpleasantly olive-pale by others. Mongrel midlatters, Yumenescenes call (called) people like her" (2015: 18). Her ocher-brown skin affects her experience of the world, starting from standards of beauty that, in another parallel with American society, are very much associated with whiteness (see Morrison 1970): the younger version of Essun, Syenite, is well aware, in spite of her age, that "she's no looker, at least not by Equatorial standards. Too much midlatter mongrel in her" (Jemisin 2015: 95).

The derogatory term for orogenes, "rogga," further ties their experience to the African American reality, with the double "g" strongly resembling the N-word. Right after being separated from her family to start her training with Schaffa, little Damaya realises that such word is primarily used to insult people like her:

> Damaya inhales, horrified. It has never occurred to her that roggas—she stops herself. She. She is a rogga. All at once she does not like this word, which she has heard most of her life. It's a bad word she's not supposed to say, even though the

grown-ups toss it around freely, and suddenly it seems uglier than it already did. (116)

With the help of Alabaster, however, Syenite learns how to reclaim and appropriate the slur and use it as a self-affirming term. Alabaster's use of the slur, of such a "dehumanizing word for someone who has been made into a thing" (182) is indeed deliberate: thanks to his influence, Syenite starts to conceive the more polite term "orogene" like a lie (188). Later in the Trilogy, listening to a non-orogene friend who uses the polite term, Essun states that "after so many weeks of hearing mostly rogga, his polite orogene sounds strained and artificial to [her] ears" (2016: 449).

Language is just the tip of the iceberg: due to institutionalised racism, orogenes are dehumanised and referred to as animals and monsters. In order to justify their summoning of a Guardian to kidnap, train, and cure their daughter, Damaya's non-orogene parents state that "Damaya had hidden [her orogeny] from them, […] hidden everything, pretended to be a child when she was really a monster, that was what monsters did, she had always known there was something wrong with Damaya" (2015: 45). During her stay in the Fulcrum, Syenite realises that forms of perversion and abuse are tolerated when the victim is an orogene (89). Orogens are considered to be owned by the Fulcrum, where they are "hunted down like dogs" (88), or to be born evil, "monsters that barely qualify as human" (160). They are "slaves" (446) that have lost the right to control their own body, prey, and "anything but the world's meat" (2016: 380-81). Officially speaking, they are not human: "per the Second Yumenescene Lore Council's Declaration on the Rights of the Orogenically Afflicted, a thousand-ish years ago" (300-1). According to Syenite, however, it is also clear that their dehumanisation "is just the lie they tell themselves so they don't have to feel bad about how they treat us" (454): again, the Trilogy parallels the dehumanisation of black people that served to justify American institution of slavery.

Orogenes, finally, exist to serve the world, and do not matter beyond what they can do for the other races of the Stilness: their sacrifice "will make the world better" (46). The apex of the systemic oppression of the orogenes relies in the monstrous, life-depriving treatment of those stationed at nodes.[75] In TFS, Syenite and Alabaster reach one of those stations and find a corpse inside, that is described as follows:

> the body in the node maintainer's chair is smack, and naked. Thin, its limbs atrophied. Hairless. There are things-tubes and pipes and things, she has no words for them- going into the sick-arms, down the goggle-throat, across the narrow crotch. There's a flexible bag on the corpse's belly, attached to its belly somehow, and it's full of-ugh. The bag needs to be changed. (Jemisin, 2015: 181)

The horror of this scene, revealing an orogene that has been mutilated and lobotomised from an early age, draws comparisons with real-existed forms of punishment and torture of Black slaves. Another dehumanising practice involving orogenes is forced breeding: with orogeny being hereditary and women expected to produce children as commodities, Orogenes' lack of control over their own bodies takes on a gender dimension, and Syenite, too, is asked to "produce a child within one year" (92) with Alabaster. Comparing the oppression of the female body in Margaret Atwood's *The Handmaid's Tale* and Octavia Butler's *Dawn*, Susan Watkins argues that in the latter "while the object of intervention is still necessarily the *female* body, those interventions carry more explicit freight and resonance in terms of racist and eugenicist histories and beliefs" (2020: 25). Jemisin's Trilogy portrays a similar representation of the exploitation of the black female body to Butler's, making clear references to biogenetic and other kinds of scientific experimentation that have historically affected the bodies of black women.

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[75] Nodes are "the network of Imperially maintained stations positioned throughout the Stillness in order to reduce or quell seismic events" (Jemisin 2015: 588).

Other forms of abuse resembling those enacted by American slave-owners that we encounter throughout the Trilogy are family separation, torture, and rape. What is also important for the present discussion is that orogenes, like the land, are hated and feared by stills meaning that their existence is characterised by trauma and uncertainty, that is also the primary feature of the land (Messimer 2019): in TBET both people and the land become exploitable resources. I, therefore, propose that Jemisin's Trilogy can be read as an example of climate fiction that treats climate justice as a core issue, linking colonising epistemologies of mastery and dominion over nature to the oppression of marginalised groups and women.

Hyperempathy and Orogeny: Burden or Power?

Misha Grifka-Wander (2019) expands on the parallels between the treatment of orogenes and American slavery, stating that Jemisin complicates the concepts of enslavement and freedom. In fact, the orogenes – those who are enslaved – are also those who have powers and are capable of lethal force, disrupting the dichotomy between enslaved-powerless vs enslavers-powerful.

Jemisin seems to draw on Octavia Butler's *Parable of the Sower* (1991), where the protagonist Lauren is affected by hyperempathy, the capacity to embody the feelings of other living beings and therefore creating new ways of living with the environment. If Lauren could only empathise with other humans and animals, Jemisin's orogeny expands hyperempathy towards matter, non-living things such as air, energy, heat, and, most importantly, towards the land, giving Essun and the other orogenes a unique perspective on the limitations of human exceptionalism and of the constructed binary between humanity and the land. Moreover, as suggested by Messimer, "In the same way that Butler depicted hyperempathy as a power but also a burden, Jemisin uses orogeny

to critique the way that historical progress has been built on the suffering of women of color" (2019: 147).

With regards to the agency of matter, the depiction of Father Earth as a living figure is similar to the one described by James Lovelock in *The Revenge of Gaia* (2007). In the 1970s, Lovelock and Lynn Margulis developed the so-called Gaia theory (also known as Gaia Hypothesis), affirming that the Earth is a living planet. Analysing Lovelock's and Margulis' works, Felicia Stenberg sees Gaia as a "system created by interaction among a multitude of organisms and species," and affirms that "all that is living on the planet affect the planet just as the planet affects all that is living on it" (2020: 11). The role of orogenes in controlling earthquakes – and the ability of the stone eaters to travel through the Earth – may be interpreted as a representation of this concept.

According to Stenberg, "the dualism between Nature/Society assumes that humanity is not an inherent part of nature, but separated because of certain qualities that define humans as apart from nonhumans" (2020: 11-12). Building on this concept, Jemisin blurs the margins between human and non-human, as all three subspecies of humanity are somehow differently 'human', and, therefore, emphasises the inseparability between humans and nature. As the previous chapters have suggested, the Anthropocene asks us to redefine this dichotomy: in particular, it becomes more and more crucial "not to deanimate[76] the Earth, but instead to reanimate it and realize that humanity is only one actor among many" (Stenberg, 2020: 16). This resonates with the concept of Chthulucene proposed by Haraway to describe the new epoch we are living in: as stated in the introduction to this dissertation, Haraway (2016) sees the time we live in as a time

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[76] Here Stenberg references Bruno Latour's concept of "deanimation" (2017; 2020). According to the French philosopher, humanity has failed to realise the agency in the Earth, and has reduced it to a mere object, failing to see the effects of its activities on it. The planet is now reclaiming its agency.

for response-ability, meaning that humans must recognise that they entangled with a myriad of different non-human agencies.

I further claim that if the so-called Stillness can be read as a representation of the indeterminacy and unpredictability of our times, of what it means to coexist with ecological disturbance: in drawing on the work of Donna Haraway, Anna Tsing, and Kate Rigby, I suggest that the planet represented in TBET has much in common with feminist ecologies. The concept of Father Earth, to begin, complicates the association of nature with so-called feminine qualities (such as nurturing mothering but also chaos). Far from being a nurturing Mother Earth, the Stillness is an angry, violent father. Jemisin's depiction of the relationship between humanity and the land is a timely one: there can be no simplistic reconciliation between humans and nature in the Anthropocene, because, as ecocritic Ursula K. Heise explains, no virgin land has survived that can sustain us after the ecological destruction we have caused (Heise 2008: 54).

Father Earth is also a timely metaphor for the vibrant and living Earth that is theorised by new materialism, and for the agency and significance of matter. The first description of Father Earth that we encounter in the Trilogy is through a comparison with the human body: "it is ordinary, as lands go. Mountains and plateaus and canyons and river deltas, the usual. Ordinary, except for its size and its dynamism. It moves a lot, this land. Like an old man lying restlessly abed it heaves and sighs, puckers and farts, yawns and swallows" (2017: 7). Father Earth does not need to wait for the orogenes to be altered, to let them stop its earthquakes, but engages actively with them. Later in the Trilogy, the main orogene characters realise that their power comes from a living Earth: "no one thought of the Earth as alive in those days – but we should have guessed. Magic is the by-product of life. That there was magic in the Earth to take… We should all have guessed" (2017: 465). We come to know, moreover, that a trained orogene like Alabaster can "deliberately, specifically, move a boulder" but also "move the infinitesimal

substances floating and darting in the interstices of his blood and nerves" (2015: 205), suggesting that the Earth is also within bodies, and that humanity has never been separated from nature. This resonates with Jane Bennett's theories of vital materialism exposed in *Vibrant Matter*: her definition of vitality refers to the "capacity of things – edibles, commodities, storms, metals – not only to impede or block the will and designs of humans but also to act as quasi agents or forces with trajectories, propensities, or tendencies of their own" (2010: viii). In what is deemed to be one of the milestones in feminist new materialist studies, Bennett complicates the ways in which we define and perceive agency, which does not operate just at human level, but might have a more-than-human potential. Another lens through which to scrutinise such intra-actions between the orogenes and the Earth could be Stacy Alaimo's theorisation of trans-corporeality, tracing "the material interchanges across human bodies, animal bodies, and the wider material world" (2016 112). Orogenes and Father Earth, indeed, "dwell in the dissolve" (168), where boundaries begin to come undone.

A Dissenting Voice on Sustainability

Dwelling in the dissolve is also something that we as readers learn to do while reading TBET. We do not see this broken planet from above, enjoying that comfortable and disembodied perspective that has been analysed in chapter 2, but we travel through the Earth together with the stone eaters, we descend, together with the orogens, into the fractures of the Earth, into the ocean, where human life is entangled with a broken and dissolving material world, and where differentials of harm and responsibilities are not obscured: climate justice is indeed at the centre of Jemisin's representation. The slow violence of climate change affects humans and non-human alike, as a feminist new materialist reading suggests.

On a similar note, chapter 2 has explored Alaimo's proposal of a radical departure from the technocratic and apolitical concept of sustainability. Alaimo, in particular, claims that the epistemological stance of sustainability is one of "hyperseparation" linked to systems management and technological fixes that will get things under control and project the problem out there, while the disembodied spectator observes from a dethatched outside. According to Alastair Iles (2019), it is possible to read Jemisin's Trilogy as a problematisation of depoliticised sustainability transitions that do not include at their core social and racial justice and that exclude minority groups and women from the process that defines what sustainability means. In the past 15 years, several scholars (e.g. Dobson 2003 and Agyeman 2008), inspired by social movements, have called for "just sustainability" – a concept that avoids any forms of separation between environmental sustainability and social justice – as a desirable endpoint. Iles further claims that the science of transition does not take into account long histories of racial-ecological exploitation; *The Broken Earth* Trilogy, conversely, "not only critiques technological hubris, but sees the ways in which technology is itself racialized" (2019: 12) – and gendered, I would add. As stated in the previous paragraphs, at a first glance Seasonal planning seems to prove its effectiveness most of the time; what the Trilogy depicts, however, is that the suffering and enslavement of the orogenes, together with the forced breeding of the female members of this "subhuman" race, are the only route to utopian thinking. The science of transition developed in the Stillness, moreover, is frequently described throughout the novel as an elitist one, based on social discrimination: in TFS, for instance, it is stated that being outside of a community's gates during a fifth season is "a death sentence" (Jemisin 2015: 105); that finding a place in a community is almost impossible for "those family members who are poor, or infirm, or elderly" (289); that what every smart comm does during a season is "kicking out the undesirable, taking in those with valuable skills and attributes" (353); and that the network of Imperial nodes decides between who needs to be saved and who is left behind. "It's just not worthwhile—at least,

not according to the Fulcrum seniors—to put nodes near every little farming or mining comm in the hinterlands. People in those places fend for themselves as best they can" (155).

Throughout the three novels of the Trilogy, Jemisin explores different pathways of "development, change, and revolution" that come from "dissenting voices," "divergent experience," and "subaltern groups" (16). In TFS, for instance, Essun visits Castrima, an underground comm built inside a geode. In order to allow the survival of the comm, its people use an ancient mechanism from a dead civilisation that can only be triggered by an orogene: this suggests that previous civilisations could have a different way of living, with orogenes probably in command. Similarly, Syenite and Alabaster spend some time in the remote island of Meov, where they find people that "don't kill their roggas," but "put them in charge" (379), because they know that otherwise they would not survive the catastrophic events that shatter their island. These representations metaphorically underline the problem of the dominant system of advanced capitalism and, at the same time, suggest that other ways of living are possible. During her stay in Meov, moreover, Syenite is free to explore different forms of sexual and gender identities than the ones allowed in the rest of the continent, and she enters a loving polyamorous relationship with Alabaster and a pirate leader called Innon. The three of them raise together Syenite's child, as in Meov nursing "is done communally, same as everything else" (463).

Besides exploring alternative forms of dwelling in the Stillness, Jemisin imagines the possibility of a much more violent form of rupture with a system that considers some people and the land as exploitable resources. Acknowledging that the suffering of the orogenes cannot be the only possible route to a sustainable future, Alabaster decides that breaking the Earth may be the only possible step toward decolonisation. Similarly, at the end of *The Stone Sky*, Essun and her daughter Nassun realise that "some things are too broken to be fixed" (2017: 496), and that "Alabaster was right, and some things

really are too broken to fix. Nothing to do but destroy them entirely, for mercy's sake" (537). Although they eventually decide that the Earth is worth saving, the subaltern, marginalised and dissenting voices of TBET suggest that deconstructing the world might not be enough: sometimes it requires to be broken – collectively. As Jemisin states in her 2018 Hugo Award acceptance speech: "even the most privileged and blindered of us have been forced to recognise that our world is broken. And that is a good thing […] because acknowledging the problem is the first step towards fixing it" (online).

8. Feminist Ecologies in Pandemic Times

From "Ontological Insecurity" to "Naturalcultural" Ecologies

Moments of crisis such as armed conflicts or political transitions have always brought along significant transformations in gender identities, roles, and relations: while so much has changed regarding the role of women in private and public life as well as in the social context, notions of masculinity that are a barrier to gender equality are challenged too, but this struggle often results in an effort to take back control of female roles, bodies, and sexualities. Considering, for example, a watershed event that has shaken the confidence of many, such as September 11, a number of studies have shined a light on the gendered nature of the psychological response to the attacks. Susan Faludi's *The Terror Dream* (2008) has described the post-9/11 age as an era of reconstituted "traditional" manhood, redomesticated femininity and nuclear family "togetherness" (3). According to Faludi, the American media, entertainment, and advertising reacted to the event by blaming women's liberation – and the subsequent feminisation of American men that left the nation vulnerable – as the real culprit of the attacks (23). The myth of cowboy arrogance and feminine weakness, revived every time the nation felt vulnerable, was restored once again "through fables of female peril and the rescue of just one girl" (200) aiming at displacing the Americans' insecurity. While American men were cast back in the role of heroes, the ideal post-9/11 American woman was instead "undemanding, uncompetitive, and dependent" (131), recast as a mere victim deprived of agency. This conservative retreat to the mid-1950s culture has affected even the genre of dystopian science fiction (Baccolini 2018). What emerges from Baccolini's analysis of Steven Spielberg's 2005 adaptation of H.G. Well's *War of the Worlds* (1897) and John Hillcoat's 2009 adaptation

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of Cormac McCarthy's *The Road* (2006), two films that have been linked to the post-9/11 cultural climate, is a gender narrative "split along the lines of invincible manhood – and more specifically manly protectiveness and fatherhood – and jeopardized femininity" (Baccolini 2018: 181), a restoring of the traditional, nuclear family, and a critique of the emasculation brought about by feminism.

The question that lies at the basis of this introduction to the chapter is whether – and if so, how – culture continues to respond to moments of crisis and vulnerability through the same old myth of protective manhood and feminine weakness. Drawing upon Agius, Bergman Rosamond and Kinnvall's recently published article (2021) on masculinity, climate denial and Covid-19, I identify and interlace two major cases of insecurity: climate change and the global coronavirus pandemic. The conceptual lens of ontological security refers to a person's sense of safety in the world; conversely, ontological insecurity has to do with "attempts to deal with [...] anxieties and dangers," where "identity and autonomy are always in question" (Laing 1960: 39, 42). According to Laing's discussion of ontological insecurity (cf. also Giddens 1999), individuals and groups tend to respond to such anxieties by searching for stable anchors. Nostalgic narrative imaginations of a secure and great past are often conveyed by political leaders to calm down anxieties among the electorate; these narratives, moreover, tend to identify those who have taken the stability away, such as immigrants, women, or the establishment. Agius, Bergman Rosamond and Kinnvall also identify a link between widespread perceptions of crisis and the rise of far-right populism, and, following feminist scholarship about gender and nationalism, introduce the concepts of gender populism and gender nationalism. The gendered dimension of populism and nationalism is expressed by an understanding of gender as natural and dichotomous as well as by a hierarchical and heteronormative vision of gender identities. If after 9/11 the real culprit of the attacks had been considered women's liberation and its feminisation of American men, it is now "gender ideology" that

constitutes a major threat to the symbolic order, in its weakening of the traditional nuclear family structure. These moves, finally, "are often accompanied by a 'strongman' style of political leadership" (Agius *et al*. 2021: 437). Trump's America, for instance, is seen as a project of gender nationalism in which the slogan "Make America Great Again" carries the idea of a strong nation that has been weakened and humiliated by feminisation. The only possible solution is to be found in the figure of a strong male leader who is able to protect the Country. Such politics of protection "relies on gendered notions of weakness and strength, legitimating actions that seek to 'save' or 'protect' citizens, in particular women" (440), while, at the same time, brings about a general backlash against women's rights.

The same gender logic underscoring far-right populism also informs responses to current cases of ontological insecurity, such as climate change and the Covid-19 pandemic. The link between misogyny and climate denialism has already been underscored in chapter 2 of this dissertation, stressing that the rise of young female climate activists has generated a backlash among conservative men. Cara Daggett has termed "petro-masculinity" the "role of fossil fuel systems in buttressing white patriarchal rule" (2018: 25). Trump's campaigning and presidency, once again, have been informed by climate change denialism and an emphasis on economic greatness: "the environment is something to exploit and retain control over to benefit American 'greatness'" (Agius *et al*. 2021: 444). Similarly, Brazilian president Jair Bolsonaro has dismantled several government divisions dedicated to climate change and played a key role in accelerating the process of deforestation of the Amazon Forest to bolster his nation's economic growth.

Toxic masculinity has also defined the response to the global coronavirus pandemic by many populist leaders, such as Donald Trump, Jair Bolsonaro, and Boris Johnson. On a personal level, they have repeatedly refused to wear masks and respect social

distancing, fearing that basic common-sense protections would have exposed their weakness and vulnerability: as Haridasani Gupta writes in *The New York Times*, "they would rather risk death from the virus than what they perceive as the humiliation of not being invincible" (2020: online). The mask-wearing has therefore become a gendered issue, corroborated by previous research observing that men are less likely than women to adopt protective behaviours, as stated by a 2016 paper by the Los Alamos National Laboratory. As such, mask-slipping has been defined the new "manspreading" by James Gorman – "something about some men just makes it difficult to keep that mask where it should be" (2021: online). Switching to the public and political level, much of the populist response to the ontological insecurity has been to show strength and authority to the Country, while dismissing the severity of the pandemic. On a similar note, consider the wartime imagery overused by (mostly male) leaders to address the challenges presented by the current coronavirus: from Emmanuel Macron to Boris Johnson, let alone "wartime president" Donald Trump, male world leaders have "waged war" against the "invisible enemy," missing the chance to expose human and social responsibility and the systemic forms of inequalities (Smith 2020: online). Populist leaders' longing for a return to "business as usual," furthermore, clashes with the link between the spread of Covid-19 and human-driven climate change, a connection that asks for a deep transformation of global consumption and economic growth. As Agius, Bergman Rosamond and Kinnvall suggest, therefore, "there are close connections between climate change denial, the coronavirus crisis and prevalent myths about the strong male leader defending his nation and its economic growth in the face of climate change and other security threats" (2021: 448).

Coming to fictional representations of climate change and global pandemics, the politics of protection, "strongman" political leadership, and redomesticated gender roles really stand out. In times of crisis and vulnerability, mainstream climate fiction and pandemic

fiction tend to embrace the same old myth of manly protectiveness and dependent femininity that has been employed in post-9/11 science fiction. Chapter three has already underscored that post-apocalyptic climate fiction tends to revolve around men and that power and agency are divided along racial, ethnic, and gender lines.

As for post-apocalyptic pandemic narratives, I draw on Carlen Lavigne's analysis of American end-of-world television series that appeared on international screens between 2001 and 2016, where she argues that most of her case studies speak to the ambitions and fears of a straight white male audience. A repetitive scenario unfolds as follows: in a devastated landscape, a straight white male hero arises as a natural leader, while "women, non-white characters, queer characters, and all those whose identities cross over and between those groups are side-lined in favour of the straight white male lead" (2018, 132). This "lingering patriarchy" (132), however, goes unacknowledged: what these shuttered worlds feature is a post-feminist and post-racial future where "the struggling hero claims leadership simply because he is the best person for the job" (137). In this way, gender binaries are reinforced, and those whose voices might challenge and disrupt the myth of heteronormative white patriarchy are excluded from the main narrative. Lavigne's analysis encompasses *28 Days Later*, *I Am Legend*, the *Resident Evil* film series, *The Strain*, *The Walking Dead*, *Z Nation*, and a more thorough discussion of *Jeremiah* and *The Last Ship*: all these case studies tend toward conservative narratives that preserve the patriarchal family and maintain heterosexual white male leadership, while reviving once again "the post–9/11 fantasy of the masculine American soldier defending the hapless women and children" (1002). In comparison to pre-Covid-19 mainstream films, more recent ones seem to propose alternatives to the traditional nuclear family and to gender essentialism, as well as non-normative formations of family

and identity.[77] Needless to say, Covid-19 is still a threat to all of us, and we will need more time to distance ourselves before significant changes in narrative responses to pandemic outbreaks may be observed.

The rest of this chapter will propose a dialogue between ecofeminist reflections on Covid-19 on the one hand, and contemporary feminist and decolonial speculative fiction challenging and reimagining mainstream pandemic narratives on the other. The Covid-19 pandemic has generated a plurality of reflections on the unsustainability of neoliberal globalisation and of the current development model. Different forms of ecofeminism have responded to the current crisis since the very first months of 2020, linking the origin of the pandemic to the indiscriminate exploitation of natural resources. Erika Bernacchi (2020) has provided a careful examination of ecofeminist reflections about the current pandemic, both at the level of theories and practices, focusing specifically on the causes of the outbreak, its possible solutions, and the socio-economic changes which are deemed necessary. In terms of strategies to counter the pandemic, ecofeminists have invited to overcome the language of war widely used by government leaders, to acknowledge the interactions between disease, poverty, sexism and racism (according to Vandana Shiva, Covid-19 has exposed three main cracks: the model of limitless growth, the functioning of the industrial food system, and structural social and economic inequalities [2020]), and, finally, to reconceptualise the paradigm of care. In the midst of

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[77] For a preliminary analysis of more recent films and TV series on pandemic outbreaks see Baccolini and Xausa 2022 (forthcoming in *EJES* [*European Journal of Gender Studies*] 26 / Going Viral Special Issue. We have chosen one film (*Bird Box*, 2018) and two TV series from the US (*Sweet Tooth*, 2021) and Italy (*Anna*, 2021), all adapted from novels and graphic novels. All original works were published before the Covid-19 pandemic. However, except for Susanne Bier's *Bird Box* (2018), all other adaptations came out in 2021, making them particularly interesting in how they narrate the pandemic. We have particularly looked at gender relations, and more particularly at issues of parenthood and family structure (motherhood and fatherhood), guided by the following question: to what extent gender relations are impacted by the pandemic – but also climate – crisis? All three works break new grounds – even though not devoid of contradictions – with regard to family structures and parental care: while *Bird Box* proposes a mere reversal of gender roles, *Anna* elaborates on the notion of motherhood by presenting unconventional models of mothering; in *Sweet Tooth*, finally, the ethics of care is extended to human relationship with non-human animals and the endangered environment.

a global crisis which is also a crisis of care, it becomes more and more urgent to expand our understanding of kinship from the labour of social reproduction often performed by women within the family to a more relational paradigm that rejects market logics and puts care at the centre of our relationship to the natural world. The concept of care is indeed linked to that of interdependence between all living things (see Svampa 2015, Haraway 2016, and Hutner 2020) but also with that of trans-corporeality developed by feminist new materialism.[78] Furthermore, ecofeminism ethics of care "is not only concerned with the human impact on nature but also with the unequal consequences this has in social terms" (Bernacchi 2020: 27), and it therefore attempts to reconcile environmental and social justice, including caring for sections of the population that have been particularly hit by the pandemic.

In proposing a dialogue between ecofeminism theorisations of Covid-19 and speculative fiction, I will particularly consider Larissa Lai's visionary novel *The Tiger Flu* (2018) as an entry point for conceptualising the gendered nature of the current Coronavirus emergency. Diverse approaches to feminist theory are adopted to guide my close reading. An intersectional methodology is used to underscore the dichotomy between female 'innate' vulnerability and nurturing disposition on the one hand, and gender as a social structure causing inequalities on the other hand. As argued by Lokot and Avakyan, "intersectional analysis places power at the centre, analysing not what makes people

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[78] In *Exposed* (2016), Stacy Alaimo proposes a brief analysis of Todd Haynes's 1995 film *Safe* (starring Julianne Moore), a movie that has been rewatched and re-interpreted from a feminist perspective in the last two pandemic years, even though it is not directly about a pandemic outbreak like the more popular *Outbreak* (1995) and *Contagion* (2011). Moore plays Carol White, a privileged second wife living in 1987 Suburban Los Angeles who suffers from a mysterious illness which manifests itself through different symptoms (such as nosebleeds and breathing difficulties). She is finally diagnosed with multiple chemical sensitivity (MCS), a controversial illness symptomised by allergic reactions to everyday chemicals. MCS is well explained in a question Carol encounters at her athletic club: "Are you allergic to the 20th century?" The movie portrays an illness that merges the person, the domestic space, and the environment, offering an example of transcorporeality in which the human body is deeply entangled with the material world. Similarly, Covid-19 has laid bare the connection between our bodies, our daily environment, and the indiscriminate exploitation of natural resources.

vulnerable but taking a broader approach to conceptualising how power hierarchies and systemic inequalities shape their life experiences" (2020: online).

Furthermore, my reading of the novel endeavours to respond to the wartime imagery overused to address the challenges presented by the current Coronavirus: Lai instead proposes a relational narrative that voices a diverse group of people working collectively to restore and repair damaged "naturalcultural" ecologies. My analysis draws on feminist, ecofeminist, and posthuman feminist scholars who have powerfully argued that human exceptionalism has pushed us to the edge and determined a global landscape where infectious diseases are becoming increasingly common occurrences. Both provide a framework for understanding human/non-human entanglements – including human relationship with bacteria and viruses – and imagine new forms of coexistence that extend care beyond the human world.

Intersectionality and Covid-19

In late March 2020, when announcing that his brother Chris Cuomo had tested positive for Covid-19, New York Governor Andrew Cuomo called the new Coronavirus "the great equalizer" in a tweet. The same expression had been used by Madonna in a controversial bathtub video shared on her Instagram. Since then, many others have referred to Covid-19 as the virus that can affect anyone and does not discriminate, and there seems to be a shared consensus that we are all in this together: poor and rich, celebrities and princes, prime ministers and asylum seekers, and men and women.

It most certainly does not discriminate against women, who are less likely to die from Covid-19. Even though globally men and women have been infected in relatively equal

numbers, available data suggest that the Coronavirus hits men harder than women.[79]

Several biological and behavioral factors could be involved: research has affirmed that women have a stronger immune response to infections, that they also carry two X chromosomes, which contain many immune-related genes, and that the female sex hormone estrogen is likely to affect the immune system. Differences in behavior encompass unhealthy habits that increase the risk of lung diseases, such as smoking (more frequent among men than women), and personal hygiene habits (men are less likely to wash their hands frequently).[80] At the time of writing, research is still at an early stage, and there is a lack of clear understanding of why women are able to tackle Covid-19 more effectively. Caroline Criado-Perez (2019) asserts that this gender data gap stems from the medical research representation of the male body as the human body, although evidence gathered so far exhibits major differences between men and women as regards disease symptoms, drug therapy, and prevention.

Criado-Perez further validates that the reluctance to address gender data gaps in women's health is also due to the "still-persistent attitude that since infectious diseases affect both men and women, it's best to focus on control and treatment" (298) and to postpone the debate about gender equality to the post-outbreak stage. Arguing that gender is a side issue can have deadly consequences for women: in Sierra Leone, one of the most affected countries by the West African 2014 Ebola outbreak, maternal, neonatal, and stillbirth mortality further increased after resources from sexual and reproductive health services were diverted toward the emergency response. Furthermore, women care-taking responsibilities, such as providing care for sick relatives and preparing the body for a funeral, left them at greater risk of exposure. As

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[79] See the ongoing analysis from the research group Global Health 50/50, a leading authority in gender equality and global health: https://globalhealth5050.org/Covid19 (accessed January 26, 2022).

[80] See Rabin 2020. For a discussion on the correlation between 'macho' stereotypes and male vulnerability to COVID-19 see Burrel and Ruxton 2020.

Lokot and Avakyan (2020) suggest, "these "indirect" consequences of disease outbreaks may be overlooked in the immediate need to provide "life-saving" health services as part of the response to Covid-19" (1).

What these indirect crisis-related deaths imply is that biological sex is a major factor determining a person's vulnerability to Covid-19, but socially-constructed roles can also affect women's experiences of and vulnerability to the broad impacts of pandemics. In fact, Coronavirus is not the great equaliser. On the contrary, the current pandemic has laid bare differences and, most importantly, deepened pre-existing inequalities and forms of discrimination. Women make up the majority of health-care workers and caregivers on the frontline of the Covid-19 response. Due to the vertical gender segregation of the health system, they are at greater risk of coming into contact with the virus.[81] School and daycare centre closures have increased women's burden of unpaid care work, the sphere of "feminised" labor that has long been undervalued and underrecognised by the current neoliberal condition. As Helen Lewis, in *The Atlantic*, affirms, "across the world, women's independence will be a silent victim of the pandemic" (2020: online). Among the consequences of quarantine, women's research production has dropped tremendously (Fazackerley 2020). Gender-based violence and abortion restrictions are among other hidden consequences affecting the lives of women and girls. Despite the evidence that Covid-19 has exacerbated gender inequalities, neither a gender lens nor a balance between men and women in political and public decision-making can be observed in most Covid-19 responses across the world. Although women have been praised for 'taking care' of patients, the elderly, and sick family members, their voices and experiences go unheard in the current crisis.

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[81] See Boniol *et al*. 2019.

Rewriting the End of the World

Larissa Lai is a renowned Chinese-Canadian author, best known for *Salt Fish Girl* (2002).
In her fictional narratives she explores themes such as gender identity, sexual
orientation, racism and cultural diversity, adopting a queer and Chinese diasporic
standpoint. Lai's timely and visionary latest novel *The Tiger Flu*, winner of the 2019
Lambda Literary Award for Lesbian Fiction, launches us in a future version of Vancouver
ravaged by a pandemic flu that is much more fatal for men. "There are no men in the
streets. The men are shut up in houses, covered in lesions and coughing their lungs out"
(13). Set in the Gregorian year 2145 – or Time After Oil (TAO) 127 – after disease and
environmental destruction have shattered the world, it is told from the perspective of two
young women, Kora and Kirilow. Kora Ko is a working-class teenager from a low-income
family living in Saltwater City, an urban centre overrun by patriarchal and corporate
technocracy.[82] Due to the infectious disease, Kora's family experiences extreme socio-
economic disadvantage. Thus, when her brother K2 gets flu symptoms, she is sent to
the Cordova Dancing Schools for Girls, where she will be taught dances "that fight back"
(Lai 2018: 112) and "forage dances." In other words, the school teaches young women
to trade cans "from the time before" (135) stolen from buried supermarkets.

Kirilow Groundsel is a doctor apprentice living in the Grist Village, a place populated by
a community of female clones founded by genetic experiments escaped from the Jemini
Group, one of the companies having control over Saltwater City. The Grist sisters are
able to reproduce through parthenogenesis: they have "doublers," who give birth to new
sisters, "starfish," sisters who can regrow their organs and so donate them to the sick
Grist sisters who need them, and "grooms" like Kirilow, healers-doctors skilled in surgery
and naturopathy: "we split, we slit, we heal, we groom, self-mutated beyond the know-

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[82] The name invokes the Cantonese appellation Haam Sui Fauh, "saltwater city," used by early
Chinese immigrants to describe Vancouver. See Thom (2018).

how of the clone company Jemini that spawned us. […] Only our starfish can save us, by regrowing whatever grooms like me cut out of them" (20). When a woman from Saltwater City, sick with a mysterious flu, enters the Grist Village, Peristrophe Halliana, Kirilow's lover and, most importantly, the last living starfish, becomes infected and dies. This traumatic event prompts Kirilow to travel to Saltwater City, where the flu has become a pandemic, to find a way to save her sisters. Here, she joins hands with Kora, who turns out to be a starfish, but they are kidnapped by a group of men who are releasing new technology to save the world from the flu and need Grist sisters – as well as other "disposable" denizens from Saltwater City – to test it.

Larissa Lai creates a forward-looking story that materialises many anxieties troubling our present, and, by sidelining to the periphery of the action all the male characters with infection, she reverses a male-dominated universe through a feminist lens. As she declares in an interview, she was "consciously writing against Cormac McCarthy's *The Road*, in which the woman kills herself at the start of the novel, ceding the story to the man and the boy. I wanted to write a story where the men are vulnerable and the women survive" (Lai 2019a).

As stated in the previous chapters of this dissertation, Susan Watkins notes that contemporary white male-authored post-apocalyptic fiction "tends towards conservatism" (2020: 1) and a desire and longing for the confirmation of the *status quo*. Conventional post-apocalyptic imagination she adds, cannot seem to move beyond traditional gender narratives, such as the protection of the heteronormative nuclear family unit and the obsession with the father-son bond. The structural similarity between post-apocalyptic pandemic narratives and the climate apocalypse is underscored in the introduction to this chapter, that draws on Carlen Lavigne's analysis on pandemic narratives.

By contrast, Watkins states that contemporary women writers engage with apocalyptic ideas in unprecedented ways that arise from their specific subject position rather than from the idea that women's writing is intrinsically different from men's. Drawing from feminist and postcolonial critiques to conservative and conventional end-of-world narratives, many women writers move beyond the self-centredness of post-apocalyptic imagination and lay bare "the relationship that exists between structural inequalities generated by patriarchy, misogyny and racism and issues such as climate change, global capitalism and techno-science" (Watkins 2020: 10).

Intersectional Experiences of Pandemic Outbreaks

In addition to bringing women's voices to the forefront of a disease pandemic, Lai creates a platform for queer and presumably non-white female characters fighting against systemic oppression. The novel raises questions about a world where women, being more resistant than men to the flu pandemic, become powerful leaders. Isabelle Chow, CEO of the other company that governs Saltwater City – the Höst Light Industries – is a remarkable example of grotesquely powerful corporations whose owners are worshiped in shrines like deities:

> Embedded in the altar is a smiling photograph of her from when she was awarded Woman Leader of the Year, taken those few short years ago when it wasn't a given that all HöST's leaders were women. Beneath the photo on a wide shelf are neatly arranged statuettes and figurines of female deities as though they were all her avatars: the Virgin Mary, Kuan Yin, a nine-tailed fox lady, Green Tara, the Venus of Willendorf, Athena, Heng'e, and many more besides. (53)

Despite the centrality of these powerful women leaders in the novel's plot, I argue that the most interesting feature of *The Tiger Flu* is its focus on intersectional experiences of the outbreak, alongside its thought-provoking concern for gender and racial justice. Disease outbreaks affect marginalised groups and at-risk communities in multiple ways,

exposing and deepening pre-existing differences and inequalities related to gender, race, and ethnicity, as suggested by the storylines of Kora and Kirilow. Belonging to vulnerable, albeit different, communities, they prove that a higher male mortality rate can, nevertheless, have indirect deadly effects on women.

In Saltwater City, the pandemic widens the gap between the wealthy corporate leaders and working-class families, increasing the severity of poverty. Kora's family lacks access to basic resources, such as medical care, supply, and a decent place to live: their "broken-up furniture" comes from "abandoned apartments around them" (67). Her mother, Charlotte, is a frontline health worker, and she is also the one taking on the extra labor of caring for sick family members and providing and preparing food:

> Charlotte looks exhausted. Although she's not yet forty, her dull black hair is streaked with white, and dark pockets of loose skin sag beneath her eyes. She's the only family member who still has a job, as a night nurse at a nearby hospice, and she looks after the whole family on top of that. (26)

Being sent to the Cordova Dancing School for Girls, Kora is affected by the stigma associated with the flu pandemic. In fact, we come to know that her father was the one who brought the Caspian tiger back from extinction for consumptive purposes; the flu is its deadly side-effect. She is constantly discriminated from the other girls for coming from a low-income family – "You're a *rat eater*. Don't lie. Your mom and dad were too poor to feed you properly" (97, emphasis added) – which also happens to be the family that revitalised the Caspian tiger. Despite being abandoned by her father and having nothing to do with his genetic experiments, she emerges as the pandemic scapegoat:

> If not for you, […] all of the men—our brothers, fathers, uncles, and sons—would be alive today. […] Lady Kora of the House of Ko, re-animators of the Caspian tiger [...]. How could you not know that you and your family are the source of the tiger flu? (84-85)

It is not by chance that Lai chooses a girl from a marginalised community to be the carrier of a "foreign" virus. Kora's constant struggle against discrimination calls into question

xenophobic fears and racial stigmatisation associated with disease outbreaks. If Ebola has long been portrayed as a 'black' disease and fueled racism against African and black communities, the current Coronavirus crisis has been tinged with anti-Asian racism and xenophobia (Timothy 2020; Aratani 2020). Racist incidents against Asian communities globally have increased after US President Donald Trump labeled Covid-19 the "Chinese" and "foreign" virus.[83]

Like Kora's mother, all the Grist sisters are involved in several forms of care work: Kirilow is a doctor apprentice, and Peristophe Halliana can regenerate her own organs and sacrifice herself so that others can live, like many women care workers on the frontline of the Covid-19 response. As Lai underscores, between the lines of the Grist community's struggle against its own erasure, we can read other narratives of Indigenous resistance. In addition to having been created for mere consumptive purposes – "they made us to use us. When they ran out of uses, they murdered as many of us as they could and exiled the rest" (48) – the Grist community is constantly under attack by patriarchal and corporate Saltwater City. Living in isolated communities, resisting and queering current reproductive practices, and not having embraced destructive and consumptive capitalist behaviors, they cannot be granted the status of 'fully human': "we aren't human" (48), "slit sluts, that's what they call us in Saltwater City" (20). The Grist sisters undergo the invasions of their territory, both in the form of systematic land theft to look for "some kind of animal or plant they need for some kind of technology" (163), and erasure of cultural identity. Even the infectious disease brought in by outsiders – in this case, a woman from Saltwater City – is a threat to the survival of

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[83] There is no need to look any further than my own location, the Veneto Region, one of the areas that were hit first by the virus outbreak in Italy: its Governor Luca Zaia suggested that the Coronavirus was caused by Chinese hygiene standards and cultural habits ("we have all seen the Chinese eating live mice"). See https://video.repubblica.it/dossier/coronavirus-wuhan-2020/luca-zaia-president-of-veneto-region-we-have-all-seen-the-chinese-eat-live-mice/354888/355455 (accessed January 26, 2022).

the Grist community, as it has been for multiple Indigenous populations who had limited immunity to pathogens introduced by European colonisers. Given the impact of the intersectional forms of oppression, the Grist sisters, albeit women, do not seem to be less vulnerable than men to the flu pandemic. Furthermore, in *The Tiger Flu*, Saltwater corporations take advantage of the opportunity created by the pandemic to further increase the forms of oppression and the surveillance of the Grist community. Once again, this resonates with the ways in which Covid-19 is devastating Indigenous communities across the world. In Brazil, one of the world's worst-hit Covid-19 hotspots at the time of writing, Coronavirus has accelerated Jair Bolsonaro's aggressive devastation of Indigenous territories and deforestation of the Amazon rainforest. As Laura Burocco underscores,

> A little more than a year after Bolsonaro's election, the Covid pandemic comes into view as an acceleration of a plan that was already underway and that seems to be in full continuity with more ancient practices, given that pathogens have historically been one of the most powerful factors in the decimation of the Indigenous peoples of South America. […] The government's plan shows its aggressive intent by affecting every aspect of the preservation of the territory and the lives of its people. (Burocco 2020: online)

A Capitalocene Challenge

As the previous paragraphs have shown, *The Tiger Flu* draws the readers' attention toward various forms of structural and intersectional inequalities that are usually exposed and heightened by a disease outbreak. As philosopher Van Dooren notes with regard to the current Covid-19 crisis, these are "vital considerations. But they are not enough" (2020). Given the zoonotic nature of this disease, we must also consider human dysfunctional relationships with other animal species and the broader endangered environment, adopting a 'one health' approach that recognises the interconnections

between people, animals and their shared environment.[84] Research has corroborated that the outbreaks of zoonotic diseases like Covid-19 are on the rise and that these animal-borne pandemics are most certainly linked to human-driven environmental change, the destruction of animal habitats all over the world, the intensification of farming practices, and global biodiversity crisis.[85] In other words, "the real source of this crisis is human, not animal" (Van Dooren 2020). This is precisely where the environmental humanities can make insightful interventions. According to Jenia Mukherjee and Amrita Sen, "while natural scientists argue that animals are hosts and carriers, environmental humanities scholars trace the real source to humans" (2020); not all humans, though. As the authors suggests, a "Capitalocene" framework provides a better understanding of the current crisis than the undifferentiated *antropos* implied by the 'Anthropocene' narrative.[86] At the foundation of the current crisis lies capitalism's consumptive force and its turning of habitats, environments, and bodies, particularly women's bodies, into resources to be subjugated, transformed, and exploited (Iovino 2020: online). Covid-19 has indeed been defined as a neo-liber disease deriving from an economic system in which profit is put before everything else. The United Nations Environment Programme itself posits that "in the last century, a combination of population growth and reduction in ecosystems and biodiversity has culminated in unprecedented opportunities for pathogens to pass between animals and people. On average, one new infectious disease emerges in humans every four months" (2020: online).

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[84] Zoonotic diseases, also called zoonoses, are infectious diseases passed by non-human animals to humans. At the time of writing, DNA evidence suggests that the novel Coronavirus is likely a bat-borne infection, while it is not clear yet whether the illegal pangolins trade is also involved. For a discussion on animal-borne pandemics, see David Quammen's bestseller *Spillover: Animal Infections and the Next Human Pandemic* (2012).

[85] See Smith, Katherine *et al*. 2014.

[86] For an enlightening debate about the Anthropocene and the Capitalocene, see Moore 2015 and Haraway 2016.

The Tiger Flu differs from outbreak-related films in popular culture, in that it does not focus on the disease emergence and infection but urges the readers to reflect upon the causes and the uneven effects of pandemics and imagine a rupture that must be brought into existence. In this case, the flu spreads around the planet thanks to a cloning company that has de-extincted the Caspian tiger for consumptive ends, namely to make addictive "tiger-bone wine." The novel throws into relief the interconnectedness between ecological disaster and the intensive exploitation of animals. In a particularly insightful scene in which Kora gets to know in vivid detail the story of how the flu has been brought into the world, the link between the human exploitation of nature and pandemics is made clear:

> Happy revellers drink from crystal glasses at first, then later, mouth to spigot as addiction deepens. Then the same vintners and revellers waste away in overstuffed hospitals and clinics from Albuquerque to Seoul to Kinshasa to New York City. The tigers pad softly into the night, and the room fills with the roar of another crumbling. Vast cliffs and towers of polar ice calve into the warming sea. A parade of long dead animals—wolves, mammoths, bear, and oxen—find their way into the wombs of their contemporary cousins. In white rooms, giant bellows expand and contract, to help those in the throes of the third wave breathe longer than they otherwise might. Oceans swell and rise to engulf whole cities. The denizens of Saltwater City construct a massive wall of earth to protect themselves. The earth's angry maw gapes to swallow those outside. The wall falls, and the people build canals instead. The ocean swells through them, recedes, then swells again. The fourth wave of tiger flu comes. Men vomit and shrivel in dirty hospital beds, their bodies refusing to hold water. (Lai 2018: 210-11)

What is also interesting for the present discussion is that the tiger flu and the Grist sisters are both "figures of mutation that erupt unexpectedly as a consequence of humankind's endless tampering with the flow of life" (Lai 2019b). Ecofeminist scholars have brought into sharp focus the analogy between the domination of nature and the exploitation of women that arise from the objectification of the 'other'. As Kirilow underscores, "the Caspian tiger is no different from us – a creature that would not live now except by human

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intervention" (Lai 2018: 88): as such, the Grist sisters and the tiger flu are the by-products of human exceptionalism, capitalism, colonialism and patriarchy. Both created by corporate power for consumptive purposes, they are figures of vulnerability that emerge amid the pursuit of endless growth.

Their stories force the readers to imagine a rupture and address the crisis at its root causes, shifting the focus from a mere return to normality or 'business as usual' to an act of repair of damaged 'naturalcultural' ecologies. "I feel that we're living now in a moment where our bodies have been pushed, through scientific innovation and the harnessing of the body's productive capabilities, to the absolute edge of their capacity to function. […] That's exactly the thing I'm interested in investigating — those moments when the body breaks because, in a sense, too much mind has been pushed on it." (Lai 2019b: online).

Envisaging a Rupture

As such, we could think of *The Tiger Flu* as a response to the wartime imagery that is being overused to address the challenges presented by the current Coronavirus. Feminist and ecofeminist analyses invite a cessation of this language of war to focus, instead, on the environmental causes of the outbreak. To provide one example, Donna Haraway has stated that "the war metaphor is a terrible burden right now. It's not just a metaphor, the whole way of approaching things as the enemy instead of wait a minute, this is clearly a sign or way more than a sign that we have screwed up natural socio-ecology of our multispecies ways of being with each other" (2020: online). With regard to Larissa Lai's novel, it departs from one-against-all narratives that identify an enemy – the virus – a military strategy, and (male) frontline warriors. Stories about singular heroes fighting against antagonists that are "fully evil" and must be destroyed, Lai suggests, are narratives that "belong to patriarchal forms of masculinity" (Lai 2019b: online). Throughout the novel, there are actually a few attempts to 'fight' the flu pandemic, and

they all come from male characters, such as Marcus Traskin, who claims that he has "a cure for the flu. He is going to save Saltwater City. He is a hero, and you should want him to live" (Lai 2018: 226). Furthermore, the novel breaks away from tiring visions of the future that refuse to explore the indeterminacy of the present and point toward a recovery of the previous *status quo*, as embodied by some secondary characters portrayed "in a desperate attempt to *know* and so *fix* the broken world" (Lai 2018: 41, emphasis added).

It also expresses boredom with reassuring techno-fixes and with narratives ending with a cure that "anticipates the triumph of science and epidemiology and affirms the worth of humanity" (Wald 268). The new technology developed by Saltwater corporations to save the world from the flu becomes a tool of oppression and surveillance that denies the Grist sisters agency, presenting some uncanny similarities with what Naomi Klein has labeled "screen new deal," pointing to the high-tech Covid-19 dystopia that benefits private interests while implementing surveillance tracking (2020). The questions Lai asks are of the utmost importance: what are the costs of techno-fixes? Who benefits from techno-fixes, and who is left behind? What is also important is that this "revolutionary" technology can save minds but not bodies. As the author has declared in many interviews in regard to the body-mind split, the way that it "emerges in Western culture through the Judeo-Christian inheritance, the Enlightenment, the rise of technology, and hyper-capitalism, […] all the trouble with patriarchy, climate change, is a consequence of that split, of insufficient value placed on bodies, especially women's bodies" (Lai 2019b: online). Contrarily, the Gist sisters "believe that body and mind exist together in harmonious balance. When one dies the person no longer exists" (Lai 2018, 294).

Lai's novel does not function as a blueprint for the future, though. By the end of the story, Kirilow joins hands with Kora and together they roll "towards a strange and *unknown* future" (259, emphasis added). *The Tiger Flu* neither proposes a progress tale nor ends

the story with ruins and decay that would force us to abandon all hope. As noted by feminist anthropologist Anna Lowenhaupt Tsing, indeterminacy, precarity, and vulnerability to others are the very conditions of our time. Learning to coexist with economic ruination, ecological disturbance and potential future global pandemics means living "without those handrails, which once made us think we knew, collectively, where we were going" (Tsing 2015: 2). She argues that the paradigmatic figure of this time is the matsutake wild mushroom: growing in daunting and human-disturbed forests, it can guide us through the ruined landscape that has become our collective home. By living a transformative relation with trees, matsutake makes it evident that we cannot live without collaborative survival across human and species differences.[87] She also writes that mushroom picking will not save us, but it might reopen our imaginations and shift them away from progress and one-against-all stories.

In this regard, the Grist storyline is one of these rupture narratives, in that it portrays resilience, the restoration of ancestral knowledge, resistance to cultural appropriation, decolonial practices, and a thought-provoking human-plant relation: "We Grist sisters feel our way to other knowings" (Lai 2018: 36). The most precious crop they harvest is called "forget-me-do," originally bred in the factories of Saltwater City together with the Grist clones but subsequently appropriated, mutated, and refined by the Grist sisters themselves and seeded through mallow, agave, and sage. Forget-me-do infused tea makes them feel pain as pleasure and replaces "poisonous medicines from the time before" (184). Most importantly, it comes to signify cultural resistance and survival, as "through its use, [they] cultivate what [they] remember and what [they] forget in order to make Grist history" (43). Weaving, sewing, and even suturing are performed using various organic and sustainable materials, such as plant and mushroom fibers. From

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[87] "The fungus gets its carbohydrates from mutualistic relations with the roots of its host trees, for whom it also forages. Matsutake makes it possible for host trees to live in poor soils, without fertile humus. In turn, they are nourished by the trees" (Tsing 2015: 40).

tents to gauzes, everything in their village is made out of mushrooms. As Lai notices in an interview, there is a striking similarity between Tsing's matsutake mushrooms and the Grist sisters, both "erupting in the wake of human-induced disaster" (Lai 2019a). The novel's idea of exploring the possibilities of life in the wake of disturbing and troubling times is also indebted to Donna Haraway's forward-looking approach to our globally endangered environment. The urgent task is to engage with one other – "in all of our bumptious kinds" (2016: 1) – to stir up potent responses and cultivate what she labels "response-ability" on a damaged Earth. *Staying with the trouble* means "learning to be truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures, but as mortal critters entwined in myriad unfinished configurations of places, times, matters, meanings" (1).

Restoring and repairing the world require learning to live and die with one other in multispecies ways that are not prone to disasters, and addressing our current state of urgency in relational rather than dialectical ways. To borrow from environmental literary scholar Kate Rigby (2015), we should learn to "dance with disaster," that is to say developing comportments that are no longer based on the promise of stability, but rather explore the indeterminacy and unpredictability of our mixed-up times. As a key feature of this dance, Rigby posits the rejection of cultural narratives grounded in hostile attitudes toward the natural world – allegedly retaliating against human beings -, "at the very time when we most need to appreciate the connectivities, both material and moral, linking human well-being with that of other living beings" (10). Although Rigby refers to eco-catastrophes, I argue that a similar approach could help us reconceptualise pandemics not as wars between humans (read: men) and viruses but rather as an opportunity to

expose structural inequalities, build and sustain new alliances and intersectional relationalities, and claim a future that does acknowledge the current rupture.[88]

As Larissa Lai suggests, this is a feature of feminist fiction, that is relational in the first instance. She further claims that *The Tiger Flu* is not about one man against the world but deals with "a group of people facing a crisis and resolving it collectively, while still having their differences" (Lai 2019b). The intersectional, multispecies collective that emerges from the pandemic crisis imagines the world anew pointing toward a green and feminist future. Indeed, after exposing the dysfunctionality of narratives based on perpetual progress and growth and on human exceptionalism, and their complicity with the ongoing subordination of nature and "others," the novel builds relationships across gender, race, species, and plants and explores the alternative forms of production and reproduction beyond capitalism. Through feminist, queer, anti-capitalist, and anti-racist resistance, a different gaze on the crisis is cultivated, and a radical systemic change is envisaged: one that rises women's voices and experiences and proposes a new paradigm for care work, which must be considered not as unpaid and feminised domestic labor but as collective care for our human, social, and environmental fragility. As Arundhaty Roy writes, this crisis can be a gateway between this world and the next one: "we can choose to walk through it, dragging the carcasses of our prejudice and hatred, our avarice, our data banks and dead ideas, our dead rivers and smoky skies behind us. Or we can walk through lightly, with little luggage, ready to imagine another world. And ready to fight for it" (2020: online).

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[88] In this regard, immunologist Antonella Viola from the University of Padua has claimed that we should "dance" with this virus, using a very different language from the military one we keep hearing in (mostly male) speeches and conversations about the current pandemic. See https://www.globalist.it/science/2020/05/14/l-immunologa-viola-smentisce-i-complottisti-irriducibili-falso-che-Covid-19-sia-artificiale-2058218.html (accessed January 26, 2022).

Final remarks: a Feminist Counterapocalypse

In *Contemporary Women's Post-Apocalyptic Fiction*, Susan Watkins points out that conventional post-apocalyptic fiction (usually male-authored) tends toward the confirmation of the status quo, mourning what has been lost during the imagined disaster, attempting to restore the past, and imagining forms of civilisation that are very much based on patriarchal and imperialist values. She further notes that, in discussions about the Anthropocene and climate change, the absence of gender and sexuality as relevant elements is notable. On a similar note, Matthew Schneider-Mayerson laments the elision of climate justice from the emerging canon of climate change fiction, which usually portrays climatic destabilisation primarily as a problem for the "monolithic and flattened 'we' of homo sapiens" (Mayerson 2019: 2), a universal human subject that is mostly male, white, and well-educated. My research has been mostly committed to exploring these absences and silences, asking whether feminist speculative fiction published in the past two decades, the moment in which a canon of climate change fiction has started to be framed, has been capable of offering radically disrupting contributions to the master narrative of the Anthropocene.

Drawing from feminist and intersectional analyses of injustices that play out in climate-changed environments, with particular regard to gender, "race," class, colonialism and capitalism, I first considered how my selected works of speculative fiction address the climate change experiences of women and other marginalised groups. What results from my analyses is that these writers make the unequal impacts of climate change along existing lines of power as a central issue: in all of these works, climate justice is a core theme. Alexis Wright's *Carpentaria* and *The Swan Book* explore the role of colonial

dispossession in environmental transformation, intertwining the "legacy in brokenness" that characterises the Indigenous Australian community and the non-human characters displaced by global warming. In its portrayal of the tragic impact of oil culture on Nigerian communities and marine ecosystems, Okorafor's *Lagoon* sheds light on the consequences of neo-colonial developmentalism, while proposing a thought-provoking critique of intersecting structures of othering. Through the oppression of the orogens in a planet where the Anthropocene seems to be brought to the extreme, Jemisin's *The Broken Earth* Trilogy entangles climate change and social justice exposing forms of ecological-racial-gendered exploitation. Larissa Lai's *The Tiger Flu*, finally, exposes the deepening of pre-existing inequalities and forms of discrimination brought about by another global threat that has been looming in the most recent years of the Anthropocene: animal-borne pandemics such as Covid-19. Most of the texts analysed, moreover, links climate change to other world-ending apocalypses that have already happened, such as slavery, displacement, and genocide, with most of the characters already living in a dystopian present.

What I consider to be the most visionary contribution of these texts, however, is their feminist attempt to shape alternative sustainable futures that diverge from dominant narratives of power and privilege and imagine ruptures from fossil capitalism and human exceptionalism: a visionary dream that feminist speculative fiction shares with feminist ecologies such as ecofeminism(s), intersectional ecocritical feminism, queer ecologies, posthuman feminism, and feminist new materialism. Rather than using the post-apocalyptic genre merely to warn, look back, and mourn the lost past, these authors propose a feminist relational counterapocalypse that generates new possibilities for humans and non-humans alike. From Alexis Wright's representation of the interdependent agency of humans and nature that interconnects Indigenous and ecofeminist philosophies, to Okorafor and Jemisin's critiques of epistemologies of hyper-

separation; from Jemisin's feminist view of sustainability that challenges technological fixes and projections of the problem of climate change out there, to Lai's feminist stance of indeterminacy and vulnerability as the very conditions of our time; from the breakdown of boundaries between humans and an agentic matter, to a queer rupture with hierarchies of humanness: all the texts that I have chosen to analyse go hand in hand with the radical imaginative stance of feminist environmental humanities. Moreover, their decolonial approach counters ecofeminism's tendency to universalise and overlook differences separating women because of "race," class, ability, location, and so on. In other words, I suggest that my selected works of speculative fiction bring the issue of intersectionality to the forefront of scholarship on the connection between gender and climate change.

These open-ended novels, finally, seem to suggest, together with Alaimo, that the tensions and contradictions between feminism and environmentalism may be more generative than their overlapping territories. None of them ends with a simplistic reconciliation between humans and the land: sometimes bleakness and despair have the function of warning against the silencing of those who have cared for the land the longest (*The Swan Book*); sometimes, the utopian conclusion regards animals only, at the expense of human beings (*Lagoon*); sometimes decolonisation from epistemologies of dominion happens through a violent and collective breaking of an unjust Earth (*The Broken Earth* Trilogy); and sometimes the main feature of the green and feminist future imagined is its indeterminacy (*The Tiger Flu*). All of them resonate with the invitation to "stay with the trouble" (Haraway 2016), to "dance with disaster" (Rigby 2015), and keep "green hope" (Garforth 2018) alive by warning of the potentially destructive consequences of neoliberal globalisation and indiscriminate exploitation of natural resources; they portray the despair that will predominate in the future if the voices of sexualised, radicalised, and naturalised minorities keep going unheard. The utopian

impulse, however, is always maintained within the work (Baccolini and Moylan 2003), and always ensures a voice for all those primarily affected "ex-centric subjects" (Baccolini 2007), whose situated knowledges might be necessary to survive these troubling times.

This critical work is part of a burgeoning tradition of feminist engagement with the Anthropocene and the current ecological crisis. As the first chapters of this dissertation have emphasised, feminist ecologies – from ecofeminism to queer ecologies, from posthuman feminism to intersectional ecocriticism – are exposing the scale of inequality and exploitation along gender, racial, ethnic, class, and species lines, and the ways it intersects with the Anthropocene. As suggested by Italian scholar Stefania Barca (2018), this debate has a crucial and urgent relevance that extends beyond the academic debate to encompass climate policies, global environmental governance, the control of external borders and migration flows, and so on. A transition towards a more egalitarian planetary consciousness needs alternative epistemologies of the Anthropocene, grounded in anti-patriarchal and anti-capitalist fights, anti-colonialist forms of production, Indigenous knowledges and struggles, and a trans-speciesist kinship. Analysing "Follow the Leaders" (also known as "Politicians discussing global warming") by Isaac Cordal, an art installation representing a homogeneous group of people (made of middle-aged white men clutching a briefcase) chosen to represent the human species, Barca draws attention on all the perspectives that are left outside the artwork.[89] The instalment, she claims, seems to suggest that these "Others" are invisible because they have already drowned: besides being victims of the climate crisis, their agency, stories, voices, and critical perspectives are also erased discursively. In the past few decades, feminist ecologies have been raising all these marginalised and silenced voices, providing a

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[89] See the installation at the following link: http://cementeclipses.com/Works/follow-the-leaders/. Accessed: April 28, 2022.

critique of the Anthropocene narrative. They have also underscored that acknowledging the feminist genealogy of the environmental humanities is an ethical necessity. This dissertation has proposed an intervention in the debate about the master narrative of the Anthropocene, threading feminist environmental humanities and literary expressions that make this time of crisis the object of writing. In doing so, it has composted feminist, queer, postcolonial, theoretical, and literary contributions, creating non-linear, non-hierarchical, and rhizomatic genealogies that respond to the epistemic violence of the Anthropocene. This resonates with the practice of reading diffractively to let new ideas "arrive unexpectedly, by way of a disturbance" (van der Tuin 2017: 112), as explained in chapter 1. According to van der Tuin, diffractive reading is indeed a methodology that wants to "stay clear from classificatory reading (reading from and for an authoritative classification of ideas, a relation of dependence that is often implicit and stays unacknowledged)" (112). The visionary contributions of feminist ecologies and feminist speculative fiction on the climate crisis are instead entwined in a relation of interdependence: we need both languages to go beyond apolitical forms of climate action and acknowledge the stories, perspectives and demands of different communities. At the same time, we "need the languages of both science and poetry," going back to the quotation from Ursula Le Guin that opens this dissertation: "science describes accurately from outside; poetry describes accurately from inside" (M16). That is to say, science proposes elevated perspectives and objective vision, poetry/literature insists on situatedness, partiality, commitment. The current crisis needs both viewpoints; most importantly, it needs a techno-science which is not disconnected from (eco)feminisms.

As argued by Ros Gray and Shela Sheikh evoking Frantz Fanon's seminal book, "the Earth is wretched […] contaminated, eroded, drained, burnt, exploded, flooded and impoverished on a worldwide scale" (2018: 163). As the multiple crises unfold, however, the wretched of the Earth are moving centre stage imagining and creating a more

sustainable future based on care and solidarity, and decolonising extractivist epistemologies based on a linear notion of development. Similarly, Braidotti argues that "the voices, experiences and perspectives of multiple others are bursting all around us" (2022: 5). In this context, feminist ecologies and speculative fiction propose a "transformative decolonial and radical struggle" (3) that might be capable of promoting a fundamental change of paradigm.

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